3.0 ENGLISH (101)

The KCSE English language examination papers test candidates' knowledge of the language. They test the candidates' ability to comprehend the input, mainly the written word; their mastery of grammar and communicative skills as elicited in their written work as well as their ability to respond to literary cues and to express such response in writing. In addition, the papers test listening and speaking skills in written form. Such things as ***pronunciation, stress*** and ***intonation, conversation*** and ***performance aspects of language*** are covered as required by the new syllabus.

Three papers were offered in the year 2008 KCSE English language examination, namely:-

Paper 1 (101/1): Testing Functional skills.
Paper 2 (101/2): Testing Comprehension, Literary Appreciation and Grammar.
Paper 3 (101/3): Testing Conventional Composition and Essays based on Set Texts.

3.1 CANDIDATES' GENERAL PERFORMANCE

Table 5 below shows the performance of candidates in the three papers in the year 2008 KCSE English language examination. Data for the years 2006 and 2007 is also provided for comparison.

Table 5: Candidates' Overall Performance in English in the last Three Years

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2006	1		60	30.71 (51.18%)	7.83
	2		80	29.88 (37.35) %	12.66
	3		60	18.93 (31.55%)	7.95
	Overall	**241,983**	**200**	**79.53 (39.76%)**	**25.00**
2007	1		60	26.11 (43.51%)	6.86
	2		80	34.95 (43.69%)	12.76
	3		60	18.34 (30.57%)	7.34
	Overall	**273,066**	**200**	**79.40 (39.70%)**	**24.00**
2008	1		60	24.59 (40.98%)	8.68
	2		80	22.71 (28.38%)	11.54
	3		60	20.25 (33.75%)	8.62
	Overall	**300,794**	**200**	**67.57 (33.78)**	**26.24**

From the table above, the following observations can be made:

3.1.1 The subject recorded a percentage mean of ***33.78%*** in the year 2008, down from ***39.70%*** in the year 2007.

3.1.2 The English ***paper 1(101/1)*** examination registered a percentage mean of ***40.98%*** in the year 2008 down form ***43.51%*** in the year 2007.

3.1.3 The English ***paper 2(101/2)*** examination recorded the poorest performance in the year 2008 with a percentage mean of ***28.38%*** down from ***43.69%*** in the year 2007.

3.1.4 Performance of candidates in the English ***paper 3 (101/3)*** examination improved slightly from a percentage mean of ***30.57%*** in the year 2007 to that of ***33.75%*** in the year 2008.

3.1.5 With the exception of the English ***paper 2 (101/2)*** examination standard deviation which went down 1.22 points, the standard deviations for ***papers 1(101/1)*** and ***3 (101/3)*** went up ***1.82*** and ***1.28*** points respectively.

An examination of the individual papers and what they entailed as well as the performance of the candidates showing the problems encountered and the weaknesses displayed in the candidates' work is given here below.

3.2 PAPER 1 (101/1)

This paper declined ***2.53 percentage points*** from ***43.51%*** in the year 2007 to ***40.98%*** in the year 2008. Once again the drop was attributed to loss of marks in question 1 as a result of candidates using the wrong format and also the poor performance on the cloze text (question 2).

Question 1

You are the secretary of the drama club in your school. The chairperson has asked you to send out a notice of the second meeting to plan the staging of Shakespeare's play, *The Merchant of Venice*. During the meeting, you will need to appoint the director of the play, set up a date for selecting the cast, discuss the budget for the play, and the dates of rehearsals and the final performance.

(a) Write the notice of this meeting which you would send to the members of the drama club.

(b) Write the agenda that you would attach to the notice.

This question had two parts. Part (a) required candidates to write the ***Notice*** of the drama club, convening the second meeting. The second part of the question required the candidates to use the information given in the task and their knowledge of meeting agendas to prepare an ***Agenda*** for the meeting convened.

Weaknesses

Many candidates failed to get the format of writing the ***Notice*** for the drama club meeting correct. Majority wrote minutes of the meeting, while others wrote a report. Quite a number missed out the agenda or incorporated it in the minutes and so lost marks for the format. Those who wrote the notice failed to get the tone and precision called for by this type of functional writing. The agenda mostly lacked the conventional items like ***"Reading and confirmation of the previous minutes"***, "***Matters arising"*** and "***Any Other Business".***

Expected Responses

(a)

SAMPLE

NOTICE

UPSTART DRAMA CLUB

Notice is hereby given/issued of the second meeting of the Upstart Drama Club members to be held on (Friday) the 26th of October, 2008 in the School auditorium at 4.30 pm to consider the matters on the agenda attached herewith.

(b)

SAMPLE

UPSTART DRAMA CLUB

Note/Agenda

1. Preliminaries.
2. Confirmation of previous minutes.
3. Matters arising.
4. Appointment of director of the play.
5. Date of selection of cast/auditioning.
6. Budget for the production of play.
7. Dates for rehearsals.
8. Date of final performance.
9. Any other business (AOB).

SECRETARY
(UDC)

Advice to Teachers

It may seem that teachers had anticipated minutes writing and had prepared the candidates accordingly. The question as set, put the candidates off and they were left in the awkward position of having to force their pre-prepared format through. This should not have been the case if teachers had taught as per the syllabus and left candidates to face the examination without undue influence.

Question 2

Fill each blank space in the following passage with the most appropriate word.

By far the 1_____obstacle to success, in my view, is a poor understanding of people. Most careers 2_____working with other people. You can have great academic intelligence 3_____still lack social intelligence - the ability to be 4_____good listener, to be sensitive 5_____others, to give and take criticism well.

If people do not like you, they may help you fail. On the other hand, you can get 6_____with serious mistakes if you are socially intelligent. How are you when it comes to working with people? Are you genuine and authentic, or do you 7_____put up a front? Do you listen to 8_____, or do you do most of the talking? Do you expect everyone else to conform to your wishes, your schedule, and your agenda, or do you look for ways to meet people on their 9_____? If you haven't learnt to get along with people, you will always be fighting a battle to succeed. 10_____making people-skills a strength will take you farther than any other skill you develop.

The cloze text required candidates to read through the passage with the sensitivity of an accomplished reader, applying the rules of grammar and structure; anticipating the vocabulary and collocation; using the punctuation and cohesion clues provided as well as the overall tendency of the sense of the passage to successfully provide the missing words. Conscientious candidates read through severally checking the likely words, back and forth, till they got each slot working with the rest to complete the passage as an entity, fully communicating a logical experience, message or argument.

Weaknesses

This was the worst performed of the cloze texts so far. There were more candidates who scored zero than has been the case previously, which is a clear indication that there is little emphasis being placed on this aspect of the syllabus and test. Candidates still remain poor readers or read with little understanding. Their knowledge of grammar and of the English idiom is wanting.

Expected Responses

1. greatest
2. involve
3. and/but
4. a
5. towards/toward
6. away
7. continually, usually, frequently , often
8. others
9. terms
10. However

Advice to Teachers

Teachers are advised to teach all aspects of language and provide practice to enable their students to cope with the demands of the cloze text. Because this test integrated grammatical, semantic and discourse skills, the candidates need to be sensitized on these demands. This requires thorough teaching and demonstration using a variety of passage types.

Question 3(a)

(a) Provide a word which sounds the same as each of the following:

(i) male .....

(ii) queue .....

(iii) hire .....

(iv) blue .....

(v) ate .....

This question required candidates to identify the pronunciation of the given words and provide homophones.

This was mostly well done and it may seem the task is now well understood by candidates.

Advice to Teachers

Teachers should continue exposing candidates to more samples of homophones.

Expected Responses

(i) mail
(ii) cue
(iii) higher
(iv) blew
(v) eight

Question 3(b)

(b) *Read the poem below and then answer the questions that follow.*

"**The Debt**" by Paul Laurence Dunbar

This is the debt I pay
Just for one riotous day,
Years of regret and grief,
Sorrow without relief.

Put it I will to the end –
Until the grave, my friend,
Gives me a true release –
Gives me the clasp of peace.

Slight was the thing I bought,
Small was the debt I thought,
Poor was the loan at best –
God! but the interest!

(From *American Negro Poetry*, Edited by Arna Bontemps)

(i) List all the pairs of rhyming words.

(ii) Describe the tone of voice that would be
poem.

(iii) How does the punctuation in the second
poem?

(iv) How would you say the last line of the p

Part (i) of the question required candidates to identify all the pairs of rhyming words in the poem, while part (ii) expected them to identify and state the tone of voice applicable in the circumstances described by the poem. Here, it must be stated that a distinction was being made between ***'tone of voice'*** and ***'tone'*** the stylistic device

employed by a writer, such as ***sarcasm, irony, hyperlole.***

In part (iii) of this question, candidates were required to consider the punctuation and how it affects the reading of the poem. There are three types of the punctuation marks each with its own significance and demands on the reader. The candidate needed to identify the three types in the stanza and in each case indicate how they would influence the reading. The last part of the question, part (iv) called for the rendering and especially the intonation and word stress of the final utterances of the poem.

Weaknesses

Part (i) of the question was well done and was the only part that did not give candidates problems. In part (ii) of the question, candidates failed to distinguish the two senses even with ***'voice'*** added. Some simply did not have an idea what the question required and so left it blank, un-attempted. Performance of candidates in part (iii) and (iv) was dismal.

Expected Responses

(i)

pay	grief	end	release	bought	best	
day	relief	friend	peace	thought	interest	

(ii) The tone of voice exhibited in the rendering of the poem (audibly) should bring out the sorrow, desperation and resignation in the persona. It is likely to be solemn, somber or poignant. This is because the persona expresses regret and despair for something foolish done in a moment of wreckless excitement. This has resulted in a lifetime of suffering and gloom.

(iii) The ***dash (–)*** represents a significant pause; creates suspense. The ***comma (,)*** represents a shorter pause which gives the persona / reader time to catch his/her breath. The ***full stop/period (.)*** is a final punctuation signaling the end of the sentence. As it were, the falling intonation seems to tell us that the persona's fate is sealed.

(iv) The last line of the poem would be said in a voice that expresses surprise or even shock at the realization of the price that the persona has to pay. Perhaps the voice would be raised, the eyes wide open and the words ***"God"*** and ***"interest"*** articulated with a lot of emphasis. The exclamation marks show that this line would reveal the fact that the persona still cannot believe what has happened.

Advice to Teachers

Teachers should by now have realized that question 3 in this paper is mainly concerned with aspects of performance and language production. Literary aspects are not tested, except in so far as they relate to sound aspects. Apart from teaching punctuation as part of the grammar and writing aspects, special attention is to be paid to punctuation especially in the genre of poetry and the essay.

Question 3 (c)

(c) *Consider the situation below and then answer the questions that follow.*

You are part of an audience that is listening to a speech. You look around and notice that some people are looking at their watches; a few are yawning, and one or two are shifting in their seats.

(i) What would be the likely cause of such behaviour?

(ii) What would you do to ensure you continue listening effectively?

Part 3 (c) (i) of this question, required candidates to analyse a communication situation involving a speaker and audience and attempt an explanation of the audience responses or reaction, while part (ii) of the question, called for candidates to state the steps they would take to ensure they continued to listen effectively despite the obvious flaws noted above.

Weaknesses

Candidates gave stock answers that were detached and lacked insight into this kind of situation in part (i) of the question, while in part (ii) majority of the candidates failed to cite any measures. Indeed, many seemed not to have understood the requirements of the question.

Expected Responses

(i) The speech may have gone on too long, may have been boring/ irrelevant/ uninformative. It may have eaten into another program causing the impatience.

(ii) In order to continue listening attentively, I would try to mentally summarise the speaker's key points; remind myself of the importance of the talk and how the information can help me. I could also take notes and try to paraphrase what the speaker says. I could also try to anticipate what the speaker would say next, maintain eye contact with the speaker and avoid daydreams and distractions.

Question 3 (d)

Consider the following conversation between a seller and a buyer of chickens and then answer the questions that follow.

BUYER: How are you this morning?

SELLER: I'm okay.

BUYER: I'm looking for good chickens, but yours don't look too good. I'm going to have visitors, and this being the Christmas season, I really must give them a feast.

SELLER: These are the right kind of chickens for your visitors. They're healthy and well fed.

BUYER: On the contrary, they look underfed. Anyway, what is your price?

SELLER: It depends. I charge more for cocks; they have more meat, you know. (Pointing at a red cock). This one, for instance, goes for Sh 400.00. As for the hens, I charge Sh.250.00.

BUYER: You're not serious! Much of the weight is a bundle of bones. I'm giving you Sh.150.00 for each hen and Sh.300.00 for each cock. I'm buying three of each – three hens for Sh.450.00 and three cocks for Sh.900.00. This will give us a total of Sh.1,350.00.

SELLER: You know, I buy and sell. I don't get them from my shamba. Your figure doesn't give me any profit at all.

BUYER: But you also know money is hard to come by, and especially during this Christmas season. Give me a reasonable price, unless you prefer I go to another seller.

SELLER: Let me make it Sh.225.00 for a hen and Sh.375.00 for a cock.

BUYER: It looks like you're not interested in selling your chickens.

SELLER: No, I'm. Why would I be here? My children's fees come from this business.

BUYER: Okay, take Sh.175.00 for each hen and Sh.325.00 for each cock.

SELLER: No, there would be no profit for me. You can do better than that. You can surely promote my small business. Just give me Sh.350.00 per cock and Sh.225.00 per hen. This would be Sh.675.00 for the three hens and Sh.1,050.00 for the cocks.

BUYER: (Doing his mental arithmetic) That's a total of Sh.1,725.00. Okay, at least I'll be able to feed my visitors. (*Handing over the money*) Here you are.

SELLER: Thank you. (*As the seller ties them together*). You're a good customer. Please come again. My name is Musimbi.

BUYER: And I'm Karani. See you then.

SELLER: See you.

(i) What is the purpose of the greetings in this situation?

(ii) Identify and explain the negotiation skills of the buyer.

(iii) What does this business transaction reveal about the nature of negotiations?

The first part of this question required candidates to comment on the function of greetings in a communication situation involving persons unknown to each other but who need to do business. In part (ii) of the question, candidates were required to identify and explain the negotiation skills of the buyer, that is, the things he did and said to either gain the upper hand or endear himself to the seller and so get a good price for the merchandise. Part (iii) of the question called for candidates to deduce from what happens between these two interlocutors, what the nature of negotiations is.

Weaknesses

Most candidates got the first part of this question correct, but in part (ii), they failed to notice and identify the negotiation skills and so could not explain them, therefore scoring dismally. Most candidates were able to get some

marks though there was no deliberate attempt to link what happens in the situation to the answers they gave in part (iii) of this question.

Expected Responses

(i) To establish rapport/break ice/secure the attention of the other party.

(ii) Buyer attempts to devalue the chickens by claiming they were malnourished and so not worth much. Feigns lack of interest in the chickens to whet the seller's appetite. He is willing to adjust and meet the seller halfway.

(iii) Involves give and take; the buyer and seller both adjust their prices till an agreeable price is reached. Win-win situation where no one party can say they won against the other. Involves mutual respect and empathy one with the other.

Advice to Teachers

Teach all aspects of the syllabus and expose candidates to a variety of communication situations.

3.3 PAPER 2 (101/2)

Performance in this paper dropped drastically from a mean of ***34.95 (43.69%)*** in the year 2007 to that of ***22.71(28.38%)*** in the year 2008. The standard deviation too declined to ***11.54*** from ***12.76.*** An examination of the individual questions may perhaps shed some light on this dismal performance.

Question 1

Read the passage below and then answer the questions that follow.

For Africans living abroad, nothing is more irritating than the constant diet of negative news on Africa. The only **silver lining** is that Africa is way down the list of news importance for the Western media. Most of the time Africa is ignored but when it does make it into the newspapers, radio or TV, then it is always portrayed as sinking in corruption, wars, famine and disease. If you set out to find a positive story on Africa, you may have to wait until your grandchildren have grown old.

What is more unfortunate is that whereas the rest of the world is divided into nations, Africa is lumped into one big **sorry** mass. A civil war in a tiny country in Africa elicits screaming headlines such as "Africa returns to barbarity". Civil wars in Europe are not European civil wars but civil wars in Bosnia, Serbia and so on. No one bothers to mention that out of Africa's 54 countries, only two may be engaged in civil wars. That means that 52 countries are peaceful. But the impression you get from the Western media is that all of Africa is at war with itself.

The same goes for diseases, especially Aids. Hardly does a week go by without the 'experts' from the West predicting how Africa's entire population will be wiped out in fifty years' time. If all the predictions made about the impact of Aids had been correct, most African countries would have been entirely depopulated by now.

According to the Western media, Africa is corrupt. All of Africa, all the time. It is interesting to note that in America, for example, only the executives of a given company are said to be corrupt while all African leaders are seen as being **irredeemably** corrupt.

The point being put across is that Africa is guilty unless proven innocent. Western journalists assigned to cover Africa are in most cases the most junior and the least experienced in the organisation. They are given this version of a 'Hopeless Continent' for so long that when they land in any African country, they immediately set out to confirm their prejudices. And you can always find what you are looking for.

The situation is similar to the search for weapons of mass destruction in Iraq. In Africa, Western journalists set out to find corruption, decay and mismanagement. And if they cannot find it, they will invent it on the basis that "it must be there somewhere".

The causes of this generalised negative view of Africa are complex. When you confront Western journalists, they deny that their view of Africa is prejudiced. They are probably telling the truth because they report what they see – but they see what they want to see. And what they want to see, subconsciously is a version of backward, primitive and uncivilized Africa.

So, while we feel irritated and even angered by the Western media's portrayal of Africa, we must remember that many journalists cannot help but see Africa the way they are programmed to do. The only way this can change is if the programming is changed. But how do you go about doing so?

The first step is to create space for dialogue between the Western media and Africans. It is during such discussions that Africans will be able to tell their side of the story. If this happens, then the Western media will see Africa as we do – a glorious continent full of promise but going through a rough time at present.

(Adapted from *African Business*, May 2004).

(*a*) What is the likelihood of finding a positive story on Africa?

(*b*) Why are Bosnia and Serbia mentioned?

(*c*) Why is the word 'experts' on the third paragraph put within quotation marks?

(*d*) Rewrite the following sentence to begin: Had .....

"If all the predictions made about the impact of Aids had been correct, most African countries would have been entirely depopulated by now."

(*e*) According to the passage is Africa more corrupt than America? Explain your answer.

(*f*) Give two reasons why African stories are mainly assigned to the most junior and inexperienced journalists.

(*g*) How can we tell that the author is an African?

(*h*) Explain the meaning of the following expressions as used in the passage:

silver lining .....

sorry .....

irredeemably .....

Part (a) of this question, required candidates to use evidence in the passage to determine the likelihood of finding a positive story on Africa, whereas part (b) expected candidates to use implicature to explain the citing of Bosnia and Serbia. The author uses contrast to advance the argument.

Part (c) of the question called for recall of the fact that when quotation marks are used on a word they draw attention to that word, and especially to its special usage in the context. Most times it may be that the writer does not believe or subscribe to the belief that the people being discussed are what they are purported to be. In this case, the ***"experts"*** seem to get it quite wrong all the time casting a doubt on their expertise. In part (d), candidates were required to rewrite the given sentence as directed without changing the meaning. Part (e) expected a yes/no answer based on the facts adduced in the passage and an explanation on the position taken by the candidate, while part (f) required candidates to identify two reasons African stories are assigned to junior and inexperienced journalists. Part (g) of the question called for candidates to find evidence in the passage to show the author was an African and in part (h) candidates were expected to explain the meaning of some given expressions as used in the passage.

Weaknesses

The first part of the question was well done. The last sentence of the first paragraph was mainly lifted and the implication was that it was almost non-existent. In part (b) the candidates failed to see the juxtaposition and mostly missed the point, while in part (c) of the question most candidates could not explain this fact although the author goes ahead to explain that the prediction of the '***so called'*** experts have always proved wrong. Candidates were at a loss as there was no statement directly to be lifted as in the case of part (f) of the question. Anything they were expected to deduce from the facts given presented problems. Most candidates were unable to explain the expressions given in part (h) of the question.

Expected Responses

(a) Little/ very little / hardly any since by the time one's grandchildren are old, one is likely to have died.

(b) Bosnia and Serbia are mentioned to show that civil wars in Europe are treated as isolated cases while in Africa they are treated as a continental war.

(c) The word is put within quotation marks to indicate that the writer does not really believe that the people are experts. If they were, their predictions would already have come true.

(d) Had all the predictions made about the impact of Aids been correct, most African countries would have been entirely depopulated by now.

(e) No, Africa is not more corrupt. It is just that the Western media generalizes the few cases of corruption.

(f) The fact that African news/stories are considered of little importance and so relegated to the juniors. Also, such journalists are inexperienced and more impressionable and so readily buy the stereotype image of Africa.

(g) The author says "while we feel irritated…" (this suggests that he is an African). More importantly, he says, "will see Africa as ***we*** do…"

(h)

- ***silver lining:*** blessing/lucky turn of events/good or positive thing.
- ***sorry:*** miserable/pitiable/without hope/pathetic.
- ***irredeemably:*** completely/incorrigibly/absolutely/hopelessly.

Advice to Teachers

Teachers should expose candidates to a variety of writings and explain the techniques writers employ in advancing their argument. They should also teach the punctuation marks, the significance of each, how to read comprehensions and the various ways of unraveling the meanings presented in the passage.

Apart from teaching the candidates the use of the dictionary, they should explain the various shades of meaning and more importantly the fact that meaning is context based. The section where candidates are required to explain meanings of words or expressions targets such contextual meaning of words presented as well as understanding of the expressions used.

Question 2

Read the passage below and then answer the questions that follow:

She lay there, more **dazed** than dozing, she did not know for how long. No water. No charcoal. There was a little hand mirror in the cupboard and she looked at the dark bruises on her cheeks, but they were less swollen than her back and shoulders. She had opened the window a crack to see in the mirror, then closed it again but now there was a tapping on the shutter.

'Who is it?' she called, fearful that he might be testing her by sending visitors.

'It is Ahoya. Don't be afraid,' came the welcome voice in Luo.

'Are you all right, Paulina?'

'I am all right but not very,' said Paulina shamefacedly, pushing at the shutter, 'and I cannot open the door'.

'Yes, I thought so,' replied the matter-of-fact voice. 'He has locked you in. Did he beat you also?'

'Yes, he beat me also.'

'And that is the first time?'

'The first time. He used to love me.'

Ahoya laughed gently. 'Well, he does love you. I could see it in his face as he caught sight of you. But I thought also he would beat you, for it is a shame to him to have you lost, though you did not mean it so. Have you anything to eat?'

'No. I do not need anything, thank you.'

'Or any medicine?'

'No. I shall be all right.'

'Be sensible, child. Every wife who comes to Nairobi from the country has problems. Do not think it is the end of the world. Every young man has problems too. Probably all his friends and workmates have been telling him he is too young to marry and now he begins to wonder how he will manage. Don't you know that if you had been married in the old way your husband would have given you a token beating while the guests were still there? They say that is so that if you are widowed and inherited you will not be able to say that your new husband was the first person ever to beat you. So don't start to wish backwards. You praise God that He has given you a husband to love you, just as I have been able to do without one.'

'You too?' asked Paulina, wondering. 'You too, like Drusilla, you are not married and yet you seem to understand so much?'

'You have met Drusilla, have you? Well, she is a very great friend of mine. And Miriam, who lives quite near here, is another. And we all know that God can look after us in all that is needful. But you, who have a husband, also need food and medicines, and I will bring it myself so that no one can accuse you of having men visitors, but you can give the tray to Amina in the front room and I will get it collected.'

She rushed away and Paulina at once felt comforted. After half an hour Ahoya came back in the car. She handed through the window a tube of ointment and a tray with thick slices of bread and jam and cold orange drink on it.

'Now if he smells the ointment, tell him I brought it and he can come and ask me questions he likes.

But now I must hurry. I have a meeting on the other side of town.'

Paulina heard the car start. She ate carefully, forcing herself to finish, and when Amina tapped at the window to take the tray away they exchanged such small **courtesies** as can be managed without a common language. Paulina slept until the stiffness softened into a small ache all over her body, and Amina gathered her cronies to tell them:

'That Martin, soft he may have looked and spoken but my goodness, did he go for her! And the mother's milk hardly dried on her lips, poor young thing. We'll see that she learns to give him something to think about, won't we just.'

(*a*) Explain what happens just before this extract.

(*b*) Describe the first meeting between Paulina and Ahoya.

(*c*) Explain the meaning of the following words as used in the extract.

(i) dazed .....

(ii) courtesies.....

(*d*) What does Paulina think of Martin after the events so far recorded in the novel?

(*e*) Rewrite the following in reported speech:

"No. I do not need anything, thank you."

(*f*) Describe two character traits of Paulina revealed in this extract.

(*g*) Make notes on Ahoya's view of wife beating.

(*h*) Who is Drusilla?

(*i*) Comment on the expression 'And the mother's milk hardly dried on her lips'.

Part (a) of the question required candidates to place the extract used in its immediate context, whereas part (b) expected candidates to recall the storyline and describe how and when the two characters in the novel meet for the first time. Part (c) called for candidates to explain the meaning of words as used in the passage and part (d) of the question required candidates to rewrite/ paraphrase the identified sentence retaining the etiquette aspects. Part (f) of the question expected candidates to describe two character traits of Paulina as revealed in the extract.

In part (g) and (h), candidates were expected to make notes on the views of one of the characters on the issue of wife beating and state briefly who Drusilla, one of the characters was. This was a mere recall of the facts as presented in the novel. The last part of the question required candidates to give their understanding of the expression given, paying attention not only to the metaphor, but also apply it in the circumstances.

Weaknesses

Candidates displayed lack of mastery of the plot, indicating that they had not read the novel thoroughly. In part (d) of the question, most candidates were able to rewrite the sentence, but failed to retain the etiquette aspects and so lost marks. In part (f), candidates mostly identified the traits of Paulina but failed to illustrate using evidence from the extract. Candidates were not able to notice the imagery and relate it to the situation in part (i) of the question.

Expected Responses

(a) Just before the extract, Martin had beaten Paulina and locked her up in the house after she had been away for two nights when she lost her way from the hospital.

(b) The Police Inspector finds Pauline locked up in a cell without a charge and determines to release her. Since it was nightfall he decides to take her to Ahoyas's residence for safety. Ahoya, an elderly white lady takes her in, feeds her and gives her a place to sleep. Early the following morning, the two set out in search of Martin's house and soon enough find Martin leaving the house for work.

(c) ***dazed:*** unable to think clearly / stupefied/ stunned/ astounded.
courtesies: pleasantries /greetings/ small talk /friendly talk.

(d) Paulina thinks that Martin does not love her, she says "the first time. He ***used*** to love me."

(e)
- Paulina thanked Ahoya and told her she did not need anything.
- Paulina politely told Ahoya that she did not need anything.

(f)
- ***Timid/ nervous / fearful:*** It takes Ahoya quite a while to make Pauline open up.
- ***Naïve / Innocent / Unsophisticated / Unworldly:*** Pauline had thought that since Martin loved her, he would never beat her.
- ***Cautious / careful/ prudent:*** Pauline finds out who is at the window before opening lest Martin had sent a visitor to test her.
- ***Appreciative:*** Pauline was grateful to Ahoya.

(g)
- She views wife beating as a natural thing that most wives who join their husbands in Nairobi go through.
- Wife beating is justifiable when one is on the wrong.
- She views it as a trivial thing since it is not the end of the world.
- She views it as an inevitable tradition.
- She views it as something that should not make a woman regret being in a marriage.

(h) A staunch Christian midwife who had been called to examine Pauline when she was lost and had just come from hospital.

(i) Emphasizes the fact that Pauline is too young to have been married. She has ***"just been weaned off!"*** leads to the last part which emphasizes the sympathy Amina expresses for her.

Advice to Teachers

Candidates need to be advised that in the literary genre, especially, every allegation is to be supported by concrete evidence from the text. Illustrations are so important that their absence results in automatic loss of marks not only for the illustration, but also the mark for identification. Teachers should teach and explain the various forms of imagery and especially their function of economy of expression and extension of meaning.

Question 3

This question was based of the reading, understanding and appreciation of the poem below.

Read the poem below and then answer the questions that follow.

The Splash

Under warm sunshine,
A pond of water rests, calm and serene.
The blue sky inhabits the middle of the pond,
And its sides reflect the greenery,
Spotted with the yellow and the red,
The red and the violet.
The water, the sky, the vegetation,
Hand in hand convey harmony and peace.
Then comes the splash!
And a tremendous stirring surges:
Reflections distort,

Giving way to a rushing flow of ripples,
Ripples innumerable,
All fleeing from the wound.
Time elapses,
Ripples fade,
Reflections regain their shape.
And once again emerges the pond
Smooth and tranquil.
But the stone!
The stone will always cling to the bottom.

Yusuf O. Kassam

(*a*) What do you think this poem is about?

(*b*) What is implied by the use of colour imagery (lines 4, 5, 6)?

(*c*) Identify and explain two stylistic devices used in this poem other than colour imagery.

(*d*) Describe the tone of this poem.

(*e*) Explain the meaning of the last two lines.

(*f*) Explain the meaning of the following words as they are used in the poem:

surges .....

fade .....

tranquil .....

Part (a) of the question required candidates to make a brief statement about the literal and metaphoric concerns of the poem. Part (b) of the question called for candidates to focus on the

colour imagery and what it implies in the already established situation in the poem. In part (c) of the question, candidates were required to identify and explain two stylistic devices employed by the poet apart from colour imagery. Candidates were also required to describe the tone of the given poem in part (d) of the question.

Parts (e) and (f) of the question expected candidates to explain the meaning of the two last lines of the poem (in the light of what they have gathered of the poem so far) and explain the meaning of words as used in the passage.

Weaknesses

In part (a) of this question, candidates failed to notice that the award given to a question is indication as to how much is expected of them. Most candidates went on and on. In part (b) of the question, many candidates were put off by the word ***'imagery'*** and fumbled. Most candidates were not able to handle questions on style and language use.

Expected Responses

(a) The poem is about a pond at rest, a pond disturbed and how it regains its calm. Metaphorically it is about some disturbance of the ***'peace'*** or ***'quiet life'*** by some occurrence; the violence experienced and the return to ***'normalcy'***.

(b) The poem names greenery, the yellow, the violet and the red colors. The primary function is the depiction of the scenery. The grass, the vegetation and the flora abound in the pond. The greenery is normally associated with peace. Yellow might suggest the intermediate stage before foliage drying up. This might imply potential danger or possibility of turbulence, change or changing circumstances. Violet shows things are not tranquil or peaceful as they may seem. Red normally depicts eminent danger, violence or turbulence.

(c) The candidates were expected to pick out and explain any two of the following:

- Personification.
- Symbol/symbolism.
- Repetition.
- Onomatopoeia.
- Aliteration.

(d) The apparent calm of the pond masks the potential turbulence when a stone is dropped into it. Some candidates were able to relate this to life, that although life may seem calm and peaceful on the surface, there is always a possibility of disturbance or turbulence which may be triggered by even slight provocation.

(e) The cause of the ripples / turbulence is permanent.

(f)

- ***surges***: move forward in a wavelike manner;
- ***fade:*** lose strength/ vigour;
- ***tranquil:*** calm/ quiet/ motionless.

Advice to Teachers

Teachers are advised to teach the literal and metaphoric levels of meanings especially in poetry and introduce, explain and illustrate the various aspects of style and their functions in poetry.

Question 4

(*a*) *Complete each of the following sentences by filling in the blank space with the correct form of the word in brackets.*

(i) The two ..... (sister-in-law) hugged during the wedding ceremony.

(ii) His speech was good but it was slightly marred by his poor ..... (pronounce) of words.

(iii) She had ..... (run) for five kilometres before the others caught up with her.

(iv) It was ..... (doubt) a superb performance.

(v) We wanted the option that would give us the ..... (little) trouble.

(*b*) *Rewrite each of the following sentences as instructed. Do not change the meaning.*

(i) I did not know that there was trouble ahead.

Begin: Little .....

(ii) She is very tall.

Begin: How .....

(iii) It was very unlikely that our national team would lose the match. (Rewrite using the word "likelihood".)

(iv) Come with me. (Rewrite adding a question tag.)

(v) Wanjiku said to Onyango, "I will join you in a few minutes." (Rewrite in indirect speech.)

(*c*) *Complete each of the following sentences by inserting the appropriate linking expression.*

(i) Ondieki is impatient and rather arrogant; ....., he is a brilliant engineer.

(ii) I have no wish to criticize Muturi; ....., I agree with most of his actions and decisions.

(iii) There is considerable evidence that smoking is harmful; ....., it must be discouraged at all costs.

(iv) I voted in favour of the proposal; ..... did Mrs Wanyonyi.

(v) We could have done much better ..... we had not taken so much for granted.

Part (a) of this question required candidates to perform various grammatical tasks, namely:

(i) plural formation of compound word;
(ii) transformation of word class as suggested by the syntax (i.e. verb-norm);
(iii) tense formation given the (-en for of the auxiliary);
(iv) transformation of word class given semantics/syntax (i.e. adverb from noun);
(v) use of the correct form of adjective (i.e. comparative) .

Part (b) of the question called for candidates to either re-write as transformations (i) (iii), indirect speech (v) or supply question tag (iv), structure and punctuation (ii), while part (c) required candidates to supply the appropriate sentence connectors for the complex sentences given.

Weaknesses

Candidates found parts (b) and (c) of this question difficult as they provided connectors without due regard for the punctuation provided nor the sense of the sentence given.

Expected Responses

(a)

(i) sisters-in-law;
(ii) pronunciation;
(iii) run;
(ii) doubtless;
(iii) least.

(b)

(i) Little did I know there was trouble ahead.
(ii) How tall she is!
(iii) There was very little/ the least likelihood that our national team would lose the match. (iv) Come with me, will you?
(iv) Wanjiku told Onyango that she would join / be with him after a short while.

(c)

(i) however/nevertheless/nonetheless
(ii) in fact
(iii) consequently/hence/therefore
(iv) so
(v) if

Advice to Teachers

In this integrated syllabus, set texts are to be taught and all aspects and possibilities of extended response questions set and discussed to give candidates ample practice.

3.4 PAPER 3 (101/3)

Question 3 (a)

The Short Story

Macmillan (Ed), *Half a Day and other stories*

Using illustrations from the story 'The Town' by Eneriko Seruma, write an essay on the characteristics of Townspeople as seen through the eyes of The Villager.

In a paragraph, say whether or not you agree with The Villager.

The question was based on a short story "***The Town"*** from the set anthology *"**Half a Day and Other Stories".*** It required candidates to isolate the characteristics of Townspeople as seen and described by the Villager, the main character and narrator of the story.

Weaknesses

The candidates seemed to have been put off by the expression ***"as seen through the eyes of the villager".*** Of course, the statements the Villager makes are his personal views as being totally new and shocking experiences. Yet to the reader – the candidate, much of what is shocking to him is the reality most of them experience daily, hence the supplementary question. Most candidates gave longish summaries of the story instead of selecting specific characteristics of townspeople and what effect these had on the Villager.

Expected Responses

The Villager considers the townspeople to be:

- Lazy and afraid of manual work which he considers more rewarding.
- Foolish/lack insight as they do not realize their attitude to manual work/opting for this madness in town works to their disadvantage as they spend their earning buying food and paying rent.
- Dehumanized and lack sense of pride hollering and touting all day long.
- The unhealthy rat race has bided them to the stack reality that they cannot make much money with such competition.
- Noisy/rowdy/suicidal.
- Unnecessarily hearty.
- Avarices/Lusty.

Advice to Teachers

Examination techniques need to be taught to candidates. Such issues as careful reading of the questions, planning the essays and keeping to the demands of the task need not be emphasized.

Question 3 (c)

The Novel

Velma Pollard, *Homestretch*

With illustrations from Velma Pollard's *Homestretch*, write an essay on the relationship between children and their step-parents.

This question was based on the optional novel ***Homestretch.*** It was the question in which candidates performed most dismally. It required candidates to write an essay on the relationship between children and their step-parents.

Weaknesses

Candidates failed to realize that relationships could be either strained and unhealthy or cordial and supportive. They may even be indifferent. Whatever the relationship, it had its effect or toll on the parties involved. Candidates, because of their narrow view of relationships soon ran out of material to write and started bringing in foster-parents and as a result lost marks.

Expected Responses

Candidates needed to discuss the relationship between children and their step-parents generally and specifically use the stories' characters in the novel for illustration.

(i) Brenda Smith and Johnnie (Step-mother in America).
(ii) Lyne (Johnnie's daughter) and Ivan Smith
(iii) Brenda Smith and Nurse (Step-mother in Britain).

Advice to Teachers

Teachers should encourage candidates to read the novels thoroughly and help them discuss all aspects of the novel.

4.0 KISWAHILI (102)

4.1 MATOKEO YA MTIHANI WA SOMO LA KISWAHILI

Jedwali hili linaonyesha matokeo ya mtihani wa somo la Kiswahili katika muda wa miaka minne (2005 hadi 2008).

Jedwali 6: Matokeo ya mtihani wa Kiswahili (2005 – 2008)

Mwaka	Karatasi	Watahiniwa	Alama ya Juu	Alama ya Wastani	Alama ya Tanganisho
2005	1		40	20.25	6.37
	2		80	34.08	10.61
	3		80	37.57	14.01
	Jumla	**259,301**	**200**	**91.89**	**26.00**
2006	1		40	15.31	7.68
	2		80	40.60	11.80
	3		**80**	48.48	14.63
	Jumla	**241,272**	**200**	**104.39**	**29.00**
2007	1		40	15.80	6.42
	2		80	32.22	11.91
	3		80	43.49	13.12
	Jumla	**272,905**	**200**	**91.51**	**27.00**
2008	1		40	14.20	7.18
	2		80	29.18	11.43
	3		80	31.17	13.64
	Jumla	**304,314**	**200**	**74.55**	**32.25**

Jedwali hili laonyesha kuwa:

4.1.1 Alama ya wastani ya ***karatasi ya 1(102/1)*** ya mwaka wa 2008 imeshuka ikilinganishwa na ya mwaka wa 2007.

4.1.2 Matokeo ya ***karatasi ya pili (102/2)*** ya mwaka wa 2008 yameshuka yakilinganishwa na ya mwaka wa 2007.

4.1.3 Vilevile, matokeo ya ***karatasi ya tatu (102/3)*** ya mwaka wa 2008 yameteremka kutoka alama ya wastani ***43.49*** mwaka wa 2007 hadi ***31.17*** mwaka wa 2008.

4.1.4 Kushuka kwa karatasi zote tatu kumeathiri vibaya matokeo ya Kiswahili kwa jumla mwaka wa 2008. Alama ya wastani ya Kiswahili ya mwaka wa 2008 imeshuka kutoka ***91.51*** mwaka wa 2007 hadi ***74.55*** mwaka wa 2008.

4.1.5 Alama ya tanganisho inaonyesha kuwa kuna baadhi ya watahiniwa ambao waliweza kujipatia alama nyingi zaidi ya alama ya wastani mwaka wa 2008. Alama hii ilikuwa ***32.25.***

4.2 INSHA (102/1)

Jedwali 7: Matokeo ya Karatasi ya kwanza ya miaka ya 2005 hadi 2008.

Mwaka	2005	2006	2007	2008
Alama ya Wastani	20.25	15.31	15.80	14.20
Alama ya Tanganisho	6.37	7.68	6.42	7.18

Jedwali hili laonyesha kwamba isipokuwa mwaka wa 2005, matokeo ya karatasi ya 102/1 yamekuwa mabaya na kwamba watahiniwa wengi hawajaweza kujipatia alama zaidi ya nusu ya alama zote ambazo zinaweza kutuzwa.

Tutachanganua swali la kwanza ambalo lilikuwa la lazima na ambalo halikufanywa vizuri, na vilevile swali la tatu ambalo liliwatatiza watahiniwa.

Swali la kwanza

Insha ya **lazima.**

Andika tahariri kwa gazeti la *Raia* ukieleza hatua zinazochukuliwa nchini ili kumwendeleza kielimu mtoto msichana.

Watahiniwa walikosa alama kwa sababu wengi waliandika barua kwa Mhariri badala ya kuandika tahariri. Hali kadhalika,wengine hawakutimiza idadi ya maneno iliyohitajika. Insha hii ilipaswa kuandikwa ifuatavyo:

(i) Tahariri iwe na sura ifuatayo:

- Kichwa Cha gazeti: ***GAZETI LA RAIA.***
- Tarehe chini ya Kichwa.
- Mada, kwa mfano: "Elimu ya Mtoto-msichana."
- Utangulizi.
- Mwili/maelezo kiaya.
- Maelezo yaweza kuwa na maoni au msimamo wa mhariri au wa gazeti.
- Hitimisho kwa mfano jina la mhariri na wadhifa wake.
- Sahihi.

(ii) Lugha ilenge kuwasilisha na kuzindua umma kuhusu juhudi zozote zile za kuhakikisha kuwa mtoto wa kike amepata elimu hadi viwango vya juu.

(iii) Lugha pia ijikite katika uhalisi wa mambo na wala si porojo au upuzi.

(iv) Baadhi ya hoja za kuzingatia ni:

- Kupiga vita ndoa za mapema.
- Kupiga marufuku ajira ya watoto.
- Wasichana kupewa nafasi ya kuendelea na masomo baada ya kujifungua.
- Alama za kujiunga na shule na vyuo vikuu kupunguzwa kwa wasichana.
- Elimu bila malipo kwa watoto katika shule za msingi na za upili.
- Kutoa msaada wa karo kwa watoto kutoka familia maskini.
- Kujenga shule zaidi za wasichana.
- Mashirika yasiyo ya kiserikali kufadhili miradi ya elimu.
- Kuhamasisha wazazi kuhusu umuhimu wa elimu ya mtoto wa kike.
- Adhabu kali kwa wabakaji.
- Washikadau wote katika elimu kuhakikisha uzingativu na uendelezaji wa sera zijengazo usawa wa kijinsia.
- Kuondoa vikwazo vya kitamaduni kama vile ukeketaji wa wanawake.

Swali la Tatu

Matikiti na matango ndiyo maponya njaa.

Hili lilikuwa swali la methali.Watahiniwa walipotoka katika kutafsiri maana ya methali hivyo basi wakapotoka katika hoja walizoshughulikia. Aidha,watahiniwa wengi hawakulijaribu swali hili kabisa.

Majibu yaliyotarajiwa

(a) Msamiati wa methali:

- Matikiti na matango ni aina ya vyakula visivyothaminiwa sana.
- Maponya ina maana ya yanayookoa au yanayofaa.
- Njaa ina maana ya shida.
- Maana kuwa vitu tunavyodunisha/tunavyopuuza huweza kuwa vya msaada mkubwa wakati wa shida.

- Kitu tulichonacho mkononi ndicho kiwezacho kututoa taabani wakati wa shida na hivyo basi tusividharau vitu tulivyonavyo.

(b) Watahiniwa walitarajiwa kuandika kisa kinachoonyesha sehemu mbili za methali:

i) upuuzaji/udunishaji wa mtu au kitu au jambo.
ii) mtu, kitu au jambo lije liwe ni la manufaa baadaye wakati wa shida.

4.3 MAPENDEKEZO:

4.3.1 Walimu wazidi kuwapa wanafunzi mazoezi zaidi katika uandishi wa kiuamilifu.

4.3.2 Walimu watumie silabasi za K.I.E na K.N.E.C katika ufundishaji wao.

4.3.3 Wanafunzi wahimizwe kusoma magazeti na kujifahamisha na matukio ya kila siku katika
jamii na mazingira yao-kitaifa na pia kimataifa; ilmuradi waweze kuyashughulikia maswali yanayohusu maswala ibuka iwapo yatatahiniwa.Haitoshi kujifunga katika maswala yaliyo vitabuni pekee.

4.4 LUGHA (102/2)

Jedwali 8: Matokeo ya Karatasi ya pili (102/2) ya miaka ya 2005 hadi 2008.

Mwaka	**2005**	**2006**	**2007**	**2008**
Alama ya Wastani	34.08	40.60	32.22	29.18
Alama ya Tanganisho	10.61	11.80	11.91	11.43

Matokeo ya karatasi ya 102/2 yameshuka mwaka wa 2008.Matokeo haya ndiyo ya chini zaidi katika kipindi cha miaka minne. Maswali ya ufahamu na ufupisho/muhtasari ndiyo yaliyowatatiza watahiniwa. Tutayachanganua hapa.

Swali la kwanza

UFAHAMU

Soma makala yafuatayo kisha ujibu maswali.

Kuna aina kuu za hisia zinazotawala na kuongoza maisha ya mwanadamu: kuona, kusikia, kugusa, kuonja na kunusa. Ni vigumu kusema ni hisia gani muhimu kuzidi nyingine ingawa ni dhahiri athari kubwa humuangukia mahuluku asiyeweza kuona. Inasemekana kuwa mishipa ya fahamu inayounga ubongo na macho ni mikubwa zaidi kuliko mishipa ya fahamu inayounga ubongo na viwambo vya masikio. Na katika maisha na nyendo za kila siku kuona hupewa uzito mkubwa **minghairi ya kusikia**. Pengine basi sio ajabu, kama itakavyobainika punde baadaye, kuwa kazi nyingi za fasihi andishi zimeelemea mno katika hisia hii kana kwamba zile nyingine kuu hazipo kabisa. Hakika hili ni kosa. Maana kusikia, kugusa, kuonja, na kunusa nako ndiko humkamilisha mwanadamu aweze kuyafaidi maisha yake. Na hata mbele ya sheria, ushahidi huweza kutolewa mintaarafu ya kusikia, kugusa, kuonja na kunusa alimradi shahidi awe amesikia, kugusa, kuonja, au kunusa mwenyewe. Ushahidi wa kuambiwa haukubaliwi.

Kwa hivyo basi kazi ya sanaa ambayo itazituma fikira za msomaji zihisi kuona, kusikia, kuonja, kugusa, na kunusa matendo na mazingira yanayosimuliwa humpeleka msomaji huyo katika mipaka na nyanja za juu za ufahamu na furaha.

Kila hisia ina umuhimu wake kutokana na mazingira ya tukio linalohusika au kusimuliwa. Maana kazi zote za sanaa hutokana na matendo na maisha ya watu ambao katika matukio, visa na mazingira yao hutumia hisia zao zote tano ama kwa pamoja au kwa nyakati mbalimbali. Ili basi msomaji aweze kupata mandhari kamili, na hata yeye mwenyewe ashiriki katika matukio yenyewe kwa kuchukia, kuonea huruma, n.k., muhimu, kabla ya yote, apate hisia zote hizo tano. Kazi ya sanaa inayojihusisha na hisia moja tu au mbili huwa **muflisi kisanii** kwa vile inashindwa kuwasilisha mandhari za hali halisi kwa msomaji. Je, mara ngapi nyoyo zetu husononeka au kuripukwa kwa maya kwa sababu ya sauti ndogo tu ya ndege aliaye pekee nyikani, au nyimbo ya zamani? Sauti ya ndege huweza kuleta majonzi ya miaka mingi mno ya utotoni wakati ambapo mtu alifiwa na mzazi, ndugu, jamaa au sahibu wake. Kadhalika nyimbo ya kale huweza kuchimbua ashiki ya zamani baina ya wapenzi, au kutonesha **jeraha la masaibu** na madhila yaliyopita. Na wala sio nyimbo na sauti ya ndege tu, pengine hata harufu ya maua huwa na nguvu za kumbukumbu kubwa mno.

Licha ya yote hayo, matumizi ya hisia nyingi yanasaidia kujenga mandhari kamili ya tukio katika akili ya msomaji. Mathalan badala ya kuelezwa tu kuwa paliandaliwa chakula kizuri, msomaji anaelezwa vitu ambavyo vimeandaliwa pamoja na harufu yake. Au badala ya kuambiwa mtu fulani alikuwa na wajihi wa kutisha, huelezwa na kuelewa vyema zaidi kwa kuainishia jinsi pua, macho, rangi, nywele, mdomo na meno ya mtu huyo yalivyo. Na hivyohivyo kwa mifano mingine kadha wa kadha kama vile hasira na ucheshi. Kutokana na maelezo ya kutosha ya hisia msomaji huweza **kumuashiki janabi**, au akadondokwa na ute kutamani chakula ambacho hakipo mbele yake.

Na sio hivyo tu. Hisia zinazotumiwa huweza kumfanya msomaji atafakari zaidi. Ataweza kufikia uamuzi kuhusu picha zinazochorwa kutokana na hisia mbalimbali na wala sio kauli za mkatomkato za mwandishi kama ilivyogusiwa hapo juu. Kauli za mkatomkato sio tu hudumaza sanaa, bali pia hudhalilisha hata akili ya msomaji: kwani **umbuji** wa mwandishi ni pamoja na kufanya matendo na mazingira anayoyasimulia yawasilishe na kuwakilisha fikira za wahusika wake na hata zake mwenyewe.

Hivyo ni dhahiri kuwa hisia humsaidia msomaji kuzama katika matendo na kuelewa fikra za mwandishi mwenyewe, asili na makazi yake, kuwadadisi na kuwaelewa wahusika wenyewe, n.k.

Makala kutoka: *Saffari, A.J. 'Hisia Katika Fasihi Andishi'*
Katika Mulokozi, M.M na Mung'ong'o (Wah.)
(1993:33) ***Fasihi, uandishi na uchapishaji***
Dar-es-Salaam: Dar-es-Salaam Univ. Press

(a) Taja na ueleze uwanja ambao hutilia mkazo hisia zote.

(b) Kwa mujibu wa kifungu hiki, ni nini matokeo ya kusisitiza hisia ya kuona katika fasihi andishi?

(c) (i) Mwandishi ana maoni gani kuhusu kazi nzuri ya sanaa.

(ii) Maoni hayo yana umuhimu gani?

(d) Eleza maana ya maneno haya kama yalivyotumiwa katika kifungu ulichosoma.

(i) muflisi kisanii .....

(ii) jeraha la masaibu.....

(iii) kumuashiki janabi.....

(iv) umbuji.....

Kwa ujumla, maswali ya kifungu yalihitaji mtahiniwa asome, aelewe na kuchanganua, kusanisi, kutafsiri, kutathmini na kutumia maudhui katika kifungu kujibu maswali. Watahiniwa wengi waliinua majibu moja kwa moja kutoka kwa kifungu, jambo ambalo linafanya majibu yasiwe na mtiririko unaoridhisha. Watahiniwa pia walikosa alama katika swali hili kwa sababu wengi hawana stadi ya
kujieleza vizuri na hufanya makosa mengi ya sarufi na tahajia.

Majibu

(a)
- Uwanja wa sheria.
- Ushahidi waweza kutolewa mintarafu ya hisia zote. (tano)
- Ushahidi huweza kutolewa mintarafu ya kuona, kusikia, kuguza, kuonja na kunusa.

(b)
- Hushindwa kukamilisha mwanadamu kuyafaidi maisha yake.
- Haimpeleki msomaji katika mipaka na nyanja za juu, ufahanu na furaha.
- Msomaji hatapata mandhari kamili.

(c)

(i) Kazi nzuri ya sanaa ni ile inayohusisha hisia zote.(tano)

(ii)
- Humkamilisha mwanadamu ili ayafaidi maisha yake.
- Humpeleka msomaji katika miaka na nyanja za juu za ufahamu na furaha.
- Msomaji hupata mandhari kamili.
- Msomaji ataweza kushiriki katika matukio yenyewe.

(d)

(i) ***muflisi kisaniii***: pungufu kisanii, hafifu, isiyoweza kutosheleza kisanii, duni, yenye kasoro au dosari, iliyo chapwa.

(ii) ***jeraha la masaibu***: matatizo, machungu, mateso, taabu, shida, dhiki n.k.

(iii) ***kumwashiki janabi***: kumhamasisha, kumteka, kumfanya apende, kumtamanisha, kumfanya avutiwe, kumteka akili, kumtia hamu au shauku.

(iv) ***umbuji***: ubunifu, uundaji, ufundi, utunzi, ubingwa.

Swali la pili:

UFUPISHO

Uchumi wa soko huria ni hali ya kiuchumi ambapo itokeapo amali, shughuli na harakati zote za kiuchumi ghairi ya zile ambazo ni za lazima kwa serikali au dola kama ulinzi, sheria na mpangilio mzima wa jamii, huwa huria kwa watu binafsi. Msingi wa soko huria, sifa kuu ya utandawazi, ni kuibua na kudumisha mazingira na hali zinazochochea na kumruhusu mtu yeyote kuongozwa na hawaa, au matamanio ya kibiashara anayoyaona sawa pasi na hofu ya kuingiliwa na udhibiti wa serikali.

Mazingira hayo yanawapa watu satua ya kufanya maamuzi kuhusu hatima yao ya kiuchumi, uamuzi kuhusu suala la ajira yao, matumizi ya mtaji – kipato na harija zake, na uwekezaji mzima. Suala mojawapo linaloibuka kuhusiana na mfumo wa soko huria ni kuweka mipaka bainifu na wazi baina ya amali na shughuli zinazohusishwa na serikali na zile ambazo huachwa huria kwa watu. Kwa mfano, inaaminiwa kuwa haki ya kuishi na kulindwa dhidi ya shambulizi, liwe la kijambazi au la kigaidi, ni ya kimsingi ambayo haiwezi kuhusishwa na uwezo wa kiuchumi wa mtu binafsi. Aidha huduma za kimsingi za afya nazo zinaingia katika kumbo hili. Ikiwa huduma hizi zitaachwa huria pana uwezekano mkubwa kuwa zitaishia kuwa istihaki ya wenye mtaji na kipato cha juu tu.

Licha ya kuwepo kwa sheria au kanuni huria kutoka nyanja maalum, hutokea hali ambapo udhibiti wa kiserikali ni lazima. Hili hutokea pale ambapo ipo haja ya kuyalinda mazingira hasa kutokana na uchafuzi wa viwanda au tasnia. Aidha udhibiti huo ni lazima pale ambapo haki za watu wengine zinahusika; yaani ikiwa uhuru wa hata mtu mmoja unaadhirika kutokana na sera hizo, pana haja ya kuingilia ili kuisawazisha hali yenyewe.

(a) Andika kwa muhtasari maana ya uchumi wa soko huria kulingana na taarifa hii.

(maneno 25-30)

Matayarisho

Jibu

(b) Eleza mawazo makuu yanayojitokeza katika aya ya pili na ya tatu.
(Maneno 70-75)

Matayarisho

Jibu

Swali hili lilihitaji mtahiniwa asome kifungu na kusanisi hoja muhimu na kuzifanyia muhtsari bila kuacha mawazo muhimu wala kupoteza maana asili ya kifungu. Mtahiniwa pia alihitaji stadi ya kutumia viunganishi vifaavyo ili kuleta mtiririko unaoridhisha.Watahiniwa wengi walilemewa katika upande wa kutumia viunganishi ili kutiririsha mawazo. Wengi waliinua sehemu ambazo hazikuwa na uhusiano wowote kihoja. Stadi ya kujieleza kwa mtiririko ufaao lazima ifundishwe.

Majibu

a) Uchumi wa soko huria ni hali ya kiuchumi ambapo shughuli zote za kiuchumi ghairi ya zile ambazo ni za lazima ***kwa serikali*** huwa huria kwa ***watu binafsi***.

(b)

- Soko huru huwawezesha watu kuamua hatima yao kiuchumi.
- Suala ibuka ni kuweka mipaka baina ya shughuli zinazohusishwa na serikali na zinazoachwa huria kwa watu binafsi.
- Haki ya kuishi na kulinda dhidi ya shambulizi haiwezi kuachiwa watu binafsi.
- Huduma hizo zikiachwa huru zitaishia kuwa istihaki ya watu wa kipato cha juu.
- Huduma za kimsingi za afya haziwezi kubinafsishwa.
- Udhibiti wa kiserikali hutokea kuyalinda mazingira dhidi ya uchafuzi.
- Pia, udhibiti huo hutokea katika kulinda haki za watu binafsi.
- Soko huru huwawezesha watu kuamua hatima yao kiuchumi.
- Suala ibuka ni kuweka mipaka baina ya shughuli zinazohusishwa na serikali na zinazoachwa huria kwa watu binafsi.
- Haki ya kuishi na kulinda dhidi ya shambulizi haiwezi kuachiwa watu binafsi.
- Huduma hizo zikiachwa huru zitaishia kuwa istihaki ya watu wa kipato cha juu.

4.5 MAPENDEKEZO

4.5.1 Walimu waendelee kuwapa wanafunzi mazoezi ya maswali ya ufahamu na kusahihisha wakizingatia sarufi kwa sababu jambo hili linazingatiwa wakati wa kusahihisha mtihani wa kitaifa.

4.5.2 Wanafunzi wasisitiziwe kwamba baadhi ya maswali ni ya stadi za juu kama matumizi na tathmini kwa hivyo maswali ambayo hayaonekani kuwa na majibu ya kuinua moja kwa moja huulizwa pia.

4.5.3 Mazoezi ya muhtasari huku mtiririko ufaao ukisisitizwa lazima yapewe wanafunzi mara kwa mara ndio wazoee kutumia viunganishi kutiririsha hoja katika kujibu maswali ya muhtasari.

4.5.4 Masuala yote katika silabasi yafundishwe katika upana wake bila kubagua.

4.6 FASIHI (102/3)

Jedwali 9: Matokeo ya karatasi ya tatu (102/3) ya miaka ya 2005 hadi 2008.

Mwaka	**2005**	**2006**	**2007**	**2008**
Alama ya Wastani	37.57	48.48	43.49	31.17
Alama ya Tanganisho	14.01	14.63	13.12	13.64

Matokeo ya karatasi ya tatu (102/3) ya mwaka wa 2008 yameshuka sana kutoka alama ya wastani ya ***43.49*** mwaka wa 2007 hadi ***31.17*** mwaka wa 2008. Tutachanganua swali la kwanza pekee katika karatasi hii kwa sababu ndilo lililoonekana kuwapa watahiniwa changamoto kidogo. Swali la ushairi huhitaji mtahiniwa kusoma, kuelewa maudhui ya shairi, dhamira, lugha iliyotumiwa pamoja na istilahi za kifasihi zinazotumiwa.

Watahiniwa walitatizika kwa kutozielewa mbinu za kifasihi na pia kushindwa kuandika katika lugha ya nathari ambapo wengi waliinua tu mishororo ya ubeti badala ya kueleza hoja zilizokuwepo kwa lugha ya kawaida. Hali kadhalika,watahiniwa wengi walitatizika katika kulielewa shairi hasa umbo lake. Wengine walibainisha udhaifu wao katika kufahamu na kuzieleza mbinu mbalimbali za uandishi zilizotumiwa. Iling'amuliwa kwamba watahiniwa wengi hawakutarajia swali la ushairi kuwa la lazima.

(LAZIMA) **USHAIRI**

Soma shairi hili kisha ujibu maswali yanayofuata.

WASAKATONGE

1. **Wasakatonge na juakali**

Wabeba zege ya maroshani,
Ni msukuma mikokoteni,
Pia makuli bandarini,
Ni wachimbaji wa migodini,
Lakini maisha yao chini.

2. **Juakali na wasakatonge**

Wao ni manamba mashambani,
Ni wachapa kazi viwandani,
Mayaya na madobi wa nyumbani,
Ni matopasi wa majaani,
Lakini bado ni masikini.

3. **Wasakatonge na juakali**

Wao huweka serikalini,
Wanasiasa madarakani,
Dola ikawa mikononi,
Wachaguliwa na ikuluni,
Lakini wachaguaji duni.

4. **Juakali na wasakatonge**

Wao ni wengi ulimwenguni,
Tabaka lisilo ahueni,
Siku zote wako matesoni,
Ziada ya pato hawaoni,
Lakini watakomboka lini?
(Mohammed Seif Khatib)

(a) "Shairi hili ni la kukatisha tamaa". Fafanua rai hii kwa kutoa mifano minne.

(b) Taja tamathali ya usemi iliyotawala katika shairi zima na uonyeshe mifano miwili ya jinsi ilivyotumika.

(c) Eleza umbo la shairi hili.

(d) Andika ubeti wa tatu katika lugha ya nathari.

(e) Onyesha mifano miwili ya maadili yanayojitokeza katika shairi hili.

(f) Eleza maana ya maneno yafuatayo kama yalivyotumiwa katika shairi.

(i) Manamba
(ii) Tabaka lisilo ahueni

Majibu

(a)

(i) Wanajamii wanajishughulisha katika kazi mbalimbali ili kuboresha maisha yao lakini maisha yao ni duni.
(ii) Vibarua wanaoajiriwa wanafanya kazi kwa bidii lakini mishahara yao ni duni.
(iii) Viongozi serikalini wamepewa nyadhifa hizo za hadhi lakini hawawajibiki kwa wale waliowachagua, hawawajibiki kunyanyua hali za wale waliowachagua.
(iv) Tabaka la chini ndio walio wengi katika jamii na ndio tegemeo la jamii lakini wanaishi maisha ya mateso mengi.
(v) Haijulikani mateso ya walio wengi yatafikia kikomo lini.

(b)

(i) ***Kinaya***

- Wasakatonge ndio wengi lakini hawana sauti.
- Makuli, mayaya, manamba, wachapakazi, madobi na matopasi ni maskini
- Wasakatonge wafanyao kazi kwa mateso mengi ni wenye mishahara duni.
- Wapelekao watu serikalini hawashughulikiwi na waliowachagua.
- Wazalishao mali hawana chochote bado maskini.

(ii) ***Taswira***

- Wabeba zege maroshani.
- Msukuma mikokoteni.
- Makuli bandarini.
- Manamba mashambani.
- Wachapakazi viwandani.
- Matopasi wa majaani.
- Wanasiasa madarakani.
- Mayaya na madobi wa nyumbani siku zote wako matesoni.

(iii)

Takriri

- Wasakatonye.
- Juakali.
- Lakini limetumiwa mwanzoni mwa kila mshororo wa mwisho wa ubeti (kikwamba).
- Wao.
- Ni.

(iv) ***Ulinganishi***

- Wachimbaji wa migodi lakini maisha yao chini.
- Wachapakazi viwandani lakini bado ni maskini.

(c)

(i) Kipande kimoja.
(ii) Shairi lina kituo, kimalizio.
(iii) Mizani hailingani katika kila ubeti.
(iv) Beti 4.
(v) Mishororo 6 kwa kila ubeti (Tasdisa, usita) au kila ubeti una kishwa/kijichwa, anwani na mishororo 5.
(vi) Katika mshororo wa kwanza vina vinabadilika – LI na NGE.
(vii) Mishororo mitano ya mwisho ina vina vinavyofanana – NI.
(viii) Pindu – mshororo wa kwanza unajipindapinda.

(d)

Watu wa tabaka la chini ndio huwapa nyadhifa viongozi. Kutokana na nyadhifa hizo viongozi hupata mali au uwezo wa kiuchumi (kuiongoza nchi). Wale waliowachagua maisha yao ni ya kusikitisha.

(e)

(i) Kufanya kazi kwa bidii.
(ii) Kuwajibika – kwa umma katika kushiriki katika kuwachagua viongozi.
(iii) Viongozi wanatarajiwa kuadilika kwa kunyanyua hali ya umma kwa kujali hali ya wafanyakazi.

(f)

- Manamba – Vibarua/wafanyikazi katika mashamba.
- Tabaka lisilo ahueni - watu maskini/wasio na hali nzuri.
- Kiuchumi/walalahoi.

4.7 MAPENDEKEZO

4.7.1 Ni vizuri walimu wakiendelea kuonyesha wanafunzi kwamba ushairi ni jambo la kawaida linalowekwa katika lugha ya kishairi ndio waweze kuupenda.

4.7.2 Walimu wawasaidie wanafunzi kuweza kutofautisha dhamira, maudhui katika ushairi na pia wasaidiwe kutambua mbinu tofauti tofauti za kifasihi katika mashairi.

4.7.3 Wanafunzi waendelee kusisitiziwa kwamba kuandika katika lugha ya nathari si kuinua mishororo mizima na kuipachika vile ilivyo, bali ni kuitambua hoja muhimu katika kila mshororo na kuiandika kwa lugha ya kawaida.

4.7.4 Wanafunzi wahimizwe kutambua masuala muhimu yanayojitokeza katika hadithi zote katika Mayai Waziri wa Maradhi na Hadithi Nyingine.

4.7.5 Wanafunzi wawekewe misingi bora katika fasihi simulizi tangu kidato cha kwanza. Katika swali linalolenga tabia za mhusika,ni muhimu kuzingatia pande zote - nzuri na baya.

TANB. Ni dhahiri kwamba kwa jumla matokeo ya mtihani wa somo la Kiswahili yamezidi kudororora; na kwa hivyo ni muhimu walimu wajitahidi kutumia mbinu zote za ufundishaji na utayarishaji wa watahiniwa kwa mitihani yao.

5.0 MATHEMATICS (121)

This Mathematics report is based on an analysis of performance of candidates who sat for the year 2008 KCSE Mathematics examination. Candidates were tested in most of the skills on the Bloom's Taxonomy on the cognitive domain. The KCSE Mathematics examination tested the candidates' abilities in two papers; ***Paper 1 (121/1)*** and ***Paper 2 (121/2***). The two papers are equally weighted and each is marked out of one hundred percent. The two papers supplement each other to cover the entire syllabus. It is hoped that this report will be of benefit to both the teachers and students in the teaching/learning process as well as in preparing candidates for future examinations.

5.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows the overall performance of both papers for the past four years.

Table 10: Candidates' Overall Performance in Mathematics for the Last Four Years

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2005	1		100	19.95	19.38
	2		100	19.51	19.25
	Overall	**259,280**	**200**	**39.39**	**37.95**
2006	1		100	22.71	20.09
	2		100	15.36	15.97
	Overall	**238,684**	**200**	**38.08**	**35.00**
2007	1		100	19.55	10.09
	2		100	19.91	20.74
	Overall	**273,504**	**200**	**36.46**	**39.83**
2008	1		100	22.76	22.76
	2		100	19.82	19.56
	Overall	**304,908**	**200**	**42.59**	**41.53**

From the table above, the following observations can be made:

5.1.1 The overall mean in the Mathematics examination improved from ***36.46*** in the year 2007 to ***42.59*** in the year 2008.

5.1.2 The overall standard deviation in the Mathematics examination also improved in the year 2008 ***(41.53)***, when compared to the year 2007 ***(39.83)***.

5.1.3 There has been a significant increase in candidature over the years.

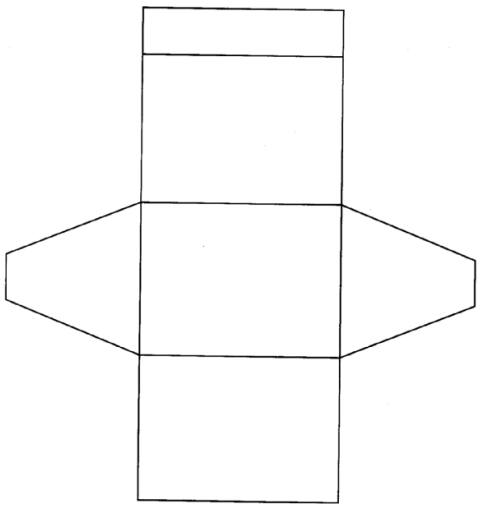
Questions in which candidates' performance was poor have been identified and are analyzed in detail in the discussion that follows.

5.2 PAPER 1 (121/1)

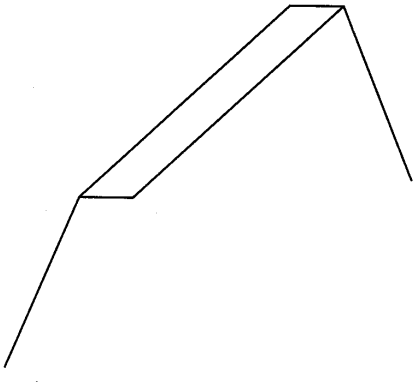
In this paper, candidates were required to answer all the questions in ***Section I*** and choose any five questions in ***Section II.*** It is important to note that candidates were not required to answer any extra questions in section II. Responses from candidates revealed that the following questions were most difficult: Questions ***5, 8, 10, 13, 20*** and ***21.***

Question 5

The figure below shows a net of a solid.



Below is a part of the sketch of the solid whose net is shown above.
Complete the sketch of the solid, showing the hidden edges with broken lines.

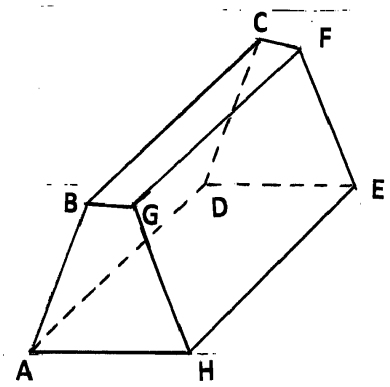


This question tested candidates' skills on construction of a solid. Given a part of a sketch of the solid and the net of the solid, candidates were required to complete the sketch.

Weaknesses

Most of the candidates were non-starters in this question. Majority of them could not draw the corresponding parallel and equal lines. Those who did were unable to indicate the hidden edges as demanded.

Expected Responses



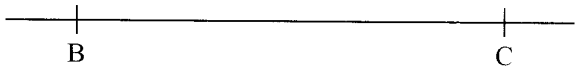
Candidates needed to draw line CD parallel and equal to FE and complete the sketch with hidden edges dotted. The solid was to be drawn using a ruler.

Advice to Teachers

Teachers are advised to provide students with adequate practice in construction of solids given their nets.

Question 8

Line BC below is a side of a triangle ABC and also a side of a parallelogram BCDE.



Using a ruler and a pair of compasses only, construct:

(i) the triangle ABC given that $\angle ABC = 120°$ and AB = 6 cm

(ii) the parallelogram BCDE whose area is equal to that of the triangle ABC and point E is on line AB.

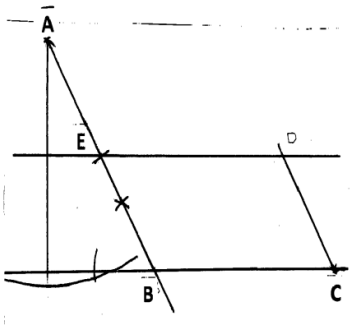
This question tested candidates' ability to construct angles using a ruler and a pair of compasses only.
Candidates were required to construct angle 120^0 on a given line BC and then construct the triangle ABC given that line AB = 6 cm. Candidates were then required to construct a parallelogram whose area equals that of triangle ABC.

Weaknesses

Majority of the candidates were not able to relate the triangle and the parallelogram given the same base and area.

Expected Responses

To start with, candidates needed to construct angle 120^0 and complete the triangle ABC to earn the first mark. Candidates were then expected to drop a perpendicular from point A to line CB produced height of triangle ABC, as shown in figure 2 below to obtain the height of triangle ABC.



Bisection of the height of triangle ABC will provide the height of the parallelogram. Candidates needed to determine point E and D and draw parallel lines EB and DC. Hence completion of the parallelogram BCDE.

Advice to Teachers

Teachers are therefore required to take students through such relationships.

Question 10

An angle of 1.8 radians at the centre of a circle subtends an arc of length 23.4 cm.
Find:

(a) the radius of the circle

(b) the area of the sector enclosed by the arc and the radii.

This question tested the candidates' knowledge on the radian measure as relates to the circle.

Weaknesses

Candidates had difficulties in using the relationship between degrees and radians.

Expected Responses

(a) Candidates were required to use the radian measure to find the radius of the circle,
$r = \frac{23.4}{1.8} = 13\ cm$.

(b) They were also required to find an arc length and area of an enclosed sector as follows:

Area of sector $= \frac{1.8}{2\pi} \times \pi \times 13^2 = 152.1 cm^2$

Advice to Teachers

Teachers are advised to teach in depth about the relationships between degrees and radians.

Question 13

A rectangular and two circular cut-outs of metal sheet of negligible thickness are used to make a closed cylinder. The rectangular cut-out has a height of 18 cm. Each circular cut-out has a radius of 5.2 cm. Calculate in terms of π, the surface area of the cylinder.

This question tested candidates' knowledge on surface area of a cylinder. Candidates were required to calculate the surface area of the cylinder given the rectangular part and two circular cut-outs. The answer was to be left in terms of π.

Weaknesses

A good number of candidates did not follow the instructions after using the formula $SA = 2\pi r^2 + 2\pi rh$.

Expected Responses

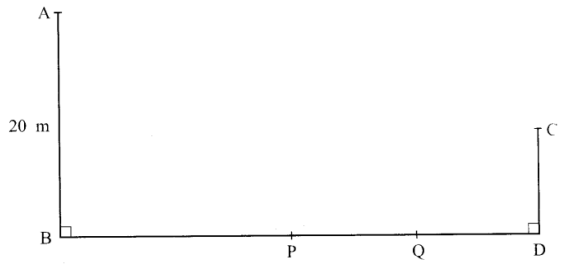
The area of the rectangular part (2 x 5.2 x π x 18 = 187.2π) was to be added to the area of the circular parts (2 x 5.22 x π = 54.08π) to obtain the surface area of the cylinder as 241.28π.

Advice to Teachers

Teachers need to give plenty of exercises to students on similar questions.

Question 20

The diagram below represents two vertical watch-towers AB and CD on a level ground. P and Q are two points on a straight road BD. The height of the tower AB is 20 m and road BD is 200 m.



(a) A car moves from B towards D. At point P, the angle of depression of the car from point A is 11.3°. Calculate the distance BP to 4 significant figures.

(b) If the car takes 5 seconds to move from P to Q at an average speed of 36 km/h, calculate the angle of depression of Q from A to 2 decimal places.

(c) Given that QC = 50.9 m, calculate:

(i) the height of CD in metres to 2 decimal places;

(ii) the angle of elevation of A from C to the nearest degree.

This question tested candidates' application skills on the concepts of angles of depression and scale drawing.

Weaknesses

Most candidates managed to score the first six marks only.

Expected Responses

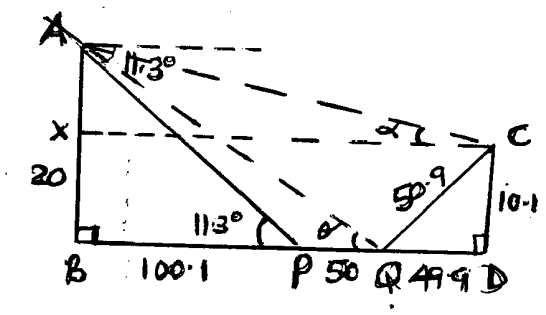
(a) Candidates were required to apply their knowledge of trigonometric ratios to calculate the distance BP:

$$\tan 11.3° = \frac{20}{BP} \Rightarrow BP = 100.1m$$

(b) Candidates needed to apply the conversion skills to calculate the distance PQ:

$$\text{PQ} = \frac{36x1000}{60x60} x5 = 50m$$

In order to conceptualize the required angle, that is, the angle of depression of Q from A, candidates needed to come up with the following sketch:



Thus, the distance BQ = 100.1 + 50 = 150.1m

Tan of the angle of depression = tan $\theta = \frac{20}{150.1} \Rightarrow \theta = 7.5896426$

$\approx 7.59°$

(c) Candidates were required to calculate the height CD and the angle of:

(i) elevation of A from C as follows:

$$CD = \sqrt{50.9^2 - 49.9^2} = 10.03992 \approx 10.04m$$

(ii) The angle of elevation $(\propto)$ of A from C can be calculated as:

$$\tan(\propto) = \frac{9.96}{200} = 0.0498$$

$$\alpha = 2.8509745$$

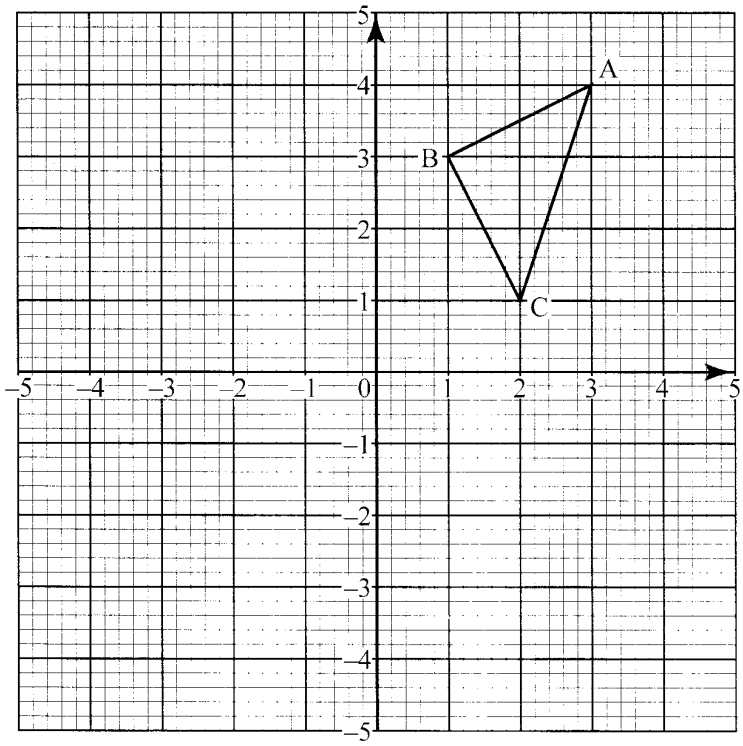
$$\approx 3^0$$

Advice to Teachers

Teachers need to ensure that students draw sketches that can help them answer such questions accurately.

Question 21

The diagram below shows a triangle ABC with A(3,4), B(1,3) and C(2,1).



(a) Draw ΔA'B'C', the image of ΔABC under a rotation of +90° about (0,0).

(b) Draw ΔA"B"C" the image of ΔA'B'C' under a reflection in the line y = *x*.

(c) Draw ΔA"'B"'C"', the image of ΔA"B"C" under a rotation of –90° about (0,0).

(d) Describe a single transformation that maps ΔABC onto ΔA"'B"'C"'.

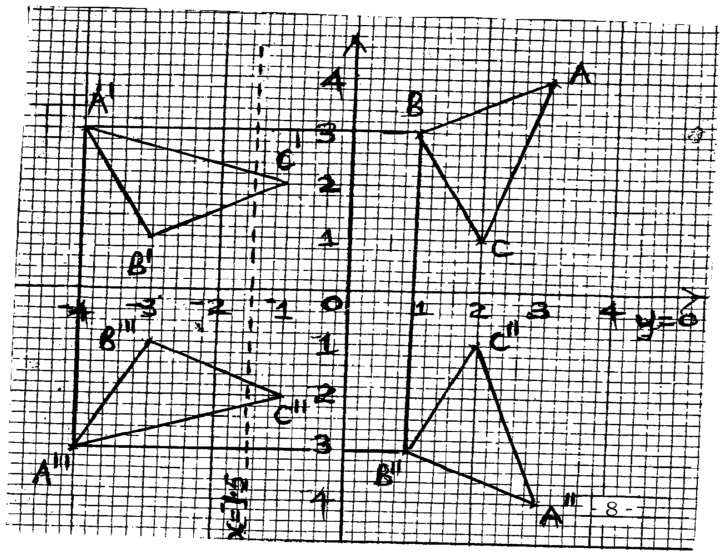
(e) Write down the equations of the lines of symmetry of the quadrilateral BB"A"'A'.

This question tested the candidates' knowledge of rotations and reflections. Candidates were required to display high skills on construction of images of objects after being subjected to given transformations.

Weaknesses

In this question most candidates were unable to obtain the correct equation in part (e).

Expected Responses



(a) The two marks were earned after correctly drawing the image $A'B'C'$, the image of the triangle ABC under a rotation of positive $90°$ about the origin. 1 mark was given in case only two vertices of the image $A'B'C'$ were correct.

(b) The two marks were earned for $A''B''C''$ correctly drawn.

(c) The two marks were awarded for $A'''B'''C'''$ correctly drawn.

(d) Candidates were required to describe a single transformation that maps triangle ABC onto $A'''B'''C'''$. The correct description was: a reflection in the line $y = -x$.

(e) The equations of the lines of symmetry of the quadrilateral $BB''A'''A'$ are:

$x = -1.5$ and $y = 0$.

Advice to Teachers

Teachers are advised to give more exercises for practice to students on the concept of transformation.

5.3 PAPER 2 (121/2)

This paper complements paper 1 in covering the KCSE Mathematics syllabus. The paper covers mainly Form 3 and 4 syllabi. The paper format is similar to that of paper 1. The following questions proved to be difficult, according to candidates' responses: Questions ***1, 3, 6, 12, 14, 21*** and ***23***.

Question 1

In this question, show all the steps in your calculations, giving the answer at each stage. Use logarithms correct to 4 decimal places, to evaluate

$$\frac{6.373 \log 4.948}{\sqrt{0.004636}}$$

This question tested candidates' ability to use logarithms in calculations of given operations.

Candidates were required to interpret 'log a' as a number in operations. They were to determine logarithms of the given numbers to 4 decimal places. They were required to also use logarithmic laws for multiplication, division and square roots.

Weaknesses

It is important to note that the question demanded displaying ***"all the steps"*** in the candidates' calculations, giving the answer at each stage. Instead, most candidates used calculators to get the square root or product in the numerator before applying logarithms.

Expected Responses

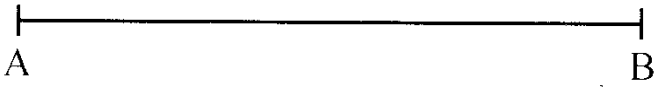
Candidates needed to find the log (log 4.948) as log = $0.6944 = \bar{1}.8416$. Again, they were to obtain $\log\sqrt{0.004636} = \bar{2}.8331$. Eventually, candidates were expected to obtain 64.98 as the correct answer.

Advice to Teachers

Teachers are advised to give students more practice on use of ***"log a"*** as a number in operations, and use of negative characteristics.

Question 3

Line AB given below is one side of triangle ABC. Using a ruler and a pair of compasses only:



(i) Complete the triangle ABC such that BC = 5 cm and $\angle ABC = 45°$.

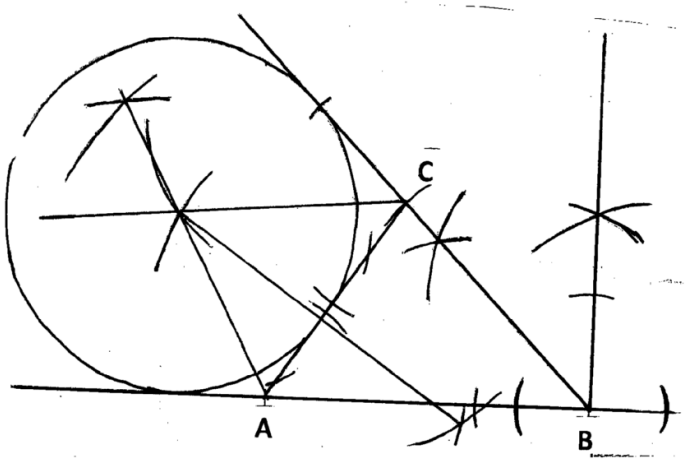
(ii) On the same diagram construct a circle touching sides AC, BA produced and BC produced.

This question tested candidates' ability to construct an escribed circle. Candidates were required to construct a triangle ABC first as per the given specifications. Thereafter, they were to construct the escribed circle along the side AC.

Weaknesses

Most candidates were unable to draw the sides BA produced and BC produced. Some were not able to construct the circle due to failure to determine the centre of the circle.

Expected Responses



To construct the triangle, candidates needed to construct angle $45°$ at B and locate point C, 5cm from B. To construct the escribed circle along AC, sides BA and BC produced, bisect the angle at A and C respectively to determine the centre of the circle. To determine the radius of the circle, drop a perpendicular from the centre of the circle to any side of the triangle. Using the circle and the radius the escribed circle can be drawn.

Advice to Teachers

Teachers are advised to emphasize determination of the radius of the ***escribed*** or ***inscribed circle*** by dropping a perpendicular from the centre to a side of the circle. Teachers should discourage students from the use of trial and error methods.

Question 6

A student at a certain college has a 60% chance of passing an examination at the first attempt. Each time a student fails and repeats the examination, his chances of passing are increased by 15%.

Calculate the probability that a student in the college passes an examination at the second or at the third attempt.

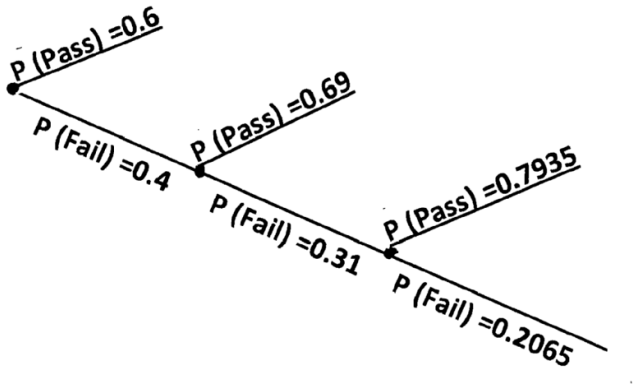
This question tested candidates' knowledge on the concept of probability. Candidates were required to interpret percentage (%) chance as probability. The use of a probability tree and then computation of the various probabilities along the branches was the most helpful approach to the question.

Weaknesses

Most candidates who were unable to answer the question added the given percentage instead of working out percentage increase.

Expected Responses

Candidates needed to use the following tree diagram to answer the question.



The probability of passing in the second attempt

$$= 0.4x0.69$$

The probability of passing in the second or third attempt

$$= 0.4x0.69 + 0.4x0.31x0.7935$$
$$= 0.276 + 0.098394$$
$$= 0.374394$$

Advice to Teachers

Teachers are advised to emphasize that probability does not exceed 1 at any time. Students should appreciate that any process that purports to create a probability greater than 1 is wrong.

Question 12

Solve for y in the equation $\log_{10}(3y + 2) - 1 = \log_{10}(y - 4)$.

This question tested candidates' knowledge on laws of logarithms.

Weaknesses

Majority of the candidates could not interpret 1 as $\log_{10} 10$. All terms in a logarithm equation are logs and plain numbers must be interpreted as logs.

Expected Responses

Candidates were required to interpret 1 as $\log_{10} 10$ and then apply logarithm laws of multiplication and division.

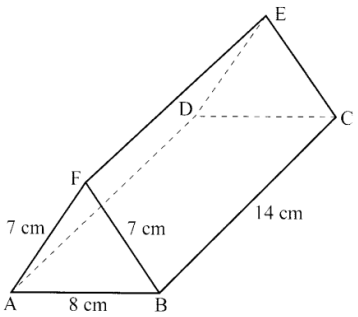
$$\log_{10} 10 = 1$$
$$\therefore \log \frac{(3y+2)}{10} = \log_{10}(y-4)$$
$$\frac{3y+2}{10} = y - 4$$
$$y = 6$$

Advice to Teachers

Teachers need to explain the concept behind dropping of logs. It is important to note that some candidates literally divide log by the word 'log'; it is not cancellation but dropping.

Question 14

The figure below represents a triangular prism. The faces ABCD, ADEF and CBFE are rectangles. AB = 8 cm, BC = 14 cm, BF = 7 cm and AF = 7 cm.



Calculate the angle between faces BCEF and ABCD.

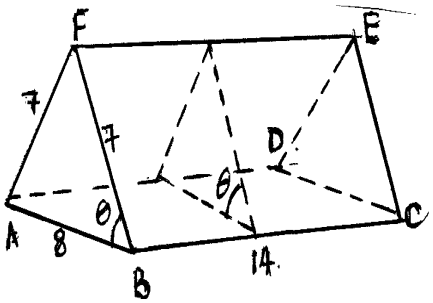
This question tested the candidates' ability to apply this knowledge on trigonometric ratio to work out angles in 3-dimensional geometry.

Weaknesses

Majority of the candidates were not able to identify the appropriate angle that defines the angle between planes BCEF and ABCD.

Expected Responses

Candidates were required to find an angle between two intersecting planes. To do this, the candidates needed to identify the required angle (θ) as indicated below:



$$Cos\theta = \frac{4}{7} \Rightarrow \theta = 55.1500954° \approx 55.15$$

Advice to Teachers

Teachers must insist on identifying the angle between two planes by lines on each plane meeting at a point on the line of intersection of the planes and those that are perpendicular to the line of intersection.

Question 21

Two policemen were together at a road junction. Each had a *walkie talkie*. The maximum distance at which one could communicate with the other was 2.5 km.

One of the policemen walked due East at 3.2 km/h while the other walked due North at 2.4 km/h.

The policeman who headed East travelled for x km while the one who headed North travelled for y km before they were unable to communicate.

(a) Draw a sketch to represent the relative positions of the policemen.

(b) (i) From the information above form two simultaneous equations in x and y.

(ii) Find the values of x and y.

(iii) Calculate the time taken before the policemen were unable to communicate.

This question tested candidates' ability to apply their knowledge of formation and solution of quadratic equations on everyday life situations.

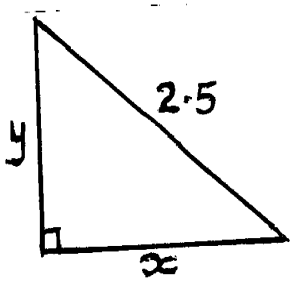
Weaknesses

Most candidates were not able to conceptualize the movements of the two policemen and hence were unable to sketch the movements.

Expected Responses

Candidates were required to form and solve linear and quadratic equations from given information. Candidates needed to interpret the given information into a sketch as shown below:

(a)



(b) The expected equations are:

(i)

$$x^2 + y^2 = 2.5^2$$

$$\frac{y}{2.4} = \frac{x}{3.2}$$

$$y = \frac{3x}{4}$$

$$\Rightarrow x^2 + (\frac{3}{4}x)^2 = 2.5^2$$

(ii) $$16x^2 + 9x^2 = 6.25x16$$

$$x^2 = \frac{6.25x16}{25}$$

$$x = 2km$$

$$y = 1.5km$$

(iii) Hence, time taken before the policemen were unable to communicate

$$= \frac{2}{3.2} or \frac{1.5}{2.4} = 0.625 hrs$$

Advice to Teachers

Teaching should be done with straight lines using rulers and all necessary information provided to students.

Question 23

Halima deposited Ksh 109 375 in a financial institution which paid simple interest at the rate of 8% p.a. At the end of 2 years, she withdrew all the money. She then invested the money in shares. The value of the shares depreciated at 4% p.a. during the first year of investment. In the next 3 years, the value of the shares appreciated at the rate of 6% every four months.

(a) Calculate the amount Halima invested in shares.

(b) Calculate the value of Halima's shares:

(i) at the end of the first year;

(ii) at the end of the fourth year, to the nearest shilling.

(c) Calculate Halima's gain from the shares as a percentage.

This question tested candidates' knowledge on investment skills. Knowledge of commercial arithmetic dealing with simple interest, depression and appreciation were required to answer the question.

Weaknesses

The major challenge to candidates in this question was the choice of number of figures in rounding off to the nearest shilling where 0.5 was either dropped or enhanced.

Expected Responses

(a) Candidates were required to workout the interest accrued after Halima deposited Kshs 109,375.

Interest $= 109375 x \frac{8}{100} x2 = 17500$

Then the amount Halima invested in shares is calculated:

Amount $= 109375 + 17500 = Shs126875$

(b) Candidates were required to calculate the value of Halima's shares at the end of the first year and at the end of the fourth year as follows:

(i) First year value of shares

$$= \frac{96}{100} x126875 = Ksh121800$$

(ii) Fourth year value of shares

$$= 121800(1 + \frac{6}{100})^9 = Ksh205779$$

(c) Candidates were required to calculate Halima's gain from the shares as a percentage as follows:

$$\%gain = \frac{205779 - 126875}{126875} x100\%$$

$$= 62.19\%$$

Advice to Teachers

Teachers are advised to explain to students on how to determine the value of ***n*** as used in the compound interest formula where compounding is not annual.

5.4 GENERAL COMMENTS

5.4.1 Teachers should endeavour to cover the syllabus early enough to enable ample time for comprehensive revision. Candidates on their part should read and adhere to the instructions demanded on the front page of the examination paper.

5.4.2 Teachers should encourage candidates to attempt all the required questions; they should avoid leaving too many blanks.

5.4.3 As evidenced in this report, a number of questions that required the application of construction skills were considered for analysis. This is an indication that candidates are ill prepared to answer questions on this concept. Teachers are therefore required to ensure that students are taken through in detail and more exercises are given for practice.

6.0 BIOLOGY (231)

This was the third time the revised KCSE Biology syllabus was tested.

6.1 CANDIDATES' GENERAL PERFORMANCE

The performance of the candidates in the three Biology papers is given in the table below. The performance of candidates in the years 2006 and 2007 is also give for comparison.

Table 11: Candidates' Overall Performance in Biology in the years 2006, 2007 and 2008

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2006	1		80	19.83	13.35
	2		80	23.2	13.06
	3		40	11.63	7.00
	Overall	**217,675**	**200**	**54.89**	**31.00**
2007	1		80	27.10	13.68
	2		80	35.01	14.63
	3		40	21.81	8.73
	Overall	**248,519**	**200**	**83.90**	**33.00**
2008	1		80	22.24	13.42
	2		80	21.09	11.55
	3		40	17.30	6.76
	Overall	**274,215**	**200**	**60.64**	**29.12**

From the table above, it can be observed that:

6.1.1 The candidature has been increasing over the years.

6.1.2 There was a drop in performance in the year 2008 when compared to 2007, with lower mean scores and standard deviations in all the three papers.

The questions that were performed poorly by the candidates are discussed below.

6.2 PAPER 1 (231/1)

Question 2

State the importance of the following processes that take place in the nephron of a human kidney:

(a) ultrafiltration;

(b) selective reabsorption.

The candidates were required to know the importance of ultrafiltration and re-absorption.

Weaknesses

The candidates gave the meaning of the ultrafiltration and re-absorption instead of their importance. They did not mention direction of movement of substances. Majority were not able to name the materials ultra filtrated or reabsorbed. Some did not know the difference between re-absorption and absorption.

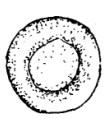
Expected Responses

(a) ***Ultra filtration:*** To remove toxic/ harmful substances/urea/nitrogenous waste from the blood stream.

(b) ***Selective re-absorption:*** To return useful substances/glucose and amino acids back into the blood stream.

Question 4

The diagrams below show a red blood cell that was subjected to a certain treatment.



At start

At the end of experiment

(a) Account for shape of the cell at the end of the experiment.

(b) Draw a diagram to illustrate how a plant cell would appear if subjected to the same treatment.

The candidates were required to know what treatment would cause a red blood cell to crenate and draw a diagram to represent a plasmolysed cell.

Weaknesses

The candidates confused the terms ***"turgid"***, ***"flaccid"*** and ***"crenation"***. The term ***"treatment"*** was interpreted by some to mean ***"medicine"***. The diagrams were poorly drawn and although labelling was not required they were wrongly labelled. Some candidates shaded or dotted the diagrams.

Expected Responses

(a) The red blood cell was placed in a hypertonic solution. It lost water by osmosis and became crenated.

Question 5

(a) State **two** factors that affect enzymatic activities.

(b) Explain how **one** of the factors stated in (a) above affects enzymatic activities.

Candidate were required to recall any of the factors that affect enzymatic activities:- temperature, pH, substrate concentration, co-factors and inhibitors.

Weaknesses

Candidates wrote ***"pH"*** as ***"ph"*** and ***"PH"***. Some confused enzyme with substrate concentration. Majority of candidates only recalled temperature and pH. Others confused properties with factors affecting enzymatic activities.

Expected Reponses

(a) Temperature; pH; co-factors; co-enzyme; substrate concentration; cell wall inhibitors; enzyme concentration; product concentration.

Question 7

(a) What is a fossil?

(b) How does convergent evolution occur?

Candidates were required to define the term fossil and describe how convergent evolution occurs.

Weaknesses

In defining fossil, the word ***'preserved'*** was missing making the definition incomplete or wrong. There was confusion between ***"homologous"*** and ***"analogous"*** structures and also between ***"divergent"*** and ***"convergent"*** evolution.

Expected Responses

(a) Preserved remains of dead organisms that lived in ancient times.

(b) Convergent evolution occurs when two dissimilar species/structures/organisms of different embryonic origin in response to similar environmental conditions develop similar characteristics/modified to perform similar functions.

Question 9

Give **three** factors that determine the amount of energy a human being requires in a day.

Candidates were required to mention three factors that determine the amount of energy a human being requires in a day.

Weaknesses

Most candidates gave health as a factor and confused ***"gender"*** with ***"sex"***. They gave factors affecting rate of respiration. ***"Metabolic rate"*** was confused with ***"B.M.R"*** and majority explained instead of stating.

Expected Responses

- Sex.
- Basal metabolic rate (B.M.R).
- Occupation/activity.
- Age.
- Body size.

Question 10

(a) Name the antigens that determine human blood groups.

(b) State the adaptation that enables the red blood cells to move in blood capillaries.

Candidates were to name the antigens that determine blood groups.

Weaknesses

Many candidates named blood groups and many did not know the difference between ***"antigens"*** and ***"antibodies"***.

Expected Responses

(a) Antigens A; and B/ rhesus factors/rhesus antigens/antigen D.

(b) Pliable/flexible/able to change its shape.

Question 14

Describe the **three** characteristics of a population.

The candidates were required to state characteristics of a population and explain each one of them.

Weaknesses

Most candidates were not able to state correct characteristics. Some gave general definitions of populations. Others simply stated but did not explain.

Expected Responses

- ***Growth:*** increase in numbers/decrease in numbers/change in numbers/growth rate.
- ***Dispersion:*** spread or distribution of organisms in a habitat.
- ***Density:*** the number of individuals per unit area.

Question 15

Explain what happens when there is oxygen debt in human muscles.

Candidates were required to have the knowledge of anaerobic respiration, oxygen debt and its effects on the tissues.

Weaknesses

Most candidates scored on either the second or last marking point and missed the first mark of muscles being subjected to respire anaerobically. Others confused ***"lactic acid"*** with ***"pyloric acid"***.

Expected Responses

Muscles are subjected to respire anaerobically resulting in accumulation of lactic acid in the tissue causing fatigue/muscle cramps.

Question 17

Account for the following phases of a sigmoid curve of growth of an organism:

(a) lag phase;

(b) plateau phase.

Candidates were required to account for some phases of a sigmoid curve of growth of an organism.

Weaknesses

The candidates did not realize that they were describing growth in one organism. There was confusion of number of cells increasing with number of organisms increasing.

Expected Responses

(a) ***Lag phase:*** The number of cells dividing are few/the cells have not yet adjusted to the surrounding environmental factors.

(b) ***Plateau phase:*** Most cells fully differentiated/few cells are still dividing. Rate of cells dividing is equal to rate of cells dying.

Question 20

(a) What is single circulatory system?

(b) Name an organism which has single circulatory system.

(c) Name the opening to the chamber of the heart of an insect.

Candidates were required to have the knowledge of circulatory systems and blood flows in the systems.

Weaknesses

Some candidates gave incomplete answers. Many replaced the heart with the body. Majority were not able to distinguish between ***"closed"***, ***"open single"*** and ***"double circulatory"*** systems.

Expected Responses

(a) Circulatory system in which blood passes through two capillary systems before flowing back to the heart/blood passes only once through the heart to complete the circuit.

(b) Earthworm/Leech/Ragworm/fish.

(c) Ostium.

Question 22

State **two** characteristics of aerenchyma tissue.

Candidates were required to state two characteristics of aerenchyma tissue.

Weaknesses

Majority of the candidates did not qualify their answers. The word ***'large'*** was not mentioned, while others gave many air spaces as a response. The nature of the cell walls was missing in most of candidates answers.

Expected Responses

- Large air spaces.
- Thin cell walls.

Question 27

Explain how anaerobic respiration is applied in sewage treatment.

The application of anaerobic respiration in sewage treatment was required.

Weaknesses

90% of the candidates did not get marks in this question. Majority of the candidates were unable to relate bacteria to sewage treatment/breakdown. Most of them thought micro organisms were to suffocate first and get destroyed during the treatment.

Expected Responses

(Anaerobic) micro organism/break down harmful substances in sewage.

Question 29

State a function of amniotic fluid.

Candidates were to state the function of amniotic fluid.

Weaknesses

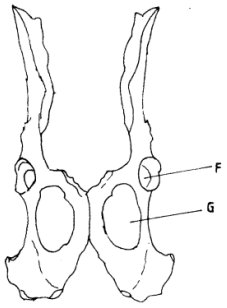
Some candidates confused ***"baby"*** with ***"foetus"*** and ***"child"***. Some of the candidates could not associate amniotic fluid with the foetus in the uterus.

Expected Responses

Cushions foetus against shock/provides a suitable medium for embryo to grow.

Question 30

The diagram below shows two fused bones of a mammal.



(a) Identify the fused bones.

(b) Name the

(i) bone that articulates at the point labelled **F**

(ii) the hole labelled **G**.

Candidates were required to identify bones that fuse to make up the pelvic girdle.

Weaknesses

Many candidates left this question unanswered while others gave incorrect responses.

Expected Responses

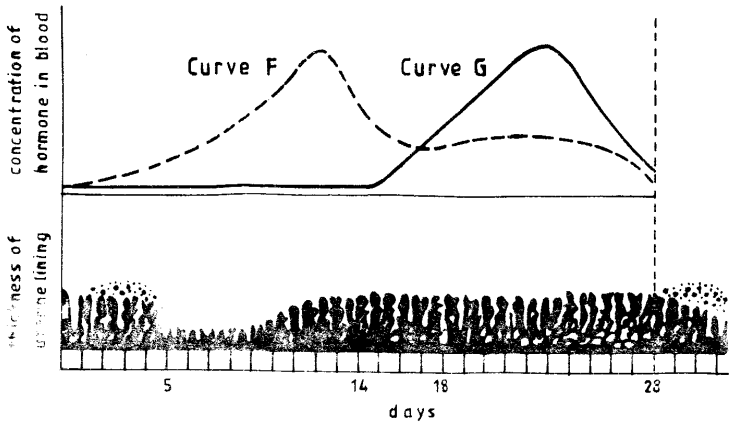
(a) Pelvic gridle.

(i) Femur.
(ii) Obturator foramen.

6.3 PAPER 2 (231/2)

Question 1

The figure below shows changes that take place during menstrual cycle in human.



(a) Name the hormones whose concentrations are represented by curves **F** and **G**.

(b) State the effects of the hormones named in (a) above on the lining of the uterus.

(c) (i) Name the hormone which is released by the pituitary gland in high concentration on the 14th day of the menstrual cycle.

(ii) State **two** functions of the hormone named in (c)(i) above.

(d) State the fertile period during the menstrual cycle.

Candidates were required to know the role of hormones in the menstrual cycle and fertility period.

Weaknesses

The candidates showed lack of mastery of the roles of specific hormones and also could not determine the fertile period.

Expected Responses

(a)

- ***F:*** Oestrogen.
- ***G:*** Progesterone.

(b)

- ***F:*** Promotes healing and repair of the uterus.
- ***G:*** Causes thickening of the uterine lining.

(c) (i) Leutinizing hormones.

(ii)

- Causes ovulation.
- Induces graafian follicle to become corpus luteum.

(d) 12^{th} to 16^{th} day.

Question 2

A pea plant with round seeds was crossed with a pea plant that had wrinkled seeds. The gene for round seeds is dominant over that for wrinkled seeds.

Using letter **R** to represent the dominant gene state:

(a) the genotype of parents if plant with round seeds was heterozygous;

(b) the gametes produced by the round and wrinkled seed parents;

Round seed parent.....

Wrinkled seed parent.....

(c) the genotype and phenotype of F_1 generation. Show your working.

Candidates' knowledge to determine genotypes, phenotypes and genetic crossing was required. Part (d) of the question called on the candidates to state what a test-cross was.

Weaknesses

Some candidates used letters other than the ones given (R). There was confusion between ***"dominant"*** and ***"recessive"*** genes. Majority did not know what test cross is.

Expected Responses

(a) Parental genotypes

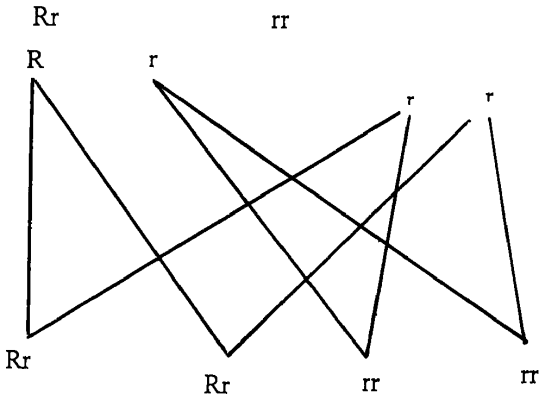
(i) Round seed plants – Rr;
(ii) Wrinkled seed plants – rr;

(b) Gametes from

P1 i Rr → R and r

P2 ii rr → r and r

(c) Rr rr



Genotype	Rr	rr
Phenotype	Round seeds	Wrinkled seeds

(d) Test cross whether an individual showing a character for a dominant gene is homozygous or heterozygous.

Question 5

A freshly obtained dandelion stem measuring 5cm long was split lengthwise to obtain two similar pieces.

The pieces were placed in solutions of different concentrations in petri dishes for 20 minutes.

The appearance after 20 minutes is as shown.

(a) Account for the appearance of the pieces in solutions L_1 and L_2.

(b) State the significance of the biological process involved in the experiment.

Candidates were required to have the knowledge of plant cell physiology.

Weaknesses

Candidates could not distinguish between ***"hypotonic"***, ***"hypertonic"*** and ***"isotonic"***. Other candidates were not clear as to the difference between ***"epidermis"***, ***"cortex***", ***"bulging"*** and ***"curving"***.

Expected Responses

(a) **L_1:** Inner cells gained water by osmosis. Increased in length hence becoming turgid, leading to curvature. The epidermal cells did not gain water because they are covered by a waterproof cuticle.

L_2: Inner cells lost water (by osmosis) leading to flaccidity hence the curvature. The epidermal cells did not gain water due to waterproof cuticle.

(b)

- Support in herbaceous plant.
- Absorption of water.

Question 6

An experiment was carried out to investigate transpiration and absorption of water in sunflower plants in their natural environment with adequate supply of water. The amount of water was determined in two hour intervals. The results are shown in the table below.

Time of day	Amounts of water in grammes	
	Transpiration	Absorption
11 00 – 13 00	33	20
13 00 – 15 00	45	30
15 00 – 17 00	52	42
17 00 – 19 00	46	46
19 00 – 21 00	25	32
21 00 – 23 00	16	20
23 00 – 01 00	08	15
01 00 – 03 00	04	11

(a) Using the same axes, plot graphs to show transpiration and absorption of water in grammes against time of the day.

(b) At what time of the day was the amount of water the same for transpiration and absorption?

(c) Account for the shape of the graphs of:

(i) transpiration;

(ii) absorption.

(d) What would happen to transpiration and absorption of water if the experiment was continued till 05 00 hours?

(e) Name **two** factors that may affect transpiration and absorption at any given time.

(f) Explain how the factors you named in (e) above affect transpiration.

Candidates were required to have knowledge about:

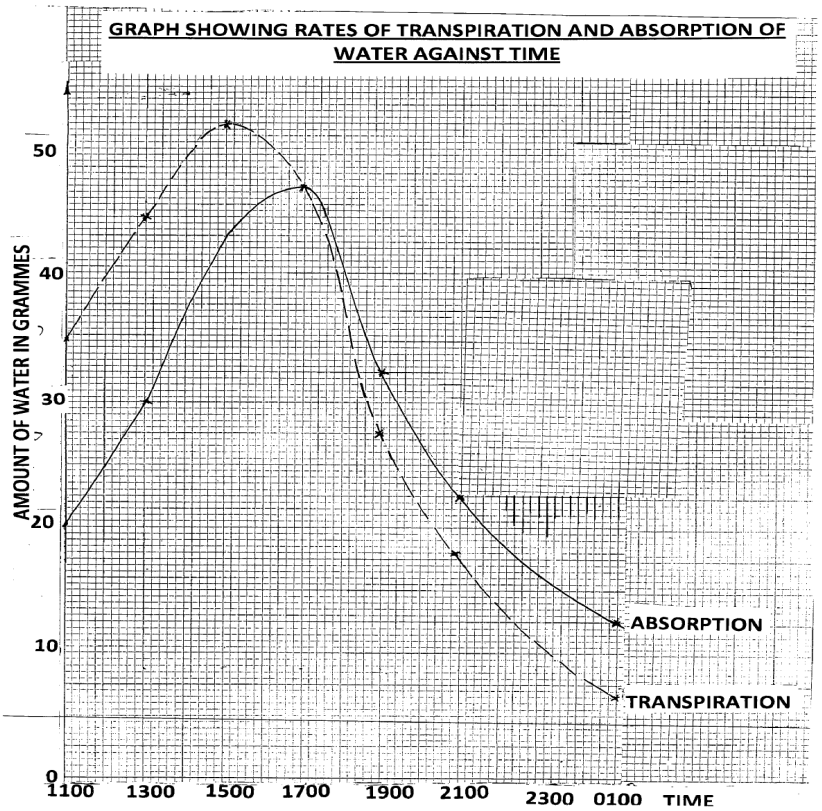
i) a 24 hour day;
ii) plotting of graphs;
iii) interpretation of the graph with respect to time of the day;
iv) factors that affect transpiration and absorption;
v) relationship between transpiration and absorption.

Weaknesses

Candidates could not relate the two processes to time of day. Plotting the graph and the curve was difficult to most of them and many were not able to explain how atmospheric pressure and humidity affect the rate of transpiration and absorption of water.

Expected Responses

(a)



(b) 17.00 – 19.00 hrs;

(c) (i) ***Transpiration***

- ***11.00 – 19.00 hrs:*** (Rapid) Increase in the rate of transpiration due to high light intensity/high temperature.
- 1***0.00 – 03.00 hrs:*** Decrease in the rate of transpiration due to low light intensity (or absence of light)/low temperature.

(ii) ***Absorption***

- ***11.00 – 19.00 hrs:*** Increase in the rate of absorption of water to replace water lost through transpiration.
- ***19.00 – 03.00 hrs:*** Decrease in rate of absorption of water due to the fact that the rate of transpiration has declined.

(d) Both transpiration and absorption decrease.

(e) Wind, humidity, atmospheric pressure.

(f)

- ***Wind:*** the rate of transpiration is faster when it is windy/than when the air is still.
- ***Humidity:*** when humidity is low, the rate of transpiration is faster due to a steep diffusion gradient than when it is high.

- ***Atmospheric pressure:*** the rate of transpiration is high at low atmospheric pressure due to a high diffusion gradient between inter cellular spaces and the atmosphere than at high atmospheric pressure.

Question 7

Describe the nitrogen cycle.

Candidates were required to have knowledge of the nitrogen cycle.

Weaknesses

Candidates' responses indicated confusion on the role of different types of bacteria, fungi, algae and lightning. The chemistry behind formation of nitrates was not known. Knowledge on purification to form ammonia was lacking.

Expected Responses

During thunderstorms, nitrogen gas combines with oxygen to form nitrogen oxides. Nitrogen oxides dissolve in water to form nitric acid. Acid is deposited in the soil by rain, nitric acid combines with chemical substance to form nitrates, which are absorbed by plants.

In the soil, symbiotic bacteria such as Rhizobium which are found in root nodules of leguminous plants fix free nitrogen to nitrates, free living bacteria such as clostridium and Azotobacter fix nitrogen to nitrates. Nostoc algae and Anabaena fix nitrogen to nitrates. Plants use nitrates to form plant proteins from nitrates. Animals feed on plants and covert plant proteins into animal proteins. Plants and animals die and are decomposed by bacteria and fungi. Decomposing plants and animals release ammonia which is converted to nitrites by nitrosomonas bacteria. Nitrites are converted to nitrates by nitrobacter bacteria. Nitrates in the soil can be converted to free nitrogen denitrification by some fungi/pseudomonas/thiobacillus bacteria.

Question 8

(a) State **four** characteristics of gaseous exchange surfaces.

(b) Describe the mechanism of gaseous exchange in a mammal.

Candidates were required to have knowledge on characteristics of gaseous surfaces and mechanism of gaseous exchange in a mammal.

Weaknesses

Candidates gave characteristics of specific surfaces instead of characteristics that are general and common to all surfaces. They did not qualify the blood capillaries or even thinness of the walls. There was confusion of roles played by the parts involved in inhalation and exhalation.

Expected Responses

(a)

- Highly vascularized/network of blood capillaries.
- Large surface area for gaseous exchange.
- Thin membrane.
- Moist lining.

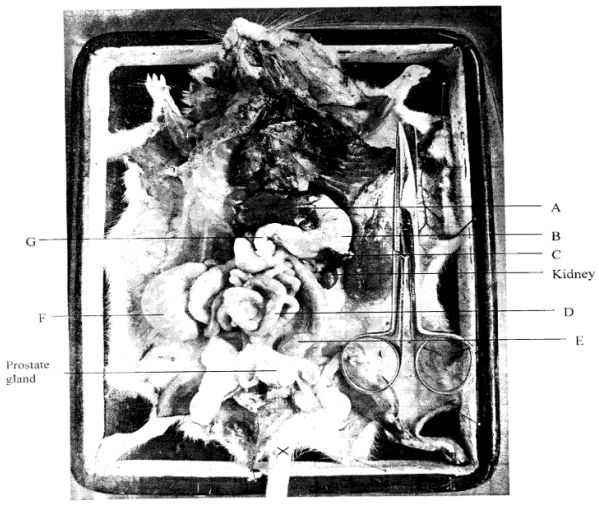
(b) ***Breathing in:*** External intecostal muscles contract, internal intercostal muscles relax, lifting the ribcage upwards and outwards. Muscles of the diaphragm contract, hence, it flattens. The volume of the thoracic cavity increases, while the pressure decreases. Higher air pressure in the atmosphere forces air into lungs through nose.

Breathing out: External intercostal muscles relax, while internal intercostal muscles contract, moving the ribcage downwards and inwards. The muscles of the diaphragm relax, hence, the diaphragm assumes dome

shape. The volume of thoracic cavity decreases, while pressure increases, forcing air out of the lungs through the nose.

Question 1

Below is a photograph of a dissected mammal. Examine the photograph.



(a) Name the parts labelled **A**, **B**, **C**, **D** and **G**.

(b) State the function of the structures labelled **E** and **F**.

(c) In the photograph label the structure where vitamin K is produced.

(d) (i) Name the sex of the mammal in the photograph.

(ii) Give a reason for your answer in (d) (i) above.

(e) (i) The actual length of the dissecting scissors in the photograph is 15 cm. Calculate the magnification of the photograph.

(ii) Calculate the actual length of the mammal from the tip of the nose to point **X** on the tail.

Candidates were required to observe a photograph of a dissected mammal, identify some parts, stating functions, carry out some measurements and calculate magnification.

Weaknesses

Majority of the candidates had wrong spellings and most were unable to relate organ to function. Poor identification of digestive system organs in a mammal was evident in candidates' responses and many candidates were unable to measure and calculate magnification. There was confusion of technical terms, for example ***"egestion"***, ***"excretion"*** etc.

Expected Responses

(a) ***A:*** Liver;
B: Stomach;
C: Spleen;
D: Small intestines;
G: Duodenum;

(b) ***E:*** Store faeces/undigested food/indigestible food materials.

F: It contains/stores/harbours bacteria; which produce cellulose /enzymes to breakdown/ digest cellulose/digestion of cellulose

(c) Colon/large intestines.

(d) (i) Male

(ii) Presence of the prostrate gland/testis/seminal vesicles.

(e) (i) $\frac{9}{15} = X\,0.6 / \frac{3}{5}$

(ii) $\frac{14.6cm}{0.6} = 24.3cm$

Question 2

You are provided with substances labelled **S**, **T**, **U**, **X** and **Y**. **S**, **T** and **U** are food substances, while **X** is 10% sodium hydroxide solution and **Y** is 1% copper sulphate solution. Carry out tests to determine the food substance(s) in **S**, **T** and **U**.

Substance	Food substance being tested for	Procedure	Observations	Conclusion
S				
T				
U				

Candidates had to use reagents provided to carry out food tests, record correct procedure, name the food to be tested, make observations and conclusions.

Weaknesses

Most candidates had incorrect procedures, wrong colour observations, wrong spellings and confused the foods to be tested. Poor recording of procedures, observations and conclusions was also evident in candidates responses.

Expected Responses

Substance	**Food substance being tested**	**Procedure**	**Observation**	**Conclusion**
S	Protein	To 1 ml of food substance add equal amount of sodium hydroxide, add a few drops of copper sulphate solution dropwise,	Purple, violet colour	Protein present

		shaking after each drop.		
T	"	"	No colour change/ blue colour	Protein absent;
U	"	"	Light pale purple colour	Trace protein present

Question 3

Below are photographs of specimens obtained from plants. Examine the photographs.

SPECIMEN K

SPECIMEN L

SPECIMEN M

SPECIMEN N

SPECIMEN P

SPECIMEN Q

(a) In the table below name the mode of dispersal and the features that adapt the specimen(s) to that mode of dispersal.

Specimen	Mode of dispersal	Adaptive features
K		
L		
M		
N		
P		
Q		

(b) (i) Label any **two** parts on specimen **L**.

(ii) State the type of placentation in specimen **L**.

(c) Name the structure labelled **W** on specimen **P**.

Candidates had to identify various kinds of fruits and relate adaptive features to mode of dispersal and name some parts of fruits.

Weaknesses

Candidates confused ***"pollination"*** and ***"dispersal"***, ***"seed"*** and ***"fruit"***, ***"mode of dispersal"*** and ***"agent of dispersal"***. Parts of fruits were wrongly spelt.

Expected Responses

(a)

Specimen	Mode of dispersal	Feature that adapts the specimen to mode of dispersal
K	Animal(s)	Hooks
L	Animal(s)	Fleshy/succulent/juicy
M	Wind	Parachute hairs/pappus
N	Wind	Winged/pericarp
P	Animal(s)	Fleshy/succulent
Q	Self mechanism/explosive	Lines of dehiscence/weakness/sutures

(b) (i) Specimen L

- Epicarp
- Mesocarp.
- Endocarp.
- Seed.

(ii) Axile/central.

(c) Seed/endocarp.

6.5 ADVICE TO TEACHERS

6.5.1 Questions testing experimental design were performed poorly by candidates. Teachers should carry out experiments on physiological process, for example: osmosis.

6.5.2 The correct way of drawing and labelling of diagrams and drawings should be practiced and emphasized during the teaching – learning process.

6.5.3 Despite having a question on genetics every year the performance in this area is still poor and requires more emphasis during teaching.

6.5.4 Evolution is still not understood well by candidates and every year questions testing evolution are performed poorly.

6.5.5 Stages of ***"mitosis"*** and ***"meiosis"*** are not clearly understood by candidates. Use of slides may help in this area.

6.5.6 Questions that test adaptation are performed poorly because candidates do not relate structure to function.

6.5.7 Use of correct terms when teaching Biology will promote correct use by candidates.

6.5.8 The results of practical papers indicate that practicals are not taught well.

7.0 PHYSICS (232)

In the year 2008, the KCSE Physics examination was tested in three papers. These were:

- **Paper 1 (232/1)**: This was a theory paper consisting of two sections; ***Section A*** which has short answer questions and ***Section B*** which has structured questions. Candidates were required to answer questions from both sections. The questions in this paper were drawn from the ***Heat*** and ***Mechanics*** parts of the syllabus.

- **Paper 2 (232/2)**: This was also a theory paper consisting of two sections: ***Section A*** which had short answer questions while ***Section B*** had structured questions. All questions were compulsory and were drawn from ***Optics, Waves, Electricity, Magnetism*** and ***Modern Physics***.

- **Paper 3 (232/3)**: This was a practical paper testing a variety of skills in all areas of the syllabus.

7.1 GENERAL CANDIDATES' PERFORMANCE

The candidates' performance statistics in the KCSE Physics examination since the year 2006 when the syllabus was revised are as shown in the table below:

Table 12: Candidates' Overall Performance in Physics in the years 2006, 2007 and 2008

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2006	1		80	24.00	15.62
	2		80	35.75	17.05
	3		40	20.88	7.22
	Overall	**72,299**	**200**	**80.63**	**37.00**
2007	1		80	23.46	13.43
	2		80	33.33	17.93
	3		40	25.85	7.14
	Overall	**83,162**	**200**	**82.63**	**35.00**
2008	1		80	25.32	14.66
	2		80	24.17	16.34
	3		40	23.92	7.31
	Overall	**93,692**	**200**	**73.42**	**35.43**

From the table above, it can be observed that:

7.1.1 The candidature increased from ***83,162*** in the year 2007 to ***93,692*** in the year 2008, an increase of ***10,530*** candidates ***(12.66%)***.

7.1.2 There was improvement in the performance of ***paper 1 (232/1)***, which improved from a mean of ***23.46*** in the year 2007 to ***25.32*** in the year 2008.

7.1.3 ***Paper 2 (232/2)*** and ***paper 3 (232/3)*** recorded a decline in performance in the year 2008.

7.1.4 The overall performance declined when compared to the previous year. In the year 2008 the overall mean was ***73.42*** as compared to the year 2007 when the overall mean was ***82.63.***

The following is a discussion of the questions in which candidates performed poorly.

7.2 PAPER 1 (232/1)

Question 1

A drug manufacturer gives the mass of the active ingredient in a tablet as 5 mg.
Express this quantity in kilogramme and in standard form.

Candidates were required to convert mg to Kg and express the result in standard form.

Weaknesses

Candidates did not know the relationship between mg and Kg and as such were unable to differentiate the negative and positive index.

Expected Response

5.0×10^{-6} Kg

Question 5

Fig. 2 shows a flask filled with water. The flask is fitted with a cork through which a tube is inserted. When the flask is cooled, the water level rises slightly, then falls steadily.

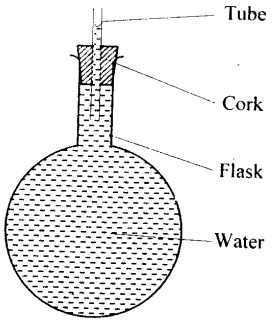


Figure 2

Explain this observation.

Candidates were required to explain the behaviour of water in the tube, when the flask is cooled.

Weaknesses

Candidates were unable to relate the rates of contraction of glass and water. Most candidates attributed the behaviour to anomalous expansion, while others only explained the expansion and not contraction.

Expected Responses

When the flask is cooled it contracts/volume reduces but due to poor conductivity of glass, subsequently as both cool the contraction of water is greater than that of glass.

Question 8

Fig. 4 shows a conical flask 15cm high, filled with a liquid of density $1200 kgm^{-3}$. The atmospheric pressure of the surrounding is $8.4 \times 10^{4} Pa$.

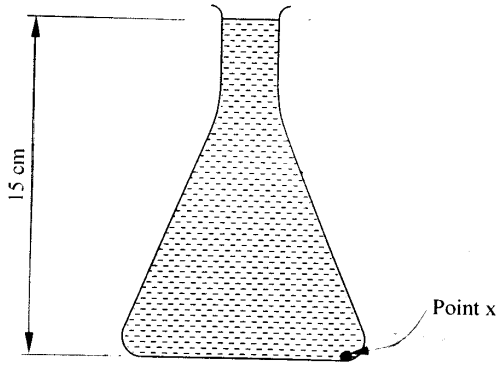


Figure 4

Determine the pressure at the point marked **X**, at the bottom of the flask.

Candidates were required to determine pressure at the point marked x in the liquid.

Weaknesses

Candidates did not combine liquid pressure and atmospheric pressure. They only calculated pressure due to the liquid but not total pressure.

Expected Responses

Pressure in liquids	=	ρgh
	=	$1200 \times 10 \times 15 \times 10^{-2}$
	=	1800 Pa
Total pressure	=	$(8.4 + 0.18) \times 10^4$ Pa = 8.58×10^4 Pa.

Questions 10 and 11

Fig. 5 shows a toy resting on top of a closed bottle. Use the information on the figure to answer questions 10 and 11.

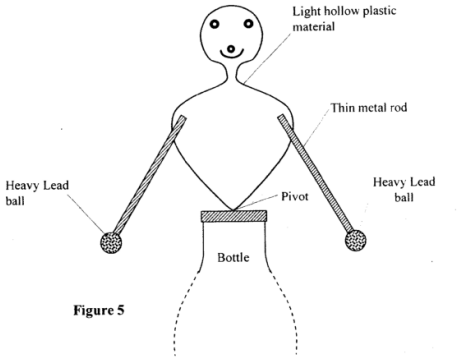


Figure 5

10 Mark on the diagram, point Q, the approximate centre of gravity of the toy.

11 Giving a reason, name the state of equilibrium of the toy.

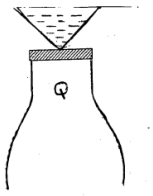
Candidates were required to draw and mark the position of centre of gravity of the toy and name the state of equilibrium giving reasons.

Weaknesses

Candidates could not relate the position of the centre of gravity with the heavy masses used and the lines of symmetry of the toy. They thought of the toy being unstable because of its shape.

Expected Responses

10.



11. ***Stable equilibrium:*** When it is slightly tilted, centre of gravity is raised. When released it recovers/returns to its original position.

Question 16

(a) Define the term heat capacity.

(b) You are provided with the apparatus shown in Fig. 9 and a stop watch.

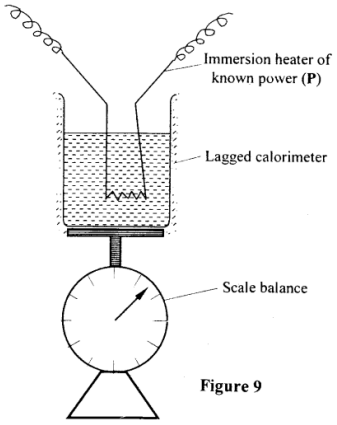


Figure 9

Describe an experiment to determine the specific latent heat of steam, *l*, using the set up. In your answer clearly explain the measurements to be made and how these measurements could be used to determine *l*.

(c) A block of metal of mass 150g at 100°C is dropped into a lagged calorimeter of heat capacity $40JK^{-1}$ containing 100g of water at 25°C. The temperature of the resulting mixture is 34°C. (specific heat capacity of water = $4200JKgK^{-1}$).

Determine:

(i) heat gained by calorimeter;

(ii) heat gained by water;

(iii) heat lost by the metal block;

(iv) specific heat capacity of the metal block.

Candidates were required to define heat capacity, describe an experiment that can be used to determine latent heat of vaporization and use heat equations to calculate heat lost and specific heat capacity of metal.

Weaknesses

Candidates confused heat capacity with specific heat capacity. They used wrong equations to calculate heat capacity. New apparatus were introduced in the given set up.

Expected Responses

a) Heat capacity of a body is the energy required to raise the temperature of the body by one degree centigrade or one Kelvin.

b) Measurements

Initial mass of water + calorimeter = M_1
Final mass of water + calorimeter = M_f
Time taken to evaporate (M_f–M_1) mass of steam = t
Heat given out by heater = Heat of vaporization
Pt = (M_1-M_f) L

$$L = \frac{Pt}{M_1 - M_f}$$

c) (i) ***Heat gained by the calorimeter***

Heat capacity x $\Delta T = 40(34-25) = 40x9=360J$

(ii) ***Heat gained by water***

$M_w \times C_w \times \Delta T$

$= 100 \times 10^{-3} \times 4.2 \times 10^3 (34-25) = 3780J$

(iii) ***Heat lost by metal block***

$M_m C_m (100-34)$

(iv) $150 \times 10^{-3} \times C_m (100-34)$

$= 360 + 3780$

$= 4140$

$$Cm = \frac{4140}{150x10^{-3}x66}$$

$= 418 \text{ J Kg}^{-1}\text{K}^{-1}$

7.3 PAPER 2 (232/2)

Question 2

A leaf electroscope **A** is charged and placed on the bench. Another uncharged leaf electroscope **B** is placed on the same bench and moved close to **A** until the caps touch. State and explain what is observed on the leaves of **A** and **B**.

Candidates were required to explain charging of an electroscope by contact.

Weaknesses

Candidates were unable to describe the ***'rise'*** and ***'fall'*** of the leaf. Some candidates wrote "***collapsing"***, ***"falling"*** without saying how far. Sharing of charge was not understood.

Expected Responses

The leaf in A falls some distance while the leaf in B rises some distance; the two leaf electroscopes share the charge.

Question 8

Figure 5 shows wavefronts approaching the boundary between two media.

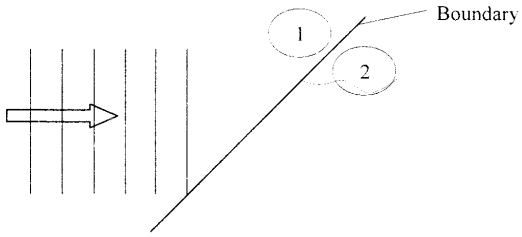


Figure 5

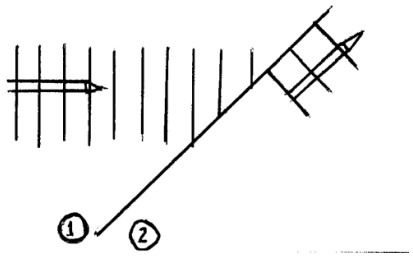
The speed of the waves in medium (2) is higher than that in medium (1). On the same diagram complete the figure to show the wavefronts after crossing the boundary.

Candidates were required to show the wavefronts of waves after crossing the boundary.

Weaknesses

Candidates were unable to relate speed and wavelength after refraction. Most did not indicate the direction.

Expected Response



Question 9

Figure 6 shows a circuit in which a battery of negligible internal resistance, two resistors, a capacitor, a voltmeter and a switch are connected.

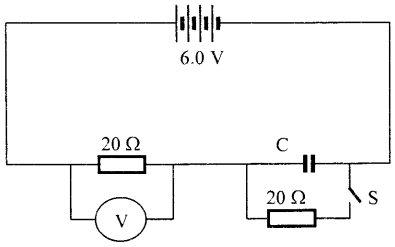


Figure 6

Giving a reason for your answer in each case, state the reading of the voltimeter, V, when the switch is

(i) Open

V =

Reason.

(ii) Closed

V =

Reason.

Candidates were tested on the charging of a capacitor.

Weaknesses

Reading of the voltmeter was poorly explained.

Expected Responses

i) $V = 0V$ (since there is no current)

ii) Current flows in the resistor V = 3V

Question 10

A heating coil is rated 100W, 240V. At what rate would it dissipate energy if it is connected to a 220V supply?

Candidates were required to apply the formular for power P = $\frac{V^2}{R}$

Weaknesses

Most candidates could not relate $\frac{V^2}{R}$ to VI. They did not realize that R is constant.

Expected Responses

$P = \frac{V^2}{R}$, $R = \frac{240^2}{100}$

$P = \frac{220^2}{240^2/100}$ = $84JS^{-1}$

Question 12

A narrow beam of electrons in a cathode ray oscilloscope (CRO) strike the screen producing a spot. State what is observed on the screen if a low frequency a.c source is connected across the y-input of the CRO.

Candidates were required to explain frequency of the a-c source on the C.R.O.

Weaknesses

Candidates could not relate frequency and movement of the spot up and down.

Expected Response

The spot moves up and down.

Question 18

(a) Figure 12 shows two circuits close to each other.

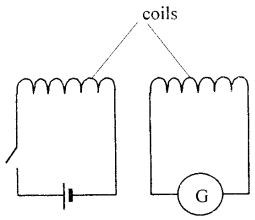


Figure 12

When the switch is closed, the galvenometer shows a reading and then returns to zero. When the switch is then opened, the galvonometer shows a reading in the opposite direction and then returns to zero. Explain these observations.

(b) Explain how energy losses in a transformer are reduced by having:

(i) a soft-iron core;

(ii) a laminated core.

(c) An ideal transformer has 2000 turns in the primary circuit and 200 turns in the secondary circuit. When the primary circuit is connected to a 400V a.c. source, the power delivered to a resistor in the secondary circuit is found to be 800W. Determine the current in:

(i) the secondary circuit;

(ii) the primary circuit.

Candidates were required to explain principles of induction and how energy losses in a transformer are reduced.

Weaknesses

Candidates seemed not to have understood induction of E.m.f in relation to build up and collapse of magnetic flux. ***"Ideal"*** transformer was also not understood.

Expected Responses

a) When the switch is closed, flux in the coil on L.H.S. grows and links the other coil inducing e.m.f. When the current is steady no flux change and hence no induced E.m.f; when the switch is opened, the flux collapses even in the coil on R.H.S. inducing current in opposite direction.

b) (i) Soft iron reduces losses due to hysteresis (or magnetic losses). This is because the domain in soft iron responds quickly to change in magnetic field (or have low frequency).

(ii) Laminated core reduces losses due to eddy currents, reducing them considerably.

c) (i) $\frac{V_p}{V_s} = \frac{N_p}{N_s}$

$\frac{V_p}{N_p} = 400$

$N_p = 2000 \qquad N_s = 200$

$V_s = 40V$

Power = $V_s I_s = 800w$

$I_s = \frac{800w}{40v} = 20A$

(ii) $P_p = P_s = 800w = 400xI_p$

$I_p = 2A$

7.4 PAPER 3 (232/3)

This was the practical paper and it consisted of two questions in which candidates were examined on a variety of skills.

Question 1

PART A

You are provided with the following:

- copper wire
- a retort stand, boss and clamp
- an optical pin mounted on a cork
- a stop watch
- wire cutters (to be shared)
- a metre rule or half metre rule.

Proceed as follows:

(a) Clamp the cork so that the optical pin is horizontal. Hang the copper wire from the pin by the loop as shown in figure 1. Ensure the wire is straight and the length X between the lower tip and the optical pin is 32 cm. If the length exceeds 32 cm reduce by cutting at the lower tip using the wire cutters provided.

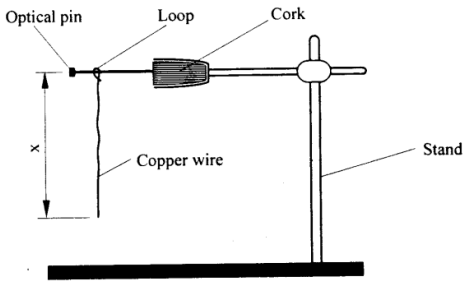


Figure 1

(b) Displace the lower tip of the wire slightly in a plane perpendicular to the optical pin and then release it. Measure the time t for 20 oscillations of the wire and record the value in table 1.

(c) Repeat the procedure in (b) above for other values of X shown in the table. *(Note that each length X is obtained by cutting off an appropriate length from the lower tip of the wire. For example to get X = 28 cm cut off 4 cm from the lower end).* Complete the table.

Table 1

Length X (cm)	32	28	24	20	16	12
time t for 20 oscillations (s)						
Period $T = {}^{t}/_{20}$ (s)						
T^2 (s^2)						

(d) Plot a graph of T^2(y-axis) against x.

(e) (i) Determine the slope, S, of the graph .

(ii) Obtain the value of k in the equation $S = \frac{8\pi}{3k}$

PART B

You are provided with the following:

- a cylindrical container
- some water
- a stop watch
- a metre rule or half-metre rule
- a boiling tube
- some sand
- a rubber band

Proceed as follows:

(f) Tie the rubber band round the boiling tube so that it is at a distance L = 12 cm from the bottom of the tube (see fig 2a). Pour water into the cylindrical container until the level is about 2.0 cm from the top of the beaker. Float the boiling tube in the water in the container. Add sand gradually into the boiling tube until the tube sinks to the 12 cm mark.

See figure 2(b).

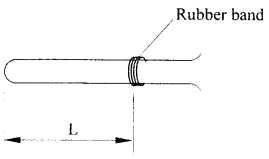


Figure 2(a)

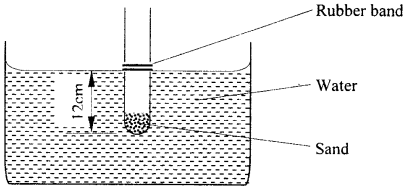


Figure 2(b)

(g) Depress the boiling tube slightly and release so that it oscillates vertically without touching the sides of the container. Measure and record in table 2 the time t_1, for five oscillations of the boiling tube. Repeat the procedure two more times to obtain t_2, and t_3 and record the values in table 2. Complete the table.

Table 2

t_1((s)	t_2(s)	t_3(s)	Average t(s) $t = \left(\frac{t_1 + t_2 + t_3}{3}\right)$	$T = \frac{t}{5}$(s)

(h) Evaluate $P = \frac{40L}{T^2}$ given that L is the length of the tube upto the rubber band in (f) and T is the value obtained in (g) above. (2 marks)

P =

The following skills were tested:

- Use of stopwatch and metre rule.
- Ability to divide and obtain squares of numbers.
- Drawing of graphs.

Weaknesses

- Reading of stopwatch was difficult for some candidates. They recorded the readings as seen on the screen, that is, 0:18:16.
- Some candidates had difficulties in approximations when carrying out the division and squaring.
- Accurate measurement of length using a metre rule was a problem to some candidates.
- Plotting of graphs was also difficult for some candidates.

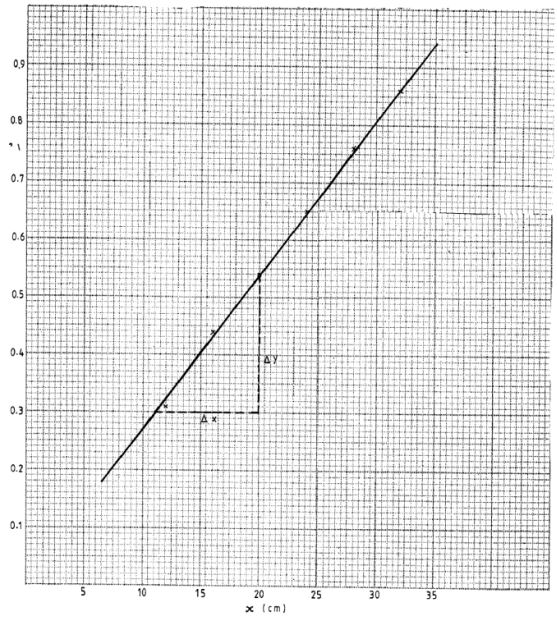
Expected Responses

PART A

(c)

Length X (cm)	32	28	24	20	16	12
Time t for 20 oscillations	18.50	17.40	16.15	14.75	13.30	11.20
Period $T = \frac{t}{20}(s)$	0.925	0.870	0.808	0.738	0.665	0.560
$T^2(s^2)$	0.856	0.757	0.652	0.544	0.442	0.314

(d)



(e) (i) slope $S = \frac{0.54 - 0.30}{20 - 11}$

$= \frac{0.24}{9} = 0.0267 \frac{s^2}{cm}$

(ii) $S = \frac{8\pi}{3k}$

$0.0267 = \frac{8\pi}{3k}$

$\therefore$ k $= \dfrac{8\pi}{3x\,0.0267}$

$= 313.767\ cm/s^2$.

PART B

(g)

t(s)	$t_{1\,(s)}$	t_2 (s)	t_3 (s)	Average t(s)	$T = \dfrac{t}{5}(s)$
	3.46	3.25	3.44	3.34	0.67

(h) $P - \dfrac{40L}{T^2} = \dfrac{40x12}{0.67^2}$

$= 1069\ cm/s^2$

$= 10.7\ m/s^2$ (accept values between 9 and 11 m/s^2).

Question 2

PART A

You are provided with the following:

- a triangular glass prism
- a piece of soft board
- four (4) optical pins
- a sheet of plain paper.

Proceed as follows:

(a) Place the plain sheet of paper on the soft board. Trace the triangular outline of the prism on the sheet of paper. Remove the prism and use a ruler to extend the three sides of the outline. See figure 3(a).

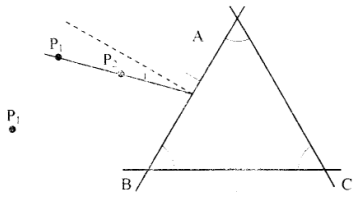


Figure 3(a)

Use a protractor to measure the refracting angle R of the prism.

R =.....

(b) On the side AB of the triangular outline, draw a normal at a point half-way between A and B. *This normal will be used for the rest of this experiment.*

(c) Draw a line at an angle i=30° to the normal. Stick two pins P_1 and P_2 vertically on this line. See figure 3(a).

(d) Place the prism accurately on the outline. By viewing through the prism from side AC stick two other pins P_3 and P_4 vertically such that they are in line with the images of pins P_1 and P_2. Remove the prism and the pins. Draw a line joining marks made by P_3 and P_4. Extend this line to meet AC. (See figure 3(b)).
Measure and record in table 3 the value of angle θ.

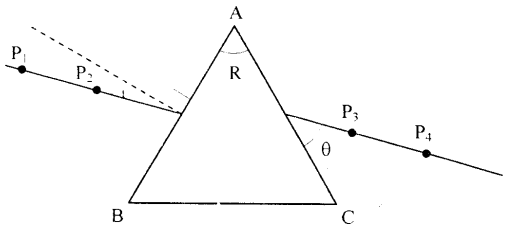


Figure 3(b)

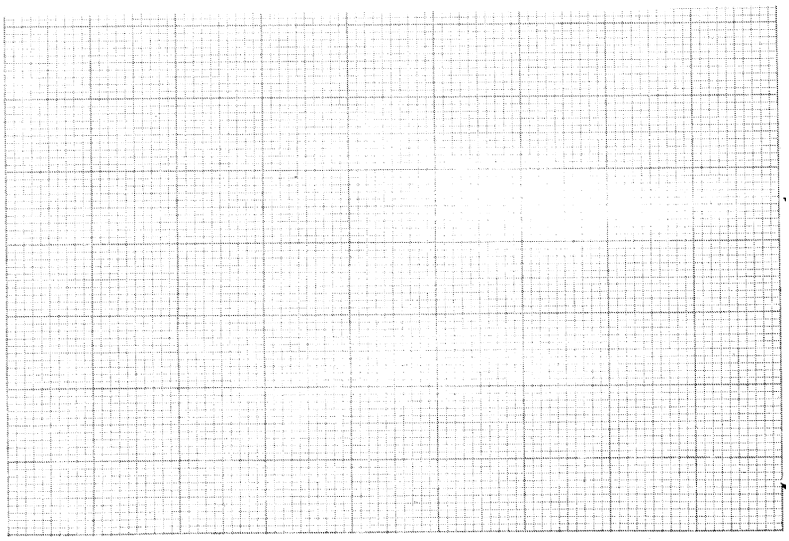
(e) Repeat the procedures in (c) and (d) above for other values of i shown in table 3. Complete the table.

N.B. ***The sheet of paper with the drawing must be handed in with this question paper. Ensure you write your name and index number on the sheet of paper.***

Table 3

Angle of incidence i(deg)	30	35	40	45	50	55	60
Angle θ (deg)							
Angle of emergence, E=90-θ (deg)							

(f) (i) On the grid provided plot the graph of the angle of emergence E (y-axis) against the angle of incidence i.



(ii) Use the graph to find i_0 the angle of incidence at which i = E

(iii) Evaluate

(I) $y = 2i_0 - R$

(II) $b = 2 \sin i_0$

PART B

You are provided with the following:

- a lens and a lens holder
- a screen with cross-wires
- a candle
- a metre rule

Proceed as follows:

(g) Arrange the lighted candle, the lens and the screen as shown in figure 4. Adjust the position of the screen until a sharp inverted image of the candle is formed on the screen.

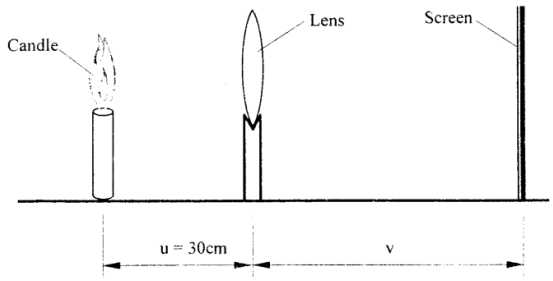


Figure 4

(i) Measure the image distance v,

v = ... cm

(ii) Determine the focal length of the lens using the formula.

$$f = \frac{uv}{u+v}$$

(h) Now arrange the lighted candle, the screen with cross wires and the lens as shown in figure 5. *Ensure that the centre of the lens, the cross-wires, and the candle flame lie on the same horizontal line.* The candle flame should be placed close to the cross-wires for better illumination.

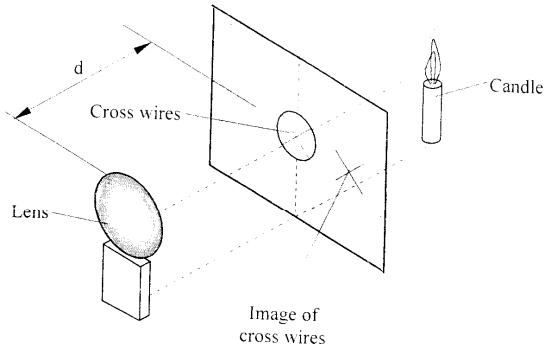


Figure 5

(i) Adjust the position of the lens until a sharp image of the cross-wires is formed on the screen next to the crosswires. *(Hint: You may have to rotate the lens slightly about a vertical axis so that the image of the cross-wires falls on the screen next to the cross-wires and not on the cross-wires).*

Measure the distance d, between the lens and the screen.

d = …….. cm

(ii) Evaluate:

I. $L = \frac{df}{f - d}$

II. $X = \frac{L}{2f} + 1$

The following skills were tested:

- Measurement of angles using a protractor.
- Obtaining the refracted ray by pin method.
- Use of metre rule to obtain image distance in location of image.
- Plotting of graphs and analysis of data from the graph.

Weaknesses

- Candidates were unable to locate the image using the pins using P_3 and P_4.
- They portrayed weaknesses in location of image of the candle in part (B), thus image distance between the lens and screen could not be obtained.
- Candidates had problems in plotting of graphs, that is, choosing appropriate scales.

Expected Responses

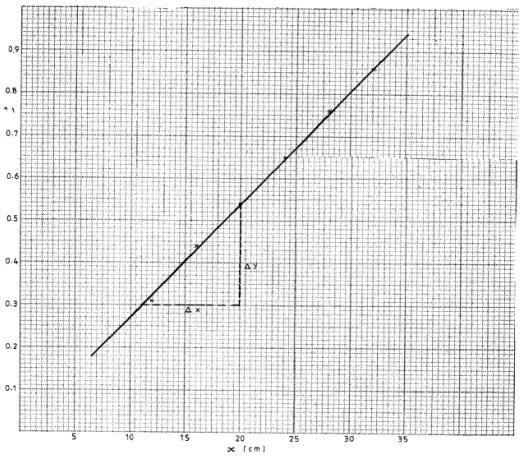
PART A

(a) A = 60°

(e)

Angle of incidence i (deg)	30	35	40	45	50	55	60
Angle Q (deg)	16.5	24.0	31.5	36.0	38.9	45.0	50.0
Angle of emergence E=90-θ	73.5	66.0	58.5	54.0	51.1	45.0	40.0

(f) (i)



(ii) $i_o = 49°$

(iii) (I) y $= 2i_0 - R$
$= 2(49) - 60 = 38°$

(II) k $= 2 \sin 49° = 1.51$

PART B

(g) (i) V = 60 cm

(ii) $f = \frac{uv}{u+v} = \frac{(30)(60)}{90} = 20cm$

(h) (i) d = 10 cm

(ii) I $= \frac{df}{f-d} = \frac{10x20}{10} = 20$

II x $= \frac{L}{2f} + 1 = \frac{20}{40} + 1 = \frac{20}{40} + 1$

$= 1.5$

7.5 ADVICE TO TEACHERS

Teachers are advised to do more practicals in optics for deeper understanding of the area.

8.0 CHEMISTRY (233)

This was the third time the subject was tested using the revised curriculum. The subject is tested using two theory and one practical paper. Each of the theory papers is taken in 2 hours while the practical paper is taken in 2¼ hours.

8.1 CANDIDATES' GENERAL PERFORMANCE

Performance in the years 2006, 2007 and 2008 was as shown in the table below:

Table 10: Candidates' Overall Performance in Chemistry in the years 2006, 2007 and 2008

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2006	1		80	20.79	14.95
	2		80	17.56	13.82
	3		40	11.48	5.10
	Overall	**236,831**	**200**	**49.82**	**32.00**
2007	1		80	19.67	15.26
	2		80	19.22	13.45
	3		40	11.87	4.95
	Overall	**267,719**	**200**	**50.78**	**31.00**
2008	1		80	18.28	14.78
	2		80	15.74	13.00
	3		40	11.46	5.42
	Overall	**296,937**	**200**	**45.48**	**31.78**

From the table it is to be observed that:

8.1.1 The overall candidature for the subject has continued to grow over the years. It increased from ***267,719*** in the year 2007 to ***296,937*** in the year 2008, a percentage increase of ***10.91%***.

8.1.2 The mean for ***paper 1 (233/1)*** dropped slightly from ***19.67*** in the year 2007 to ***18.28*** in the year 2008.

8.1.3 The mean for ***paper 2 (233/2)*** dropped from ***19.22*** in the year 2007 to ***15.74*** in the year 2008.

8.1.4 The mean for ***paper 3 (233/3)*** also dropped from ***11.87*** in the year 2007 to ***11.46*** in the year 2008.

8.1.5 The overall mean for the subject dropped from ***50.78*** in the year 2007 to ***45.48*** in the year 2008.

Questions which were poorly performed are discussed below.

8.2 PAPER 1 (233/1)

Question 3

Complete the following table by filling in the missing test and observations.

No.	Gas	Test	Observation
I	Chlorine	Put a moist red litmus paper into the gas	
II	Sulphur (IV) oxide		Paper turns green
III	Butene	Add a drop of bromine water	

The question required the candidates to state at least one test for chlorine and make observations that would arise as a result of the test for sulphur (IV) oxide when bromine water is added to butene.

Weaknesses

- Candidates were not able to state the observation made when a moist red litmus paper was dropped in chlorine. Some candidates stated it remained red, while others left the question unanswered. A majority stated that there was no observation.

- Candidates also failed to state one correct chemical test for sulphur (IV) oxide. Some stated the use of dichromate (VI) paper, while others stated the use of concentrated sulphuric acid.

- Candidates were not able to state the correct observation made when bromine water is added to butene. Some of the candidates who made a fair attempt did not use proper scientific language when describing the tests and the observations.

Expected Responses

i) The red litmus paper turns white/bleached.
ii) Put a filter paper dipped in acidified potassium dichromate (VI) into the gas.
iii) Bromine water is discoloured.

Advice to Teachers

The weaknesses stated above are likely to have occurred due to lack of adequate exposure to various practical activities stated in the syllabus. Schools are once more reminded that sciences being practical subjects should be approached through carefully planned experimental work. Students must be given the chemicals and equipment to carry out practicals themselves. Results of the practicals must be recorded immediately and using appropriate scientific language. The results should then be discussed fully.

The weaknesses noted could also have resulted from inadequate coverage of the syllabus. Students should have covered the syllabus before they sat for their mock examinations. This allows them to have enough time for thorough revision.

Question 16

Starting with copper metal, describe how a sample of crystals of copper (II) chloride may be prepared in the laboratory.

The candidates were expected to describe how crystals of ***copper (II) chloride*** could be prepared in the laboratory.

Weaknesses

Candidates were not able to give a logical description of the method used to prepare crystals. Others did not realize that the crystals could not be dried by the use of an oven because they could loose water of crystallization and thus become powdery. It has been stated earlier that questions which involve preparations of substances must be planned

carefully. The question requires that all steps involved must be written logically starting with the ***correct*** first step. If the first step is incorrect the whole description is also incorrect and ***all*** the marks will be lost. The weaknesses stated above usually arise from lack of practical skills. Students should thus be exposed to as much practical work as possible.

Expected Responses

Heat the metal in the air to form copper (II) oxide. Add excess dilute hydrochloric acid to get copper (II) chloride. Concentrate the filtrate and leave to crystallize. Filter and dry the crystal at room temperature or between pieces of filter paper.

Question 23

In a closed system, aqueous iron (III) chloride reacts with hydrogen sulphide gas as shown in the equation below.

$$2FeCl_{3(aq)} + H_2S_{(g)} \rightleftharpoons 2FeCl_{2(aq)} + 2HCl_{(aq)} + S_{(s)}$$

State and explain the observation that would be made if dilute hydrochloric acid is added to the system at equilibrium.

In this question, candidates were expected to state the observation that would be made when dilute hydrochloric acid was added to the mixture at equilibrium.

Weaknesses

Candidates failed to state the correct observation and therefore the explanation they gave was incorrect. The bright candidates were however able to score the two marks.

Candidates should have realized that when equilibrium is attained in a closed system, all the species would exist in the mixture. If one of the species is changed by increasing or decreasing its concentration, the position of the equilibrium would shift in order to nullify the effect of the change. In this case, the amount of dilute hydrochloric acid was increased, the system would thus respond by shifting in the direction in which hydrochloric acid is consumed. Thus the position shifts in the backward direction resulting to the increase of hydrogen sulphide and iron (III) chloride. This means the brown colour of the solution intensifies.

Expected Responses

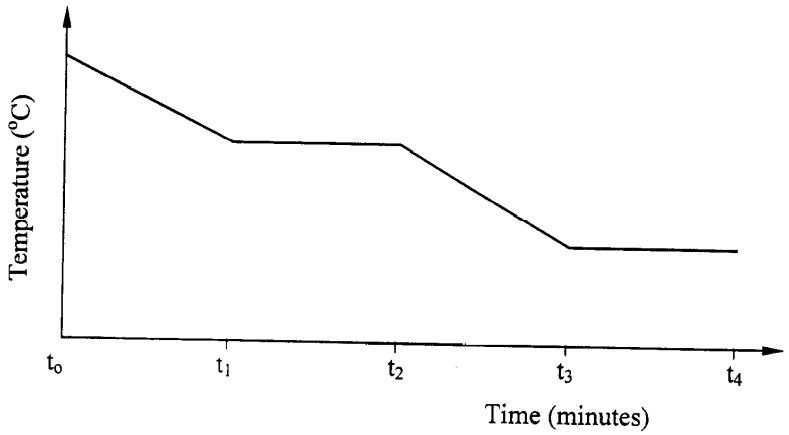
The brown colour of the mixture intensifies or increases while the green colour of the mixture fades. Iron (II) is oxidized to iron (III).

Advice to Teachers

Reactions involving poisonous gases (substances) are usually avoided. For students to understand the reactions of hydrogen sulphide, a carefully planned demonstration can be carried out either in an efficient fume cupboard or in the open. Theoretical teaching should be avoided. Enough time must be allowed to teach and revise all topics in the set syllabus if improvement is to be expected in chemistry.

Question 25

The graph below is a cooling curve of a substance from gaseous state to solid state.



Give the name of the:

(a) process taking place between t_0 and t_1;

(b) energy change that occurs between t_3 and t_4.

In this question, candidates were supposed to study the cooling curve of the substance from its gaseous state to solid state and then answer a few questions.

Weaknesses

Majority of the candidates were not able to state the process taking place between time t_0 and t_1. Most of them could not state the correct name of the energy change that occurs between t_3 and t_4. These weaknesses are likely to have resulted from lack of enough coverage of the topic ***"energy changes"***. It is therefore strongly advised that this topic should be given more time during teaching. Assignments should be administered immediately after tuition. Drilling during revision is a must if this topic is to be understood properly. Experiments on cooling curves should be conducted by students and results discussed.

In part (b) of the question, the candidates failed to give the correct name of the energy change between t_3 and t_4. Some of the wrong responses given by candidates were: ***"Physical change", "heat of freezing", "latent heat of solidification"*** and ***some even subtracted t_4 from t_3.*** This kind of weaknesses occur when candidates do not give themselves enough time to read and understand the question. Candidates are advised that they should read each question carefully, understand the demands of the question and give it its correct interpretation before they begin to write responses. Questions involving graphs and flowcharts demand a fair amount of time and intense concentration. Usually these questions are the easiest and yet they are the poorest performed just because enough time is not spent on them.

Expected Responses

(a) Cooling.

(b) Latent heat of fusion.

8.3 PAPER 2 (233/2)

From the data collected, ***questions 4*** and ***5*** were best performed with an approximate mean score of ***60%*** while the ***questions 1*** and ***7*** were the poorest done with a mean score of ***29%*** and ***34%*** respectively. ***Questions 1*** and ***7*** are discussed below.

Question 1

(a) Biogas is a mixture of mainly carbon(IV) oxide and methane.

(i) Give a reason why biogas can be used as a fuel.

(ii) Other than fractional distillation, describe a method that can be used to determine the percentage of methane in biogas.

(b) A sample of biogas contains 35.2% by mass of methane. A biogas cylinder contains 5.0 kg of the gas.

Calculate the:

(i) number of moles of methane in the cylinder. (Molar mass of methane = 16)

(ii) total volume of carbon(IV) oxide produced by the combustion of methane in the cylinder (Molar gas volume = 24.0 dm^{-3} at room temperature and pressure).

(c) Carbon(IV) oxide, methane, nitrogen(1) oxide and trichlorofluoromethane are green-house gases.

(i) State **one** effect of an increased level of these gases to the environment.

(ii) Give **one** source from which each of the following gases is released to the environment:

I Nitrogen(1) oxide.

II Trichlorofluoromethane.

Candidates were expected to state:

- Why biogas (mixture of methane and carbon (IV) oxide) is a fuel.
- Carry out a calculation involving the mole concept.
- Describe a method for obtaining methane from the mixture and determine its percentage.
- State the environmental effects of N_2O and CCl_3F.

Weaknesses

Candidates were able to state why biogas can be used as a fuel and they were also able to carry out the mole calculation quite well. They were however, not able to describe systematically a method that can be used to determine the percentage of methane in a sample of biogas. They were also not able to state the environmental effects of nitrogen (V) oxide and trichlorofluoromethane.

Once more, candidates are reminded that questions which involve descriptions of processes need careful planning. The start of the process is very important. If the starting is incorrect then the whole process is incorrect and ***all*** the four marks would be ***lost***. There was a drop in the performance of paper 2. It is strongly believed that the marks were lost in this area (Description of processes). It is important for candidates to plan, organize the steps sequentially then proceed to write their responses.

One of the emerging issues is pollution of the environment especially from industrial waste. Most of topics dealing with industrial processes will have a sub-topic on effects of products and by products on the environment. Over 70% of the candidates were not able to state the correct pollution effects of N_2O and CCl_3F. Items in examinations can be set from ***any*** section of the syllabus. Therefore ***thorough*** coverage of the entire syllabus is critical. A clear relation on what is taught to real life happenings should be brought out strongly. Project work should also not be ignored.

Expected Responses

(a) (i) Biogas contains methane which combustible.

(ii) Pass a known volume of biogas (V_1) through aqueous NaOH, KOH or limewater. CO_2 will be absorbed. Collect all the gas that comes out in a gas syringe (V_2).

% of methane $\frac{V_2}{V_1} x100$

(b) (i) Moles of methane = $\frac{35.2x5x1000}{100x16}$

= 110 moles

(ii) $CH_{4(g)} + 2O_{2(g)} \longrightarrow CO_{2(g)} + 2H_2O_{(\ell)}$

Volume = 110 x 24

= 2640 dm^3

(c) (i) Global warming

(ii) I N_2O: ammonium fertilizers.

II CCl_3F: sprays, aerosols, propellants, refrigerators.

Advice to Teachers

Teachers should give candidates more practice in giving precise and logical descriptions of processes.

Question 7

(a) Define the standard enthalpy of formation of a substance.

(b) Use the thermochemical equations below to answer the questions that follow.

1. $C_2H_{6(g)} + \frac{7}{2}O_{2(g)} \longrightarrow 2CO_{2(g)} + 3H_2O_{(l)}; \quad \Delta H_1 - 1560 kJmol^{-1}$

2. $C_{(graphite)} + O_{2(g)} \rightarrow CO_{2(g)}; \quad \Delta H_2 = -394 kJmol^{-1}$

3. $H_{2(g)} + \frac{1}{2}O_{2(g)} \rightarrow H_2O_{(g)}, \quad \Delta H_3 = -286 kJmol^{-1}$

(i) Name **two** types of heat changes represented by ΔH_3.

(ii) Draw an energy level diagram for the reaction represented by equation 1.

(iii) Calculate the standard enthalpy of formation of ethane.

(iv) When a sample of ethane was burnt, the heat produced raised the temperature of 500g of water by 21.5K,. (Specific heat capacity of water = $4.2Jg^{-1}K^{-}$).

Calculate the:

I. heat change for the reaction.

II. mass of ethane that was burnt. (Relative formula mass of ethane = 30.)

The question required the candidates to:

- Define the standard enthalpy of formation of a substance.
- Interpret thermo chemical equations.

- Draw energy level diagrams and use the energy level diagram to calculate the enthalpy of formations of a substance (ethane).
- Carry out calculations involving the mole concept and energy.

Weaknesses

Average and above average candidates were able to give the correct definition of the standard enthalpy of formation. More than 60% of the candidates were not able to state two energy changes represented by the equation:

$$H_{2(g)} + \tfrac{1}{2}0_{2(g)} \longrightarrow H_2O_{(g)}$$

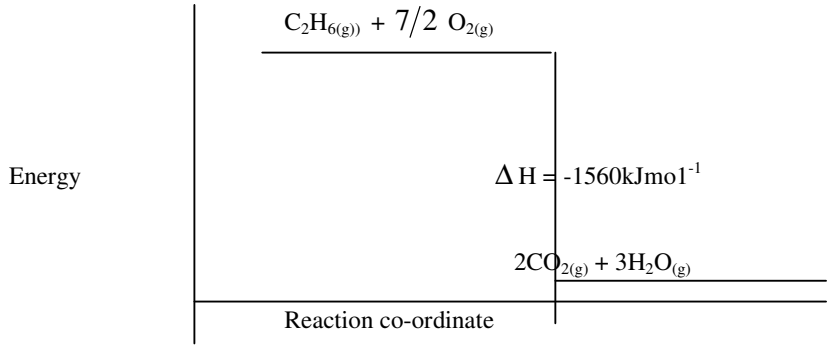
If candidates spent some time on the equation, they should have realized that one mole of water is formed from its constituent elements, hydrogen and oxygen. Therefore one of the heat changes involved is heat of formation of water. They should also have realized that one mole of hydrogen gas is being burnt completely. Therefore, the other energy change is heat of combustion of hydrogen. It is important to think seriously about the requirements of a question before attempting it. The other weakness noticed was that the candidates could not link the moles of a substance to energy changes. Majority drew the correct energy level diagrams but they could not calculate the heat of formation of methane.

Expected Responses

(a) This is the heat change (ΔH) when one mole of a substance is formed from its constituent elements (under standard conditions).

(b) (i)
- Heat of combustion of hydrogen.
- Heat of formation of water.

(ii)



(iii) $2\ CO_{2(g)} + 3\ H_2O_{(g)} \longrightarrow C_2H_{6(g)} + \frac{7}{2} O_{2(g)}$; $\Delta H = -1560kJmol^{-1}$

$2\ C_{(s)} + 2\ O_{2(g)} \longrightarrow 2\ CO_{2(g)}$; $\Delta H = 788\ kJmol^{-1}$

$3\ H_{2(g)} + \frac{3}{2} O_2 \longrightarrow 3\ H_2O_{(g)}$; $\Delta H = 858\ kJmol^{-1}$

$2\ C_{(s)} + 3\ H_{2(g)} \longrightarrow C_2H_{6(g)}$; $\Delta H = 86\ kJmol^{-1}$

(iv) I Heat change $= \dfrac{500x21.5x4.2}{100}$

$= 45.15\ kJ$

II No. of Moles of ethane

$= \dfrac{45.15}{1560}$

$= 0.0289423$

$\therefore$ Mass of ethane = 0.0289423 x 30

= 0.87 g

Advice to Teachers

As was noticed in ***paper 1 (233/1)***, the topic on energy changes is not properly understood. More time should be allocated to its teaching. Methods of approach should also be re-designed so that students can be allowed to carry out experiments on heat changes. Heats of displacement, solution etc are quite easy to determine. Students should be allowed to determine them. More examples on calculations involving energy changes should be given to students for practice.

8.4 PAPER 3 (233/3)

This is a practical paper testing mainly on quantitative and qualitative analysis. Skills required in quantitative analysis have been mastered by the majority of candidates. Results from titrations, records of time, temperature, plotting of graphs, etc were done quite well in 2008. It is hoped that this trend continues.

Questions 2 and 3

2 You are provided with solid **D**. Carry out the tests below. Write your observations and inferences in the spaces provided.

(a) Place **all** of solid **D** in a clean dry test-tube and heat it strongly until no further change occurs. Test any gases produced with both blue and red litmus papers. Allow the residue to cool and use it for test (b).

Observations	**Inferences**

(b) Add about $10cm^3$ of 2M hydrochloric acid to the residue and shake for about three minutes. **Keep the mixture for test (c).**

Observations	**Inferences**

(c) (i) Place about $1cm^3$ of the mixture in a test-tube and add aqueous ammonia dropwise until in excess.

Observations	**Inferences**

(ii) To the rest of the mixture, add **all** of solid **E** provided and shake the mixture well.

Observations	**Inferences**

3 You are provided with solid **F**. Carry out the tests below. Write your observations and inferences in the spaces provided.

(a) Place about one third of solid **F** on a **metallic** spatula and burn it using a Bunsen burner.

Observations	**Inferences**

(b) Place the remaining of solid **F** in a test-tube. Add about $6cm^3$ of distilled water and shake the mixture well. **(Retain the mixture for use in test (c).**

Observations	**Inferences**

(c) (i) To about $2cm^3$ of the mixture, add a small amount of solid sodium hydrogen carbonate.

Observations	Inferences

(ii) To about $1cm^3$ of the mixture, add $1cm^3$ of acidified potassium dichromate (VI) and warm.

Observations	Inferences

(iii) To about $2cm^3$ of the mixture, add two drops of acidified potassium manganate (VII).

Observations	Inferences

The two questions were on qualitative analysis.

Weaknesses

Candidates recorded wrong results or observations. Candidates need to know that they can only earn marks if the observation is correct and correct scientific language is used to describe that observation. It should be known that if the observation is ***Wrong*** or ***Correct*** scientific language is ***not*** used, then all the marks will be lost.

Expected Responses

Observations	*Inferences*
2. (a) ▪ Green solid turned black. ▪ Colourless liquid condenses on cool part of test-tube. ▪ Blue litmus paper turned pink. ▪ Red litmus paper remains the same.	▪ Solid d is hydrated or Contains water of crystallization. ▪ Acidic gas is produced.
(b) ▪ No effervescence. ▪ Black solid reacts to form a green Solution.	▪ Black solid is basic. ▪ Coloured ion present i.e Fe^{2+}orCu^{2+}
(c) (i) ▪ Blue precipitate formed. ▪ Re-dissolves in excess to form a deep blue/Royal blue solution. (ii) ▪ Effervescence occurs ▪ Brown solid deposited. ▪ Colourless formed. ▪ Green solution turns. ▪ Test-tube gets warm.	Cu^{2+} present (1) E is a metal more reactive than copper ***Or*** E displaces Copper or E reduces Cu^{2+} to Cu
3. (a) Yellow smoky flames/sooty flame. (b) Dissolves to form a colourless solution. (c) (i)	F is along chain hydrocarbon or an unsaturated organic compound. It is probably a soluble salt or Polar organic compound.

▪ Effervescence occurs. ▪ Colourless gas given out. (ii) Orange/Yellow colour persists. (iii) $KMnO_4(aq)$ is decoloursied.	Compound is acidic (1) – COOH or H^+ or H_3O_+ Absence of Hydroxyl group C= C or –C≡C- present

Advice to Teachers

Students should be given more practice in carrying out experiments. Correct descriptions of results should be emphasized and correct inferences must be given. It is totally unfair to the candidates to deny them use of apparatus during teaching only for them to see them during examinations. It makes them panic. Build confidence in the students by exposing them to various types of experiments throughout the four year course.

9.0 HISTORY AND GOVERNMENT (311)

History and Government equips students with adequate knowledge that enhances their understanding of social, economical and political developments of the world. Students are expected to relate this information to the Kenyan situation. The year ***2008 KCSE History and Government*** examination was presented in two papers: ***paper 1 (311/1)*** covers the *"**History and Government of Kenya**"* while paper ***2 (311/2)*** is on the *"**Themes in World History and Government**"*. This report analyses the performance of candidates in the year 2008 History and Government examination paper paying special attention to the poorly performed items. It looks at what the questions tested, the candidates' weaknesses, possible reasons for their poor performance and gives advice to History and Government teachers with the aim of improving future performance in the subject.

9.1 GENERAL CANDIDATES' PERFORMANCE

The table below shows performance of candidates in History and Government (311) over a period of four years: 2005, 2006, 2007 and 2008.

Table 14: Candidates' Performance in History and Government for the Last Four Years

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2005	1		100	56.71	19.76
	2		100	45.81	19.88
	Overall	**142,924**	**200**	**102.51**	**38.00**
2006	1		100	59.16	19.55
	2		100	42.23	17.74
	Overall	**143,400**	**200**	**101.38**	**35.00**
2007	1		100	48.04	18.60
	2		100	53.82	20.19
	Overall	**165,844**	**200**	**101.85**	**36.00**
2008	1		100	36.20	16.96
	2		100	45.75	18.33
	Overall	**184,823**	**200**	**81.92**	**33.57**

From the table above, the following can be deduced:

9.1.1 The candidature in the subject has continued to grow over the years.

9.1.2 The performance in both papers dropped as shown by the means of ***36.20*** and ***45.75*** in ***papers 1 (311/1)*** and ***2 (311/2)*** respectively. Of particular significance is ***paper 1 (311/1)*** which dropped by ***11.84*** points from a mean of ***48.04*** in the year 2007 to a mean of ***36.20*** in the year 2008.

9.1.3 The drop in the mean of ***paper 1 (311/1)*** affected the overall mean of the subject adversely. In the year ***2007*** it was ***101.85*** while in the year ***2008*** it dropped to ***81.92***.

Questions which were poorly performed by the candidates are discussed below:

9.2 PAPER I (311/1)

The performance of candidates in this paper declined from a mean of ***48.04*** in the year **2007** to ***36.20*** in the year **2008.** For the sake of this report ***questions 21(a)*** and ***24(a)*** which were challenging to most candidates will be discussed.

Question 21 (a)

State **five** reasons why the government of Kenya adopted the Sessional Paper No. 10 of 1965.

Candidates were expected to give reasons why the government of Kenya adopted Sessional Paper No. 1 of 1965.

Weaknesses

A good number of candidates gave irrelevant responses which included ***"To promote local authorities, City Council and towns" "this is spoilage of trees in Kenya", "to manufacture books for Kenya"," to Preserve global World peace", etc.***

Expected Responses

- To ensure equal opportunities for all citizens.
- To provide democracy.
- To ensure that resources are used for the benefit of society and its members.
- To encourage various forms of ownership of property.
- To promote freedom of conscience and human dignity.

Advice to Teachers

The various wrong responses given by candidates point at inadequate or poor tuition and poor syllabus coverage. Teachers need to ensure that all topics in the syllabus are thoroughly taught. Candidates need to carry out revision before sitting for this examination.

Question 24 (a)

Identify **five** requirements in the constitution making process.

Requirements

Candidates were to spell out the requirements in the constitution making process.

Weaknesses

Candidates came up with irrelevant answers such as ***"First reading", "Committee stage"*** and ***"report stage", "Requires a person above thirty five years", "The law making process", "The Bible" "geographical factor" and "historical factor".***

Expected Responses

- Provision of Civic education.
- Collecting views from the public.
- Drafting the constitution.
- The draft constitution is published for the public/disseminated.
- The Review commission holds public hearings in all the areas for further recommendations.
- Convening of a national constitutional conference to amend or reject the recommendations.
- The agreed upon issues are re-drafted and presented to the Attorney General by the Review commission.

Advice to Teachers

The constitution has been a common topic in the media houses for nearly three years. Teachers need to spice their teaching with current affairs. Candidates should read widely and be in contact with current affairs that make this topic up to date.

9.3 GENERAL COMMENTS

9.3.1 There should be effective coverage of the syllabus as well as its completion.

9.3.2 Teachers need to have regular and effective testing.

9.3.3 Teachers should set standard examinations and desist from procuring commercially produced examinations.

9.3.4 Teachers should expose students to current affairs through reading, listening to news and participating in debates.

9.3.5 Teachers should make use of group activities and class discussions and symposia.

9.3.6 Teachers should train student to stick to the rubric and encourage them to think before attempting questions.

9.4 PAPER 2 (311/2)

The syllabus coverage in this paper was up to standard. Questions from forms 1 to 4 were set and all the cognitive skills of testing were incorporated. ***Questions 8, 12*** and ***23 (b)*** gave challenges to the candidates and will be discussed here below.

Question 8

What is the meaning of the term "Urbanisation".

Candidates were expected to give the meaning of the term ***"urbanization"*** from the Historical point of view.

Weaknesses

Many candidates described rural-urban migration.

Expected Response

It is the concentration of people in certain places which grow large to be called towns/cities.

Advice to Teachers

Teachers should assist candidates in getting the terminologies used in the subject correct.

Question 12

Identify the European power that took over the administration of Tanganyika after the First World War.

Candidates were expected to know who administered Tanganyika after the 1st World War.

Weaknesses

Most candidates lacked specific knowledge that showed that the administration of Tanganyika was transferred to Britain from Germany after the later was defeated in the war.

Expected Response

Britain.

Advice to Teachers

There is need to teach the facts that assist the candidates to answer certain questions as the one above.

Question 23(b)

Explain **five** differences between the Organisation of African Unity and the African Union.

Weaknesses

This question posed a major challenge to the few candidates who attempted it, perhaps due to lack of information on both organizations.

Expected Responses

- The structure of the African Union is more elaborate than that of the Organisation of African Unity/The African Union has more organs than the organization of African Unity.

- African Union unlike the Organization of African Unity has mandate to intervene in the internal affairs of member states who violate human rights.
- African Union has an accountability mechanism/the African Peer Review Mechanism while the Organisation of African Unity lacked it.
- The African Union has proposed the creation of a standing army whereas the Organisation of African Unity did not think of it.

Advice to Teachers

Teachers should cover the syllabus adequately and guide candidates on how to answer questions concerning comparisons.

9.5 GENERAL COMMENTS

The performance of candidates in the papers in this subject needs to be improved. This year's performance especially in ***paper 1 (311/1)*** was dismal. As mentioned in previous reports there is need to ensure the following is adhered to:-

9.5.1 Ensuring that the syllabus is adequately covered.

9.5.2 Revising the syllabus as per the set objectives.

9.5.3 Hiring enough History and Government teachers to handle the subject.

9.5.4 Provision of adequate, reading and research materials.

9.5.5 Sensitizing teachers and candidates on KNEC feedback reports on examinations.

9.5.6 Candidates should not be cheated by revising 'fake' papers which divert them from the real examinations.

9.5.7 Ensuring that rubric is seriously adhered to. Candidates should only answer what they have been asked, that is, in individual questions as well as when attempting the whole paper.

10.0 GEOGRAPHY (312)

The year 2008 was the third time that the revised Geography syllabus was tested. Like in the previous two years, two papers were offered, each with ten questions. The two papers formed a sufficient sample of all the areas of the syllabus that candidates were expected to have covered over the four year period of their course. The papers were developed to test a wide range of abilities. Among the skills tested were map interpretation skills, comprehension, application, analysis, simple calculations and drawing among others.

Paper 1 (312/1) tested a number of topics and varied skills ***in physical Geography*** and ***map reading skills*** while ***paper 2 (312/2)*** tested concepts in ***human*** and ***economic Geography, photograph interpretation skills*** and ***simple arithmetic calculations.*** In both papers, candidates were expected to answer all the questions in section A. In section B, question 6 was compulsory, then a choice of two other questions out of the remaining four essay questions.

10.1 GENERAL CANDIDATES' PERFORMANCE

The ***table 15*** below shows the overall performance in Geography over the period 2005 to 2008

Table 15: Candidates Overall Performance in Geography for the Last Four Years.

Year	Paper	Candidature	Maximum Mark	Mean Score	Standard Deviation
2005	1		100	36.68	16.31
	2		100	45.90	15.83
	Overall	**106, 865**	**200**	**82.56**	**30.00**
2006	1		100	46.12	19.23
	2		100	37.34	15.74
	Overall	**97,991**	**200**	**83.44**	**33.00**
2007	1		100	45.50	19.82
	2		100	48.14	16.37
	Overall	**103,288**	**200**	**93.62**	**34.00**
2008	1		100	35.91	17.10
	2		100	38.08	16.35
	Overall	**109,745**	**200**	**74.01**	**31.92**

The following observations can be made from the table above:-

10.1.1 The candidature increased by ***6,457*** candidates from ***103,288*** in the year 2007 to ***109,745*** in the year 2008. This was the highest candidature in the four year period.

10.1.2 There was a drop in the performance of candidates in both papers as indicated by the means. In the year 2007 the mean for ***paper 1 (312/1)*** was ***45.50*** while in the year 2008 it declined to ***35.91***. Similarly, the mean for ***paper 2 (312/2)*** declined from ***48.14*** in the year 2007 to ***38.08*** in the year 2008.

10.1.3 The overall mean also declined from ***93.62*** in the year 2007 to ***74.01*** in the year 2008.

10.1.4 The best performance over the four year period was recorded in the year 2007 when a mean score of ***93.62*** was recorded.

10.1.5 The standard deviation in both papers shows a reasonable spread of candidates' scores.

Although the performance of candidates dropped, not all the questions recorded poor performance. This report will discuss the questions in which candidates scored poorly. These are ***questions 4 (a), 6, 7 (c), 8(c), 9*** and ***10*** in ***paper 1 (312/1)*** while in ***paper 2 (312/2)*** the poorly performed questions were ***7 (a) (ii), 9 (c)*** and ***10 (c).*** The report will highlight the possible reasons why performance in these questions was not as good as expected and also give suggestions on possible strategies that teachers could adopt to improve performance in the future.

10.2 PAPER 1 (312/1)

Question 4 (a)

Apart from water vapour, name two other substances that are suspended in the atmosphere.

The question required candidates to have knowledge of the composition of the atmosphere so that they would to be able to list the substances that are suspended in the atmosphere.

Weaknesses

Many candidates were not able to name the substances that exist in the atmosphere. Many responded through guessing but got it wrong while some left the question unanswered. This is an indication that this area had not been covered adequately during teaching.

Expected Responses

- Dust particles.
- Pollen grain.
- Gases/ Carbon dioxide/ oxygen.
- Salt particles/ sodium chloride.
- Smoke.

Advice to Teachers

This was one of the simplest questions in the paper where candidates should have scored full marks. Teachers should ensure they cover all the areas of the syllabus thoroughly. When teaching a given topic, all aspects should be discussed so that students are not left to guess answers to questions.

Question 6

Study the map of Kericho 1:50,000 provided and answer the following questions.

(*a*) (i) Give the longitudinal extent of the area covered by the map.
(ii) Convert the scale of the map into a statement scale.
(iii) What is the approximate height of the hill in the grid square 6770?
(iv) Calculate the area of Kericho Municipality. Give your answer in square kilometres.

(*b*) (i) Give **three** types of natural vegetation found to the west of Easting 53.
(ii) What is the bearing of the trigonometrical station at grid reference 554668 from the factory at grid reference 610626?
(iii) Identify three forms of land transport found to the north of Northing 68 and west of Easting 53.

(*c*) Describe the distribution of settlements in the area covered by the map.

(*d*) Citing evidence from the map, explain **three** factors that favour the establishment of tea estates in the area covered by the map.

Candidates were given a topographical map of Kericho which they were expected to study and interpret. The question tested the following skills:

- Interpretation of longitudes.
- Conversion of scale.
- Use of grid lines.
- Use of contours to determine heights.
- Calculating area and bearing
- Application of knowledge on conditions ideal for tea farming.

This question required candidates to have mastered most skills in map reading. Specifically, they had to apply knowledge on grid references, marginal information, and interpretation of physical and human features using symbols provided in the key.

Weaknesses

Performance in this question was very poor. It is worrying that candidates have continued to do poorly in map work yet all the answers to the questions are derived from the map. The responses given by most of the candidates were an indication that they had little map reading skills. They were not able to apply the symbols in the key to come up with the correct interpretation of features in the map.

In part (a) (iii) of the question, most candidates failed to get the approximate height of the hill. This is an indication that they do not know how to apply the contour interval to the heights on the map. On the distribution of settlements, many candidates were not able to isolate the areas with sparse and dense settlements. Worse still, was the application and explanation of factors favouring tea farming in the area represented.

Expected Responses

(a) (i) 35º 15´ E to 35º 25´ E

(ii)

Map scale 1: 50, 000
i.e. 1 cm represents 50,000 cm
50,000cm = $\frac{50,000}{100,000}$ Km
= 0.5 km

Statement scale is 1cm represents 0.5 km/½ km

(iii) 2120m/just over 2120m/below 2140m

(iv) 10.5 – 11.0 km^2

(b) (i)

- Scrubs.
- Woodland.
- Scattered trees.
- Thicket.
- Papyrus/papyrus swamp vegetation.

(ii)

305º

(iii)

- All weather/road loose surface.
- Dry weather road.
- Motorable tracks.
- Foot paths/other tracks.

(c)

- There are few settlements/labour lines within the tea estates and no settlements in the forested areas.
- To the north and west of Kericho-Lumbwa road, the settlements form a dispersed pattern.
- To the north of Tugenon river, there are few or no settlements.
- There are nucleated settlements in the market/shopping centres/labour lines/villages.
- Some areas such as the steep slopes and river valleys have few or no settlements.
- Kericho town is the main settlement area/forms a large cluster of settlement/ dense settlement.

(d)

- The high relief as evidenced by the contours that rise between 1900 and 2400 metres above sea level, modifies temperatures making the area suitable for the growing of tea bushes.
- The relatively undulating slopes as evidenced by widely spaced contours allow proper drainage of soils making it ideal for tea farming/ allows mechanization.
- Presence of forests / many permanent rivers and high relief show that the area receives high rainfall which is suitable for tea growing.
- The area has fairly dense settlements which indicates availability of labour needed in tea farming.
- The area is well served by all weather roads which are needed for the transportation of tea from the farms to the factory/transportation of labour.

Advice to Teachers

Over the years, many candidates have been scoring low marks in map reading questions. This is worrying and teachers ought to re examine the way they teach this area with a view to enabling candidates to understand the concepts and perform better in the examinations. They must make a deliberate effort to help students learn how to interpret all aspects of a map. This includes the application of symbols used in the map. Students must understand the meaning of all the symbols in the key and look for the same in the map. They should also use the knowledge of physical and human geography and apply as they answer questions that require application of the same.

Question 7 (c)

Describe how the following features are formed and for each give an example from Kenya:

(i) a crater;

(ii) a geyser;

(iii) a lava plateau.

This question required knowledge on formation and distribution of volcanic features.

Weaknesses

Some candidates had rough ideas of the formation. However, many were not able to give the sequence of events that leads to the formation of the features. Formation of a feature follows a sequence which must come out in the candidates' responses. If one starts with the last event in the sequence, it shows that he/she does not know what happens earlier or later in the process.

Expected Responses

(i) ***A crater***

- Eruption of lava through a central vent causes building up of a cone.
- The lava in the vent cools and contracts.
- The cool lava withdraws into the vent leaving a shallow depression at the top of the cone.
- Gas explosions may blow away surface rocks causing a crater on the surface.

Examples: Mt Longonot, Menengai, Mt Suswa.

(ii) ***A geyser***

- Rainwater percolates down through cracks in the rocks.
- The water gets into contact with hot igneous rocks.
- The water is super heated and gases/steam forms.
- Pressure builds up in the cracks.
- The pressure causes steam and water to be ejected explosively or as it jets to the surface.
- The water and steam are emitted intermittently as pressure level changes.

Example: Lake Bogoria.

(iii) ***A lava plateau***

- It is formed when magma reaches the surface of the earth through a single vent or series of vents/fissures.
- The lava is extremely fluid/ultra-basic.
- The lava spreads evenly over a large area.
- The lava cools slowly and solidifies.
- Successive eruptions lead to more and more layers building up the landscape into a plateau.

Examples: Yatta Plateau, Uasin Gishu plateau, Laikipia plateau.

Advice to Teachers

For every feature that is taught in paper 1 (312/1), teachers must take time to explain the processes and ensure that they use appropriate diagrams for students to have a visual impression of what they are learning about.

Question 8 (c)

Describe each of the following drainage patterns:
(i) dendritic pattern;
(ii) trellis pattern.

Candidates needed to have learned the factors that influence development of drainage patterns and more so the influence of rocks in the process.

Weaknesses

Many candidates were not sure of the lay out of the two patterns. Some described patterns that had not been asked for while others confused the two patterns. Another weakness was that candidates failed to bring out the influence of the type of rocks to the type of drainage pattern. Where this was mentioned, candidates confused between the influence that the ***homogenous*** and ***heterogeneous*** rocks have on drainage patterns.

Expected Responses

(i) ***Dendritic pattern***

- It develops in areas where rocks have uniform structure.
- The direction of flow is influenced by the slope of the land.
- The tributaries join the main river at acute angles.
- The tributaries converge on the main river forming a shape like that of a tree and its branches.

(ii) ***Trellis pattern***

- The pattern develops where soft and hard rocks alternate vertically.
- The tributaries join the main river at right angles.
- The consequent streams are parallel to the main river.
- Some obsequent streams flow to the opposite direction of the main river.
- The main river and its tributaries form a rectilinear pattern.

Advice to Teachers

As they teach about drainage patterns, teachers should ensure that students understand the influence of all the factors at play. In this case, rocks are a major factor. They should also ensure that candidates are able to distinguish between different types of drainage patterns.

Question 9

(*a*) (i) Describe how ice is formed on a high mountain.
(ii) Apart from a valley glacier, name **two** types of ice masses found on Mountains in East Africa.
(*b*) Explain how the movement of a valley glacier is influenced by the following factors:
(i) temperature;
(ii) width of a glacier channel.

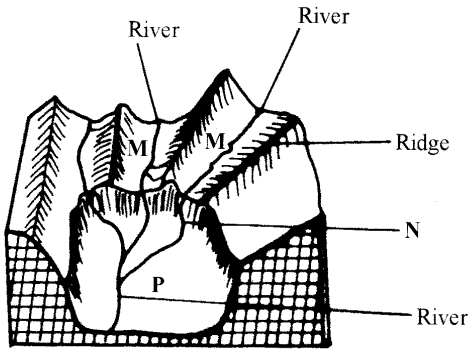
(*c*) Describe the distinctive characteristics of the following features resulting from glacial erosion:

(i) a corrie;

(ii) a pyramidal peak;

(iii) a fiord (fjord).

(*d*) (i) The diagram below shows a glaciated upland area.



Name the features marked **M**, **N** and **P**.

(ii) Describe the process through which a crag and tail is formed.

This question required candidates to have knowledge on the process of glaciation and the processes involved in the formation of the resultant features.

Weaknesses

Candidates displayed total lack of knowledge on the topic on glaciation. It is not a surprise that this was the most unpopular question out of the five essay questions. It shows that candidates were ill prepared on this topic. The few who attempted the question performed poorly.

Expected Responses

(a) (i)

- Due to low temperatures, water vapour freezes and forms snow.
- Snow falls and accumulates on the mountain top/higher slopes.
- Snow continues pilling and new layers exert pressure on the lower layers
- Lower layers become compressed as air is expelled from the spaces between snow particles
- The compacted layers are ice.

(ii)

- Ice caps.
- Cirque glaciers.

(b)

(i) ***Temperature***

- Glaciers move faster in summer/when the temperatures are higher because the ice melts due to the warm conditions, whereas in winter/when temperatures are low, ice movement is slow due to cold conditions.
- The weight of the valley glacier exerts pressure to the bottom of the valley thereby raising the temperature and causing ice to thaw and move downslope.

(ii) ***Width of a glacier channel***

- When the channel is wide, ice spreads out forming a thin layer, so there is less pressure to cause thawing that would facilitate ice movement.

(c)

(i) ***A corrie***

- Is a deep rock basin.
- Has steep sides.
- Is arm-chair in shape/semi circular.
- Has a high back wall.
- Has a reverse slope on the lower side.

(ii) ***A pyramidal peak***

- Has steep sides.
- Is surrounded by cirques.
- Is a sharp rock pinnacle/horn.
- Has a radiating system of arêtes.

(iii) ***Fiord***

- Has steep walls.
- Is narrow sea inlet.
- Is U-shaped.
- Has hanging valleys.
- Has deep waters.
- It is shallow seawards and/ deep landwards.

(d) (i)

M : Hanging valley.
***N* :** Water fall.
***P* :** U Shaped valley/glacial trough.

(ii)

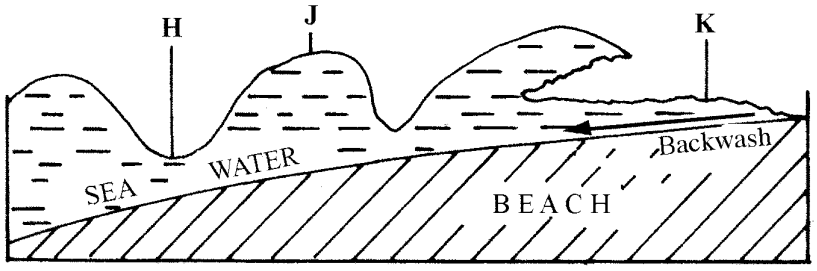
- A large block of rock stands on the path of an coming glacier.
- The moving ice plucks off/erodes weak rock fragments from the upper side of the rock.
- As the ice moves round and over the resistant rock it carries the eroded materials to the lee side.
- The lee side does not experience erosion.
- Eroded materials are deposited on the lee side of the rock.
- With time the moving ice smoothens the side of the on coming ice while deposited materials increase on the lee side.
- The resistant rock is the crag while the materials deposited on the lee side form the tail.

Advice to Teachers

Teachers must cover all the topics in the syllabus. If students are left on their own, they may not be able to read and understand such topics as glaciation. They need guidance and thorough teaching for these concepts to be clear. It is recommended that teachers employ all possible methods including use of photos, models and even mud to demonstrate the work of ice on the earth's surface.

Question 10

(*a*) The diagram below shows a breaking sea wave.



(i) Name the parts labelled **H**, **J** and **K**.
(ii) What is a backwash?

(*b*) Describe **three** processes of wave erosion along the coast.

(*c*) Explain how the following factors influence wave deposition:
(i) gradient of the shore;
(ii) depth of the sea.

(*d*) Using well labelled diagrams, describe how a bay bar is formed.

To be able to answer this question adequately, candidates were expected to have sufficient knowledge of the processes involved in the formation of some coastal features and the appearance of some of them.

Weaknesses

Performance on this question was fairly poor. Candidates displayed limited knowledge on coastal features and the processes involved in their formation. As a result, all parts of the question were poorly answered. However, the part that recorded the worst performance was part (d) of the question where candidates were expected to draw diagrams. Many were not aware of what to draw, meaning that they did not know what a ***bay bar*** is and the processes involved in its formation.

Expected Responses

(a) (i)

H: Trough.
J: Crest.
K: Swash.

(ii) It is the return flow of water down the beach to the sea after a wave has broken.

(b)

- ***Abrasion/ corrassion:*** Rock fragments carried by waves are used as a tool to grind against the cliff face as the waves break. Rock fragments carried by the backwash erode the sea floor.
- ***Solution/Corrosion:*** The solvent and chemical action of the sea water weakens and removes the soluble minerals that are found in the cliff/sea floor especially where there are limestone rocks.
- ***Hydraulic action:*** The swash/breaking waves hit against the cliffs shattering the rocks. The force of breaking waves compress air into the cracks/joints in the cliff face. This enlarges the cracks and parts of the rocks may break off.
- ***Attrition:*** Particles that are carried by waves are constantly colliding against each other. This wears them into smaller sizes.

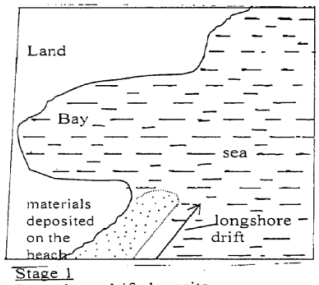
(c) (i) ***Gradient of the shore***

- A shore with a gentle gradient reduces the velocity/speed of the flow of the backwash causing the waves to deposit the load on the shore.
- Where the shore is steep, the velocity/speed of flow of the backwash will be moved from the shore back into the sea. There will be little or no deposition at the shore.

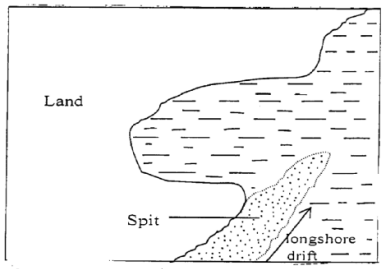
(ii) ***Depth of the sea***

- Shallow water causes waves to break thus encouraging deposition.
- Where the sea is deep, there is less deposition because the sea bed is not in contact with the waves carrying deposits.

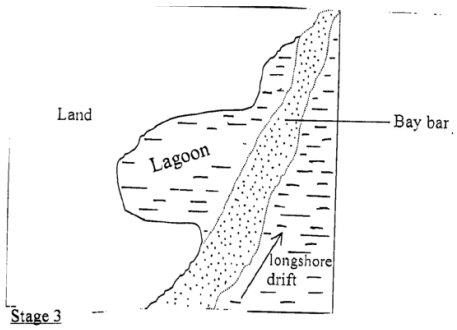
(d)



Stage 1
Longshore drift deposits
Materials at the entrance
Of the bay



Stage 2
A spit forms at the entrance of the bay



Stage 3

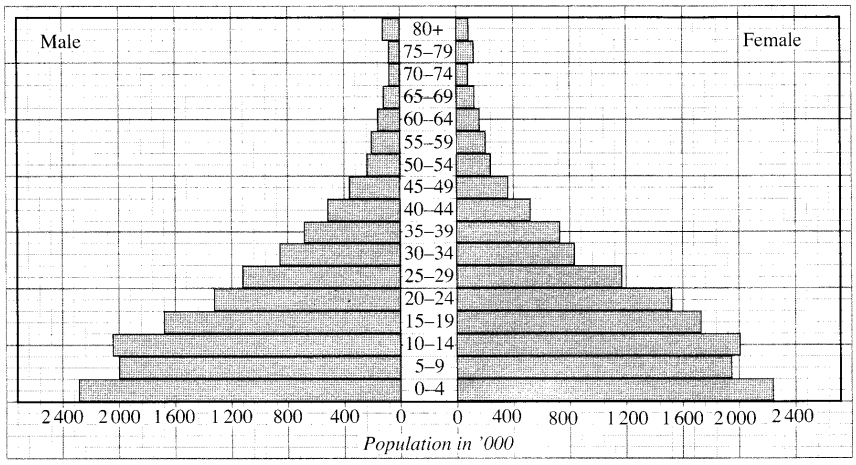
The longshore drift continues to deposit materials and the spit extends towards the other end of the lagoon. Eventually the spit reaches the other end thus forming a bay bar.

10.3 PAPER 2 (312/2)

Performance in this ***paper (312/2)*** was slightly better than in paper ***1 (312/1).*** The questions in which candidates had difficulties were fewer. These were ***questions 7 (a) (ii), 9 (c)*** and ***10 (c).***

Question 7(a) (ii)

The pyramid below represents population structure of Kenya.



Population by age and sex, 1999 (absolute values)

Describe the characteristics of the population as represented by the pyramid.

The question required that candidates to study the pyramid and derive the required features of the population from it. They could describe each bar on its own or group them where appropriate.

Weaknesses

Candidates were not able to interpret the graph appropriately. Some of the responses given were not corresponding to the graph. Some candidates wrote very little, while others avoided the question because they did not know how to answer it.

Expected Responses

- The number of males and females is almost equal at all ages.
- The aging population is low/from age 65 and above.
- The dependency ratio is high.
- The number of infants from age 0-4 is high/the population has a high birth rate.
- The middle age/working population is low.

Advice to Teachers

Teachers must use appropriate illustrations during teaching to make concepts clear. This would have helped candidates to interpret the graph correctly.

Question 9 (c)

Explain **five** problems facing sugarcane farming in Kenya.

This question required knowledge on sugarcane farming and the challenges that the farmers in Kenya face as they carry out the activity.

Weaknesses

The expectations were that candidates will score well since challenges related to sugarcane farming are unique. Candidates wrote about problems of farming in general and failed to dwell on just those in sugarcane farming. They also failed to explain but just listed the problems.

Expected Responses

- Pests such as ***termites*** and ***white grub*** and diseases such as ***ratoon stunting*** and ***smut*** attack the plants and lower the yields leading to low income for the farmers.
- Accidental fires/fires set by arsonists destroy the cane resulting in heavy losses to the farmers.
- Flooding of market by cheap imported sugar results in lowering the prices for the locally produced sugar thus low profit margins for the farmers.
- Delays in harvesting reduces the quality and tonnage of the cane reducing the farmer's earnings.
- Closure of some factories such as ***Ramisi*** and ***Miwani*** has deprived farmers of their source of income/annual closures of factories for servicing of machines disrupts the farmers' calendar of activities.
- Poor feeder roads in some areas leads to delayed delivery of the cane to the factory lowering the quality and subsequently the profit to the farmers.
- Prolonged droughts in some areas destroy the crop leading to heavy losses.
- High cost of farm inputs reduce the farmers' profit margins.
- Mismanagement of factories and cooperatives leads to delayed payments thus discouraging the farmers.

Advice to Teachers

Crops that are listed for study in the syllabus should be learned in details. What is unique about each crop should be noted. There is need to train the candidates on how to answer questions that require explaining.

Question 10 (c)

Explain why in East Africa, fresh water fishing is more developed than marine fishing.

Candidates needed to have learnt about factors that influence fishing and the distribution of fresh water and marine fisheries in East Africa to be able to respond to this question. The candidates' responses were also expected to have been supported by specific examples.

Weaknesses

Candidates had little knowledge of the distribution of fresh water and marine fisheries. They were not able to explain their answers.

Expected Responses

- There are numerous inland fishing grounds such as lakes and rivers which are accessible to many people.
- There is low demand for sea fish compared to fresh water fish making fresh water fishing more preferable.
- The narrow continental shelf along the coast of East Africa limits the growth of plankton thus limiting the breeding of fish/limiting the variety of edible fish.
- The stiff competition in the open sea from the industrialized countries whose fishermen use modern fishing equipment discourages local fisherman.
- The limited technology and inadequate capital make it difficult to develop marine fishing.

Advice to Teachers

Teachers must ensure that students are familiar with terms used in Geography and are able to distinguish between marine and fresh water fisheries. Distribution of fisheries should be taught using map illustrations.

10.4 GENERAL COMMENTS

10.4.1 Revision work on areas where performance is always poor should be taken very seriously to give students sufficient practice. For map work, this should be a must.

10.4.2 Teachers must read widely bearing in mind that Human and economic Geography is a dynamic subject that requires them to be well informed especially on emerging issues. They should read newspapers regularly and where possible check for information from sources like the internet and magazines. They should avoid sticking to old text books that are likely to have outdated information.

10.4.3 Teachers should train the students to avoid using a generalized approach to answer questions that are based on case studies. They should also train them on how to write complete answers on questions that demand explanations.

11.0 CHRISTIAN RELIGIOUS EDUCATION (313)

The year 2008 KCSE Christian Religious Education syllabus was examined in two papers. ***Paper 1 (313/1)*** examined the ***Old Testament*** and ***Traditional African Religious Heritage*** while ***paper 2 (313/2)*** tested aspects of the syllabus in the ***New Testament*** and ***Contemporary Christian Living***. Each of the papers had a total of six essay structured type questions and candidates were expected to answer any five. Rubric had to be adhered to and any candidates who attempted more questions were penalized through not marking either extra points within the questions or in the entire paper.

11.1 GENERAL CANDIDATES' PERFORMANCE

The table below shows candidates' performance in the KCSE Christian Religious Education examination for the last four years.

Table 16: Candidates Overall Performance in CRE for the Last Four Years

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2005	1		100	61.59	15.01
	2		100	53.07	16.20
	Overall	**119,887**	**200**	**114.65**	**29.00**
2006	1		100	57.51	16.16
	2		100	53.57	15.29
	Overall	**144,100**	**200**	**111.07**	**30.00**
2007	1		100	58.04	18.98
	2		100	66.74	15.31
	Overall	**167,022**	**200**	**124.77**	**32.00**
2008	1		100	53.61	18.19
	2		100	47.21	14.19
	Overall	**188,749**	**200**	**100.82**	**30.24**

The following observations can be made from the table above:

11.1.1 There has been a steady increase in candidature in CRE since the year 2005. There was an increase of ***21,727*** candidates in the year 2008.

11.1.2 The performance of candidates in the subject declined as attested by the mean of ***124.71*** in the year 2007 compared to ***100.82*** in the year 2008.

11.1.3 Poor performance was noted in paper ***2 (313/2)*** which had a mean of ***47.21*** in the year 2008 as compared to ***66.74*** in the year 2007. The performance in this paper drastically affected the overall mean of the subject.

This report will therefore focus attention in the areas in which candidates performed poorly. It also gives advice to teachers with a view of improving future performance in the CRE examination.

11.2 PAPER 1 (313/1)

The paper tested the syllabus adequately and all the questions were within the syllabus. The skills were also balanced but it was more challenging to the candidates than the previous years. There was fair performance by candidates in the paper, but for the sake of clarity we shall discuss questions which gave some challenges to the candidates.

Question 5 (a)

Explain the significance of the symbolic act of buying land by prophet Jeremiah.

Candidates were expected to know the act of buying land by Prophet Jeremiah and bring out the symbolic teachings of each action in the buying of land.

Weaknesses

The candidates did not know how the various actions of Jeremiah's buying of land symbolized hope and restoration.

Expected Responses

- It showed that the people of Judah still had a future despite the coming crisis.
- It demonstrates that the people would resume their normal lives/construct homes/cultivate land/own property.

- Divine judgment was not an end in itself.
- Restoration was to take place at God's own time/God was to determine when the people would be restored.
- It made them feel secure/they were not to lack anything.

Advice to Teachers

Teachers should stress on the symbolism of the prophetic actions and ensure that the Bible is well read in class.

Question 5(c)

State **five** ways in which Christians resolve conflicts among themselves.

Candidates were expected to state ways in which Christians resolve conflicts among themselves without involving the elders, courts, etc.

Weaknesses

A good number of candidates brought in general ways of resolving conflict including the court instead of being specific to biblical teachings.

Expected Responses

- They pray over the issue/problem.
- They offer guidance and counseling to the affected.
- Paying visits/talking to the offenders/fellowship.
- By involving church leaders as arbitrators.
- Withdrawing some privileges for a period of time so that one can reform.
- By sharing meals/eating together.

Advice to Teachers

Teachers should ensure that they are specific when teaching certain areas of the syllabus. They should encourage students to use biblical teachings as much as possible when dealing with such topics in the syllabus.

Question 6(b)

State **six** requirements that one had to fulfil to be made an elder in traditional African societies.

Candidates were expected to give qualifications one needed to meet in order to be considered as an elder.

Weaknesses

Some candidates confused the area with modern society and how people acquire positions by being considered to be members of parliament.

Expected Responses

- Being initiated.
- Must be married.
- Being of good conduct.
- Should have children.
- Having the right/specified age.
- Ability to provide for others.
- By undergoing the rituals of being an elder.
- Be a bonafide member of the community.

Advice to Teachers

Teachers should expose candidates to traditional practices so that they may grasp and appreciate the traditional practices as an ongoing process.

11.3 PAPER 2 (313/2)

The performance of candidates in this paper declined from a mean of ***66.74*** in the year 2007 to ***47.21*** in the year 2008. The questions which posed challenges to the candidates were ***questions 1(b), 2(c)*** and ***6(b).*** The questions will be highlighted in this report.

Question 1(b)

Explain what the Magnificat reveals about the nature of God.

Candidates were expected to give what the Magnificat revealed about the nature of God.

Weaknesses

A good number of candidates lacked the information because they were not familiar with the Biblical text.

Expected Responses

- God is the saviour because he remembers the lowly.
- God is mighty because he scatters the proud.
- God is merciful to those who fear Him.
- He is the provider/sustainer because he feeds the hungry.
- He is kind/helper to his servant Israel.

Advice to Teachers

As mentioned in previous reports, teachers have to read the Bible in class during teaching and encourage students to read the context of each topic.

Question 2(c)

Why are Christians finding it difficult to apply the teachings of John the Baptist in their lives today?

Candidates were expected to give reasons why Christians find it hard to apply the teachings of John the Baptist in their lives.

Expected Responses

- They lack faith in God's word.
- Clinging to the past/inability to abandon the old/previous life style.
- Negative attitude by the rich towards the needy/poor.
- The influence of mass media/moral decadence in society.
- Peer pressure.
- Some Christians lead hypocritical lives.

Advice to Teachers

Teachers need to assist students to master how to handle application questions. Candidates should have the ability to infer information.

Question 6(b)

Outline **eight** problems related to maintenance of law and order in Kenya today.

Candidates were expected to spell out the problems related to maintenance of law and order in Kenya today.

Weaknesses

Most candidates were not specific in bringing out issues related to maintenance of law and order.

Expected Responses

- Some legislators do not observe the law, thus serving as wrong role models.
- Unequal distribution of resources.
- People lack interest/do not care about others hence do not report cases of lawlessness.
- Interference from civil society/human rights groups/activists who oppose government initiatives in maintenance of law and order.
- People are not conversant with the laws of the country.

Advice to Teachers

Teachers should expose students to current information from the media. They should encourage the students to involve themselves in research and debates to gather more knowledge in this topic.

11.4 GENERAL COMMENTS

The performance of the subject dropped as indicated in this report. For the trend to change the following has to be adhered to:

11.4.1 The Bible ***must*** be used during teaching and revision.

11.4.2 Candidates should avoid being misled by 'fake' papers as they revise for their examinations.

11.4.3 Candidates must adhere to the rubric since examiners follow the instructions of marking strictly.

11.4.4 The government needs to hire more qualified CRE teachers because some of the candidates' answers depict lack of quality tuition.

11.4.5 There is need to in-service the CRE teachers to handle the syllabus.

11.4.6 Teachers need to avoid the use of previous marking schemes when teaching because some candidates merely reproduce them without answering the questions asked.

12.0 ISLAMIC RELIGIOUS EDUCATION (314)

In the year 2008 Islamic Religious Education (IRE) was tested in two papers. ***Paper 1 (314/1)*** consisted of six essay questions and candidates were required to answer five. The paper tested the ***Quran, Hadith/Sunnah, Devotional acts*** and ***Pillars of Iman***. ***Paper 2 (314/2)*** also had six essay questions of which candidates were required to answer five. This paper tested ***Akhlaq, Muamalat, History of Islam and Muslim scholars***. Both paper 1 (314/1) and paper 2 (314/2) were marked out of a maximum of 100 marks each and time allocation for each paper was 2 hours and 30 minutes (2½ hours). Each question in the papers carried a maximum of 20 marks.

The questions in the IRE examination tested candidates:

- Knowledge of the factual materials relevant to each topic in the syllabus.
- Understanding of the meaning and interpretation of each of the topics.
- Ability to express themselves on the basis of evidence and argument.
- Appreciation and evaluation of the materials studied in each topic.
- Ability to respond and apply the religious, moral and social issues raised in each topic.

12.1 GENERAL CANDIDATES' PERFORMANCE

The table below shows candidates performance in IRE at the KCSE level for the last four years.

Table 17: Candidates Overall Performance in IRE in the last four years

Year	Paper	Candidate	Maximum Score	Mean Score	Standard Deviation
2005	1		100	59.50	17.20
	2	5,488	100	64.57	18.31
	Overall		**200**	**123.99**	**32.00**
2006	1		100	60.34	17.34
	2	6,105	100	56.76	17.77
	Overall		**200**	**117.10**	**31.00**
2007	1		100	64.51	17.91
	2	7,100	100	58.42	16.78
	Overall		**200**	**122.93**	**31.00**
2008	1		100	61.43	16.99
	2	8,622	100	48.01	17.68
	Overall		**200**	**109.42**	**31.39**

The following observations can be made from the table above:

12.1.1 The candidature in the KCSE IRE examination has been rising steadily over the four year period, with the year 2008 registering the highest number of candidates ***(8,622)*** compared with the year 2007 ***(7,100)*** a percentage increase of ***17.65 %***.

12.1.2 In the year 2008, candidates' performance in ***paper 1 (314/1)*** was better than in paper ***2 (314/2).***

12.1.3 The year 2008 registered the lowest overall mean of ***109.42*** in the four years under review.

This report analyses the candidate's general performance in the year 2008 KCSE IRE examination papers, paying special attention to the questions where candidate's performance was relatively poor. An attempt has been made to highlight possible causes of the poor performance. The report also gives samples of expected responses and makes suggestions to the teachers of IRE with the hope of helping them evaluate and improve their teaching methods and approaches with the aim of improving candidate's performance in future.

12.2 PAPER 1 (314/1)

The general performance of the candidates in IRE paper 1 (314/1) examination was commendable as is shown by the mean of ***61.43.*** The questions in which candidates' performance was relatively poor in the year 2008 KCSE IRE paper 1 (314/1) examination were ***2(a), 2(b*** and ***6(a)***

Question 2(a)

Identify the themes emphasised in the Makkan *Surahs*.

The question expected that the candidates knew the themes outlined in the surahs revealed in makka.

Weaknesses

The candidates gave general themes of the Quran and the characteristics of makkan surahs.

Expected Responses

- Tawheed (unity of Alllah).
- Worship of Allah.
- Day of judgement.
- Allah's mercy to human kind.
- Man's ingratitude to Allah.
- The power of Allah.
- Hell.
- Paradise.
- Righteous conduct.
- Condemnation of idol worship.

Advice to Teachers

Teachers should emphasize on themes and also characteristics of surahs and not just translation and meaning of the surahs.

Question 2(b)

Discuss the importance of *Surah Fatiha.*

The candidates were expected to discuss the importance of Surah Fatiha to Muslims

Weaknesses

The candidates did not know the teachings of Surah Fatiha and ended up giving it's translation and teachings.

Expected Responses

- It is the first chapter of the Quran/opening chapter.
- It is referred to as the key to the Quran.
- It teaches about the attributes of Allah.
- It is a supplication (Dua).
- It is a pillar of prayer. (Must be recited in the five daily prayers).
- It praises Allah and shows His majesty.
- It is also referred to as the greatest surah in the Quran by the prophet (p.b.u.h).
- It is referred to as As-sab Al-Mathani, the seven repeatedly recited verses.

Advice to Teachers

Teachers should critically analyse all surahs in the syllabus.

Question 6(a)

Define the term *ljtihad.*

The candidates were expected to give the meaning of the word ***'ijtihad'***.

Weaknesses

The candidates did not know the meaning of the term ***"ijtihad"*** and assumed that it is jihad hence gave the definition of Jihad.

Expected Responses

- It literally means an effort or an exercise to arrive at one's judgment.
- In its widest sense it means the use of human reason in the elaboration and explanation of sharia law.
- It includes the interpretation of the text of the Qur'an, the assessment of the authenticity of Hadith.

Advice to Teachers

Teachers need to cover the syllabus adequately so as to enable candidates respond to this kind of question with ease.

12.3 PAPER 2 (314/2)

Performance in the IRE ***paper 2 (314/2)*** examination declined from a mean of ***58.42*** in the year 2007 to a mean of ***48.01*** in the year 2008. The questions in which candidates performance was relatively poor in the year 2008 KCSE IRE ***paper 2 (314/2)*** examination were **2(a), 3(b)** and **6(a).**

Question 2(a)

Define the term *Mirath*.

Candidates were expected to give the meaning of the term ***'mirath'***

Weaknesses

Candidates misunderstood the meaning of the term **'mirath'**.

Expected Responses

- Mirath is the terminology used for the Islamic law of inheritance.
- It also means the transfer of property or items from one person to another.
- Technically, it is a science that shows inheritance by application of some mathematical principles.

Advice to Teachers

Teachers should ensure that they explain the meaning of all Arabic terminologies in the syllabus so as to ensure that candidates develop the skill of definition.

Question 3(b)

Identify ways in which Muslims in Kenya can show *Taqwa*.

Candidates were expected to give ways in which Muslims in Kenya can show fear of God ***(Taqwa)***

Weaknesses

Candidates paid little attention to the key word ***'Taqwa'*** and ended up giving it's definition and advantages.

Expected Responses

- Showing gratitude for Allah's favours through words and action.
- Reading/reciting the Quran.
- Performing the five daily prayers and observing other devotional acts.
- Being humble, gentle and polite to others.
- By being patient and practicing self restraint.
- By protecting, conserving and taking care of Allah's creation.
- By living in peace with oneself and others.
- Being content with what ones has.
- By living simple and modest lives.

- By leading chaste and moral lives/moral uprightness.
- Keeping away from evil deeds and immoral practices.
- Devoting time to Allah, remembering Him and His bounty to mankind.

Advice to Teachers

Teachers to teach learners techniques of responding to questions appropriately.

Question 6(a)

Elaborate the contribution made by Ibn Sina to medicine.

Candidates were expected to analyse Ibn sina's contributions and specifically give his contributions in the field of medicine.

Weaknesses

Candidates gave the general contributions of Ibn Sina to Islam.

Expected Responses

- Authored books on medicine, for example: canon of medicine which were widely referred to.
- Made advances in the treatment of contagious diseases, for example:- Tuberculosis.
- Started a study on the interaction/relation/relationship between psychology and health.
- Made advances in the understanding of diseases spread through water and soil.
- Made contributions in the area of pharmacology.
- He describes 800 different drugs.
- He was the first to expose meningitis.
- Contribution to medical areas of anatomy, gynaecology and child health.
- Prescribed healing power of prayer.
- His works in medicine are used by universities all over the world.

Advice to Teachers

It's evident from the candidate's performance on ***Muslim scholars*** that this topic is not adequately covered or is neglected during teaching. Teachers of IRE should ensure that the topic is exhaustively covered. Students should be guided to critically look at the contribution of the selected Muslim scholars.

13.0 HINDU RELIGIOUS EDUCATION (315)

In the year 2008 KCSE examination, Hindu Religious Education (HRE) was tested in two papers. ***Paper 1 (315/1)*** consisted of six essay questions and candidates were required to answer five. The paper tested the content areas of ***attributes of paramatma***, ***manifestations of paramatma***, ***scriptures***, ***principles of Dharma*** and ***Yoga***. ***Paper 2 (315/2)*** also consisted of six essay questions of which candidates were required to answer five. ***Paper 2 (315/2)*** tested the content areas of ***Rites and Rituals, utsav, law of Karma, places of pilgrimage, Historical Development*** and ***Hindu Heritage.*** Both ***paper 1 (315/1)*** and ***2 (315/2)*** were marked out of maximum of 100 marks each and the time allocation for each of the papers was 2 hours and 30 minutes (2½ hours). Each question in both papers carried a maximum of 20 marks.

The questions in the HRE examination were set to test candidates' knowledge of the factual materials relevant to each of the topics contained in the HRE secondary education syllabus, understanding of the meaning and interpretation of each the topics, ability of candidates to express themselves on the basis of evidence, arguments, appreciation and evaluation of materials studied in each topic, ability to analyze and synthesize materials studied in each topic and ability to respond and apply the religious, moral and social issues raised in each topic. The questions were also meant to give candidates across the various ranges of abilities the opportunity to show what they knew, understood and could do.

13.1 GENERAL CANDIDATES' PERFORMANCE

The table below shows the performance of candidates in the HRE examination in the last four years.

Table 18: Candidates Overall Performance in HRE in the last four years

Year	Paper	Candidature	Maximum Scores	Mean Score	Standard Deviation
2005	1		100	54.87	21.17
	2		100	51.13	14.02
	Overall	**15**	**200**	**106.00**	**32.00**
2006	1		100	59.23	8.27
	2		100	59.62	10.14
	Overall	**13**	**200**	**118.85**	**16.00**
2007	1		100	45.29	17.36
	2		100	51.57	19.26
	Overall	**07**	**200**	**96.86**	**35.00**
2008	1		100	57.92	10.60
	2		100	65.46	12.63
	Overall	**13**	**200**	**123.38**	**19.92**

The following observations can be made from the table above:

13.1.1 There was a considerable improvement in the candidates' general performance in the year 2008 as compared to the year 2007.

13.1.2 The candidature increased from ***07*** candidates in the year 2007 to ***13*** candidates in the year 2008.

13.1.3 The overall mean for the year 2008 of ***123.38*** out of 200 marks is the highest ever in the four years under review.

This report analyses the candidates' general performance in the year 2008 KCSE HRE examination papers paying special attention to the questions where the candidates' performance was relatively poor. An attempt has been made to highlight possible causes of the poor performance. The report also gives samples of the expected responses and makes suggestions to teachers with the hope of helping them evaluate and improve their methods and approaches in the teaching of HRE in order to further improve the candidates' performance in the subject in the future.

13.2 PAPER 1 (315/1)

The question in which candidates' performance was relatively poor in the year 2008 KCSE HRE paper 1 (315/1) examination was ***question 5(a).***

Question 5(a)

Explain ways in which Buddhists practise the principle of *Samyak Vani.*

The question was set on the principles of Dharma. The question expected the candidates to know the principles of Samyak Vani and how the Buddhists practice them.

Weaknesses

Very few candidates attempted this question.

Expected Responses

- By carefully and wisely choosing their words when they speak.
- Thinking before they speak.
- Speaking softly/not shouting.
- Avoiding use of harsh words/speak kind, gentle words which bring happiness to listeners.
- By speaking the truth.
- Avoiding gossip, slunder, idle talk, backbiting, use of abusive language, vulgur language.
- Avoid using language that can offend others.
- Avoid quarrels/complaining, grumbling.
- By looking straight into the eye of the person they are talking to/with.
- By speaking sincerely and from the heart/genuinely.
- At times it is better to keep quiet rather than say untruth and hurtful words.

Advice to Teachers

Teachers should ensure that they teach the topic on principles of Dharma exhaustively to enable candidates answer questions with ease.

13.3 PAPER 2 (315/2)

The questions in which candidates' performance was relatively poor in the year 2008 KCSE HRE paper 2 (315/2) examination were ***questions 2(a), 5(a)*** and ***5(b)***

Question 2(a)

State the teachings of the theory of the Law of Karma.

The question was set on the Law of Karma. The question expected candidates to know the teachings of the Law of Karma.

Weaknesses

Candidates defined the Law of Karma instead of giving the teachings. They were unable to analyse the Law of Karma and give its teachings.

Expected Responses

- All deeds/actions (large or small, good or bad) have an effect.
- Good deeds/actions bring good effects and bad deeds /actions bring bad effects.
- Suffering and happiness depend on our deeds/actions.
- Present situation was conditioned by past deeds/actions.
- Accumulated Karma affects a person's future.

- Result produced by Karma are experienced mentally and physically.
- Human beings create/shape their own destiny.
- The past cannot be changed but the future can be improved by performing good deeds.
- Human beings are capable of eliminating bad qualities and replacing them with good ones for a better future.

Question 5(a)

Explain the means of propagation of Hindu Dharma during the Vedic period.

The question was set on the topic ***historical development***. The question expected candidates to identify the vedic period and explain how Hindu Dharma was propagated during the period.

Weaknesses

Candidates were unable to identify the period which they were supposed to write on due to lack of adequate knowledge.

Expected Responses

- Through the reading/study of scriptures, for example: the Veda, Brahmanas, Aagam, Upanishads. The scriptures lay down the cardinal principles of Hinduism.
- Through the teachings/preaching of the sages/Rishi who recited and taught what was revealed to them.
- Through philosophy: - through discussions between teachers and students, meditation and practicing asceticism (austerity as shown in Upanishads).
- The gurukul system.
- Through discipleship: - Disciples learned under a teacher after which they went out to teach others in the society.
- Through rulers and kings as custodians of the Hindu culture, religion and thought.
- Rites and rituals, for example: - sacrifices by the priests, prayers, singing (chanting) of hymns.
- Through the lives and works of reformers, scholars, philosophers, for example: - Buddha, Mahavir.
- Through the temples, for example: - temple rituals, reading of scriptures, temple architecture and art.
- Through the teaching of morality and ethics. Morality/good qualities as detachment, charity, discipline, austerity, celibacy lead the soul upwards on the path to salvation.

Advice to Teachers

Teachers should ensure that they teach the topic on Historical development in details to enable candidates respond to questions adequately.

Questions 5(b)

Describe the factors that led to the establishment of Khalsa *Panth* in the medieval period.

The question on Sikhism was set on the establishment of Khalsa Panth in the medieval period. The question expected candidates to know why Khalsa Panth was established.

Weaknesses

Candidates tried to explain the meaning of Khalsa Panth instead of describing how it was established. Candidates did not have enough facts to answer the question.

Expected Responses

- The Indian society was divided into caste system.

- Hindus and Sikhs were being forced to convert to Islam by the Mogul ruler.
- The Mogul Emperor persecuted non-Muslims.
- There was no justice in the society.
- Freedom of worship was denied to non-Muslims.
- Tyranny of the Mogul Emperor made the people subservient and conformists.
- There was rampant poverty among the masses.
- Guru Gorbind Singh believed that he was under authority to provide leadership(military, religious and social) to liberate his people from the oppression and tyranny of the Moguls.
- He appealed to people to rise against the injustice and oppression.
- In 1699 he instituted the Panj Pyare, the Khalsa through a ritual of Baptism by sword.
- The initiated professed the martial creed of the Khalsa and Five K's, and the four rules were prescribed.
- So began the new disciplined order of the fighting Sikhs, a brotherhood with membership open to all castes and to both men and women.
- Gobind commissioned them to be warriors to defend the oppressed and downtrodden.
- Guru Granth Sahib was established as living Guru.

Advice to Teachers

Teachers are advised to adequately cover all the topics of the syllabus during teaching.

14.0 HOME SCIENCE (441)

The year 2008 KCSE Home Science examination tested mastery of knowledge and skills specified in the syllabus. This year's report analyses the performance of the candidates in the three papers paying special attention particularly to the poorly performed questions. The report further gives expected responses of those poorly performed questions and goes further to give advice to both teachers and candidates with the sole purpose of improving future performance in the subject. The individual papers examined in the year 2008 KCSE Homescience examination were as follows:

Paper 1 (441/1): This is a theory paper divided into three sections and it was worth 100 marks. The three sections were:

- ***Section A*:** Consisted of compulsory short answer questions worth 40 marks.
- ***Section B:*** Questions were compulsory and covered applied practices in Home Science. This was worth 20 marks.
- ***Section C:*** Consisted of three (3) essay questions each worth 20 marks of which candidates were expected to choose and answer any two (2) questions.

Paper 2 (441/2): This was a practical paper which tested skills in Clothing Construction and was worth 45 marks.

Paper 3 (441/3): This was also a practical paper which tested skills in Foods and Nutrition and was worth 25 marks.

For purposes of computing the results, the scores of paper 2 (441/2) and paper 3 (441/3) are added to form paper 2.

14.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows the candidature and the overall performance in the KCSE Home Science examination in the last three years.

Table 19: Candidates' Overall Performance in Home Science in the years 2006, 2007 and 2008

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2006	1		120	62.47	14.06
	2		80	35.18	8.25
	Overall	**10,571**	**200**	**97.65**	**20.00**
2007	1		100	51.69	12.15
	2		70	32.26	7.48
	Overall	**11,384**	**170**	**83.94**	**18.00**
2008	1		100	47.18	11.42
	2		70	35.0	8.95
	Overall	**12,314**	**170**	**82.24**	**18.23**

The following observations can be made from the table above:

14.1.1 The candidature increased from ***11,384*** candidates in the year 2007 to ***12,314*** candidates in year 2008, an increase of ***930*** candidates.

14.1.2 There was a slight drop in overall performance of the subject as noted in the mean ***83.94*** in the year 2007 as compared to ***82.24*** in the year 2008.

In this part of the report, an analysis of performance and a discussion of questions which candidates performed poorly will be made.

14.2 PAPER 1 (441/1)

Question 1

Mention **three** functions of water in the body.

The question expected candidates to mention the uses of water in the body.

Weaknesses

Some candidates gave responses on the general use of water.

Expected Responses

- Transportation of nutrients.
- Elimination of waste.
- Digestion.
- Controlling body temperature.
- Regulating fluidity of body fluids.
- Lubricating parts of the body.
- Dissolving foods.
- Prevents dehydration.
- Acts as a medium of body metabolism.
- Controls body PH.
- Acts as a solvent for various substances in the body.
- Provides minerals, for example:- zinc, copper etc.

Advice to Teachers

Teachers are advised to teach the topic on water thoroughly.

Question 3

What are effects of immersing a hot aluminium frying pan in water?

The candidates were expected to list the reaction of a hot aluminium frying pan in water.

Weaknesses

Some candidates did not understand the nature of aluminium.

Expected Responses

- Sudden contraction/warping/distorted shape.
- Shortened life span/develop hot spots/burns food/develops holes.

Advice to Teachers

Teachers are advised to teach more on materials used for making household equipment.

Question 4

Explain the **two** principles in bottling of fruits.

The candidates were expected to explain the principles in bottling of fruits.

Expected Responses

- Heating to kill micro organisms.
- Removing air to prevent development of bacteria.

Advice to Teachers

Teachers are advised to teach the topic on food preservation thoroughly.

Question 5

Write the following abbreviations in full.

- AIDS
- TBA

The candidates were expected to write out some given abbreviations in full.

Weaknesses

Inability of candidates to interpret and spell correctly the abbreviation AIDS while other candidates confused TBA with TB.

Expected Responses

- ***AIDS:*** Acquired Immune Deficiency Syndrome.
- ***TBA:*** Traditional Birth Attendant.

Advice to Teachers

Teachers are advised to teach on abbreviations used in the subject thoroughly.

Question 6

Mention two complications arising from obesity.

The candidates were expected to list complications that arise from obesity.

Weaknesses

Candidates misinterpreted the question and described obesity as a condition.

Expected Reponses

- Hypertension/heart disease/heart attack.
- Stretch marks.
- Diabetes.
- Cellulitis.
- Kidney disease.
- Tiredness and shortness of breath.

Advice to Teachers

Teachers should advise candidates to read and understand questions before attempting to answer them.

Question 7

What are the determinants of safe parenthood?

Candidates were expected to state the determinants of safe parenthood.

Weaknesses

Candidates gave responses on how to raise good families.

Expected Responses

- Meeting nutritional needs of the mother.
- Social preparation of the expectant mother.
- Psychological preparation of the expectant mother.
- Voluntary counseling and testing of HIV of the parents.

Advice to Teachers

Teachers to advise students to read and understand questions well before attempting them.

Question 8

Identify **three** points to bear in mind when buying land for a family house.

Candidates were expected to state the points to bear in mind when buying land for a family house.

Weaknesses

Some candidates did not differentiate between ***"buying land"*** and ***"buying a house".***

Expected Responses

- Near good road network for ease of communication.
- Near a health facility.
- Near a school.
- Near a shopping centre.
- Well drained.
- Near clean water supply.
- Safe neighbourhood.
- Validity of ownership/legally acquired.
- Should be within family's financial means/cost.

Advice to Teachers

Teachers are advised to guide students on how to respond to questions and write out answers fully.

Question 10

Give **three** advantages of using credit cards.

Candidates were required to state advantages of using credit cards.

Weaknesses

Some candidates confused ***"credit cards"*** with ***"scratch cards"*** and ***"hire purchase"***.

Expected Responses

- In case of emergency a consumer can access goods and services.
- Can be used at any time of the day or night.
- Some credit cards give cash credit.
- It is relatively safer to carry than carrying cash money.
- It is not bulky.
- It saves time and energy.
- Convenient in use.

Advice to Teachers

Teachers are advised to try and be as practical as possible and expose the students to all types of cards.

Question 11

Name **four** fabrics that should not be wrung during laundering.

Students were required to name fabrics that should not be wrung.

Weaknesses

Candidates' responses displayed guess work. Some candidates gave responses related to fibres and not fabrics.

Expected Responses

- Acrylic.
- Wool.
- Silk.
- Polyester.

Advice to Teachers

Teachers are advised to define the difference between ***"fibre"*** and ***"fabric"*** and carry out more practicals in laundry.

Question 12

State **three** functions of a pressing cloth.

Candidates were expected to state the functions of a pressing cloth.

Weaknesses

Candidates did not know what a pressing cloth was.

Expected Responses

- Damping articles.
- Protecting articles from scotching/burning/getting damaged.
- Preventing sheen on articles.
- Protecting articles from direct heat of the iron.
- Improve/enhance appearance of articles.

Advice to Teachers

Teachers are advised to use teaching aids and also carry out practicals to show use of pressing clothes.

Question 14

Identify **six** ways of finishing the frill of a nightdress.

Candidates were required to identify ways of finishing a frill.

Weaknesses

Some candidates did not know what a frill was. Others could not differentiate between ***finishing edges***, ***seams*** and ***control of fullness***.

Expected Responses

- Lacing.
- Using a bias binding.
- Using ric rac.
- Shell edging.
- Hemming/machine/edge stitching.
- Using zigzag stitches.
- Crocheting.
- Scalloping.
- False hem.
- Facing/ribbon/crossway strip.

Advice to Teachers

Teachers are advised to carry out practicals on frills so as to enable students understand this area better.

Question 16

Differentiate between natural and man-made fibres.

Candidates were required to differentiate between ***natural*** and ***man-made fibres***.

Weaknesses

Candidates did not differentiate the fibres but instead talked of their properties.

Expected Responses

Natural fibres are from plants, animals and minerals while ***man-made fibres*** are manufactured from chemicals.

Advice to Teachers

Teachers are advised to stress on proper revision.

Question 17

You are preparing for the school's prize giving day.

(a) Describe the method you would use to clean a varnished wooden table to be used for the occasion.

(b) Give **six** rules you would observe when removing stains from table napkins to be used for the occasion.

(c) Outline the procedure you would use when cleaning a toilet to be used by the guest of honour.

This question was on applied practices in Home Science. Candidates were required to:

- Describe methods of cleaning a varnished table.
- State the rules to observe during stain removal.
- Outline the procedure of cleaning a toilet.

Weaknesses

Candidates did not understand the word ***"varnish"*** in reference to the table. They gave the method of laundering table napkins and not stain removal while the procedure of cleaning a toilet was not properly outlined.

Expected Responses

a)

- Dust the surface with a soft cloth/duster;
- Wring out the soft cloth in warm soapy water/warm water with vinegar added to it and wipe/clean the surface carefully;
- Rinse using soft cloth wrung in warm water;
- Dry thoroughly with a dry soft cloth;
- Rub with a little furniture cream polish/linseed oil/cold black tea;
- Buff to shine.

b)

- Remove stains from outside to the inside;
- Use specific stain removal agents for stains that are clearly identified;
- If the nature of the stain is not known try the least harmful method first;
- Use correct procedure when removing stains;
- When treating stains try several weak applications of the stain removal agent rather than one strong one;
- Stain removal agents must be used in the recommended form;
- When fabric is immersed in solution, it should not be allowed to stay longer than necessary;
- Once the stain is removed the article should be washed immediately to remove traces of the agent.
- Work on the stain before washing.
- Identify the type of fabric before choosing stain removal agent.

c)
- Flush the toilet/pour water;
- Sprinkle some toilet cleaner/detergent and leave for some time;
- Clean with a toilet brush/broom;
- Flush the toilet again/pour water/rinse;
- Clean the floor with a mop and disinfectant;
- Ensure enough supply of toilet paper;
- Ensure fresh air/leave window and door ajar for a while/use air freshner.

Advice to Teachers

Teachers are advised to do more practicals and advise candidates to revise properly.

Question 18 (a)

(a) What do the following terms mean in meal planning and management?

(i) Accompaniment.

(ii) Savoury foods.

(iii) Flavourings.

(b) State **eight** points to bear in mind when setting a table.

(c) (i) Define a food budget.

(ii) Identify **seven** advantages of budgeting for food.

Candidates were expected to define some given terms used in meal planning and management.

Weaknesses

Most candidates did not confine meanings to meal management but gave general meanings of the words.

Expected Responses

i) ***Accompaniment:*** Food items served alongside others although they may not form part of the main meal.
ii) ***Savoury Foods:*** Foods that have a salty taste/not sweet/sour.
iii) ***Flavourings:*** Substances which when added to foods enhance taste.

Advice to Teachers

Teachers to encourage thorough revision.

Question 20 (c)

Give **three** features of a well cut out crown of a sleeve.

Candidates were expected to know the features of a well cut out sleeve crown.

Weaknesses

Most candidates did not know what a sleeve crown was.

Expected Responses

- Its head has a slight rather shallow curve at the back.
- It is well rounded.
- It has a hollow curve at the front area.

Advice to Teachers

More practical work is required in clothing construction.

14.3 PAPER 2 (441/2)

This is a practical paper where candidates were provided with a pattern to cut out and make child's blouse.

A pattern of a girl's blouse is provided. You are advised to study the sketches, instructions and layout carefully before you begin the test.

Materials Provided

1 Pattern pieces for the blouse:

A – Blouse front
B – Blouse back
C – Collar
D – Pocket

2 Lightweight plain cotton fabric 50 cm long by 90 cm wide.

3 Sewing thread to match the fabric.

4 One large envelope

THE TEST

Using the materials provided, cut out and make the **LEFT HALF** of the blouse to show the following processes:

(*a*) making of an open seam at the shoulder;

(*b*) making of the side seam using a French seam;

(*c*) neatening of the blouse front facing;

(*d*) preparation of the Collar;

(*e*) attachment of the Collar. Use hemming stitches at the back;

(f) holding the facing on to the blouse using diagonal tacks. **Do not remove**;

(g) preparation and attachment of the patch pocket;

(h) management of the blouse hem:

(i) use even tacking to hold the hem. **Do not remove**;

(ii) use machine hemming.

At the end of the examination, remove all pins, firmly sew onto your work, on a single fabric, a label bearing your name and index number.
Fold your work carefully and place it in the envelope provided. Do not put scraps of material in the envelope.

14.3.1 Weaknesses

The performance of candidates in the paper reflected the following weaknesses.

14.3.1.1 Cutting out was poorly done and as a result most of the work presented had no straight grain.

14.3.1.2 Candidates displayed lack of knowledge on the management of an open seam at the shoulder line. Most of them were not neatened, not pressed open and were not evenly worked out.

14.3.1.3 Candidates displayed lack of knowledge on the handling of a collar. The following details were missed out completely: ***knife edge, sharp corner, flashing, trimming***, ***snipping*** and ***sandwiching***.

14.3.1.4 Candidates displayed lack of knowledge on hem management. Only ***twenty (20)*** candidates out of ***twelve thousand (12,000)*** candidates managed the hem well at the centre front (CF).

14.3.1.5 Candidates did not follow the instructions in the question paper and as a result they missed out on some marks, that is, the instructions were clear on not removing of some temporary stitches but the candidates removed them.

14.3.2 Advice to Teachers

14.3.2.1 Teachers should ensure that candidates use sharp scissors when cutting fabric and they should also buy well grained fabrics.

14.3.2.2 Teachers should encourage more practice on seam making and pay attention to details.

14.3.2.3 Teachers are advised to give more practicals on needlework processes.

14.3.2.4 Teachers are advised to stress on following of instructions in the question paper and not just drilling the candidates.

15.0 ART AND DESIGN (442)

The year 2008 KCSE Art and Design examination tested the application of knowledge, skills, concepts and attitudes fundamental to Art and Design activities. The subject was tested in three papers:

- Paper 1 (442/1) - Theory
- Paper 2 (442/2) - Practical
- Paper 3 (442/3) - Project

15.1 GENERAL CANDIDATES' PERFORMANCE

The table below shows the overall candidates' performance in the Art and Design (442) examination in the years 2006, 2007 and 2008.

***Table 20**: Candidates' Overall Performance in Art & Design (442) for the Years, 2006, 2007 and 2008*

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2006	I		50	29.86	7.26
	2		100	59.62	14.41
	3		50	34.17	5.05
	Overall	**1,120**	**200**	**123.52**	**21.00**
2007	1		50	25.67	8.82
	2		100	62.04	14.58
	3		50	29.72	6.68
	Overall	**999**	**100**	**117.24**	**23.00**
2008	1		60	35.92	7.67
	2		100	62.15	13.52
	3		40	33.27	5.15
	Overall	**1,072**	**200**	**132.35**	**19.71**

The following observations can be made from the table above:-

15.1.1 There was an increase in candidature from ***999*** candidates in the year 2007 to ***1,072*** candidates in the year 2008, an increase of ***73*** candidates.

15.1.2 Performance of candidates in ***paper 2 (442/2)*** in the year 2007 and 2008 compares quite well as evidenced by the mean scores of ***62.04*** and ***62.15*** respectively.

15.1.3 Overall performance was better in the year 2008 as compared to the years 2007 and 2006 as shown by the mean scores of ***132.35, 117.24*** and ***123.52*** respectively.

The discussion below is based on a sample of randomly selected candidates' scripts for the year 2008 KCSE Art and Design examination. Analysis of performance for each question was carried out to determine the questions that were poorly done. We shall therefore, discuss the questions in which the candidates performed poorly.

15.2 PAPER 1 (442/1)

Question 1 (b)

Name the **three** most important elements of Art and Design.
Give the reason why they are considered the most important.

This question tested candidates' knowledge on the elements of Art and Design. The candidates were required to name the three most important visual elements of Art and Design.

Weaknesses

Most candidates were familiar with the visual elements of Art and Design. However, majority were only able to mention one or two of them. Some mentioned shape and texture which were not correct responses. Those who mentioned dots scored correctly because a line is perceived as an extended mark.

Expected Response

The three most important elements of Art and Design are ***line, value*** and ***colour***. This is because these elements can be used singly or in any combination to produce all other elements such as shape and texture.

Question 1(d)

Explain the **main** difference between montage and photomontage.

This item was examining the candidates' knowledge on the picture making techniques that involve pasting or sticking materials on a surface. Candidates were required to differentiate between ***"montage"*** and ***"photomontage"*** as techniques of picture making.

Weaknesses

Most candidates tackled the question well even though a few were unable to distinguish between the two picture making techniques. Some candidates confused the techniques and gave responses in reference to mosaic and collage.

Expected Response

Montage is a picture created by pasting or sticking pictures in parts or layers to create a composition. In ***photomontage*** photographs are pasted juxtaposed to produce the composition.

Question 1(e)

Identify the illustration above and state its function.

The question was based on Graphic Design and was testing candidate's knowledge on visual symbols. Candidates were required to study and identify the road sign symbol depicted and explain its function. In this item, the candidates were expected to reflect concepts learned to real life situations. Mosaic and collage are picture making techniques which are related in that all involve pasting or sticking one type of a material and mixed media respectively.

Weaknesses

Most candidates were not familiar with the given road sign and therefore, failed to identify it. They were also unable to explain its function or use as required by the question.

Expected Response

The visual symbol represents a road sign. It conveys the sudden need to take care and attention, it expresses abstract idea of warning in visual terms.

Question 1 (f)

Explain the terms "Structured" and "Applied" designs as used in Fabric Decoration.

The question examined the candidates' knowledge on the techniques of Fabric Design. Candidates were required to distinguish between ***"Structured"*** and ***"Applied"*** designs in Fabric Decoration.

Weaknesses

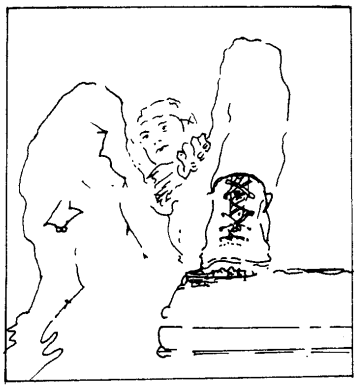
Most candidates were not familiar with the terms ***"Structured"*** and ***"Applied"*** designs as used in Fabric Decoration. Majority of them scored poorly in this item due to lack of knowledge of the technical terms used in the task.

Expected Responses

"Structured" designs are those that are constructed by looping, knitting, plaiting, netting, weaving, braiding etc. ***"Applied"*** designs are those printed or dyed on a fabric to render it more appealing or serve a particular purpose.

Question 1 (g)

Study the drawing below.



Explain how depth has been created in the drawing.

The question tested candidates' knowledge on ***"Perspective"***. They were required to study the drawing of the human form that had been given and explain how depth was created.

Weaknesses

Some of the candidates were not familiar with the principles of ***"Perspective" in 2 –dimensional Art and Design*** and therefore scored poorly. The few candidates who appeared conversant with the rules of perspective performed extremely well in this question.

Expected Responses

Depth has been created in the drawing by use of perspective or foreshortening. Perspective is a method used to create an illusion of depth or space on a flat surface. In perspective things are represented the way they appear and not the way they are in nature. Distant objects become smaller, greyer and less detailed while near objects appear bigger, clearer and more detailed. To show this concept, artists employ perspective technique. Linear perspective mainly uses lines and when it is applied to human or animal forms or objects receding into depth, the result is called foreshortening.

Question 2

In the space provided below, make a sketch of a human head in profile.

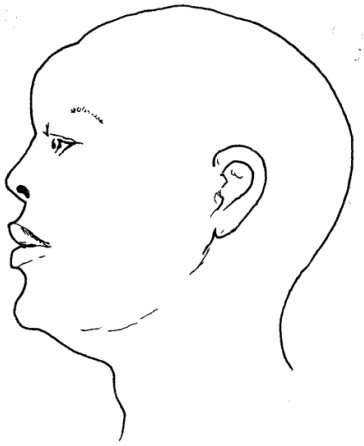
This was an application question and required the candidates to sketch a human head in profile. It was testing candidates' knowledge on the use of line and practical skills acquired in the course of learning drawing.

Weaknesses

Majority of the candidates misunderstood the term ***"Profile"*** and sketched the human head in frontal view. Some sketched a series of heads portraying different expressions which was not required as per the item. Some candidates showed poor use of line and poor application of drawing skills.

Expected Response

A sketch of a human head in profile. In days before camera's were invented, the only way to show what people looked like was to have artists draw or paint their portraits. Some artists liked showing, side views. It is these side-view portraits that are called profiles. Proportion of the head in relation to other features, for example: - eyes, ears, mouth, nose etc was an important aspect in sketching the head. A head in profile is shown below.



Question 3

(a) Define the term impression in reference to printmaking.

(b) State the **four** main stages in the procedure of creating impression.

The question required the candidates to define the term ***"Impression"*** in reference to printmaking. Candidates were further expected to state the main stages in the process of creating impression. The item basically tested on candidates knowledge on the printing process based on either block, screen and stenciling techniques.

Weaknesses

Majority of the candidates misunderstood the term ***"Impression"*** in reference to printmaking and therefore, gave wrong responses to the question. They failed to define the term ***"Impression"*** as required by the question. Some candidates were quite familiar with the procedure of creating impression and scored well, however, a few failed to present it in a logical sequence and performed poorly.

Expected Responses

(a) Any imprint, mark or image created as a result of physical contact of an inked surface with a printing surface.

(b)

(i) Sketch the design and transfer the image onto the block, screen or stencil;

(ii) If it is a block, cut out the negative areas, leaving the positive areas standing high. For the screen printing block, cut out the negative areas using shellac or varnish. And if you are using the stencil cut out the design and leave an opening on paper.

(iii) Apply ink onto the block, or in the screen or stencil.

(iv) Place the block, screen or stencil on the printing surface and apply pressure on the block or force the ink/dye to pass through the screen or stencil using a squeegee, dabbing ink through the opening of the stencil may be another alternative.

(v) Lift the block, screen or stencil to reveal the impression or print.

Question 4

(a) Explain any **three** qualities that make lettering effective in layout.

(b) In the space provided below, construct letter p in uppercase to illustrate "Counter" and "Serif".

The question was based on Graphic Design and required the candidates to explain qualities which make lettering effective in layout. They were also required to construct ***letter "p"*** in uppercase and show ***"Counter"*** and ***"Serif"*** as parts of a letter.

Weaknesses

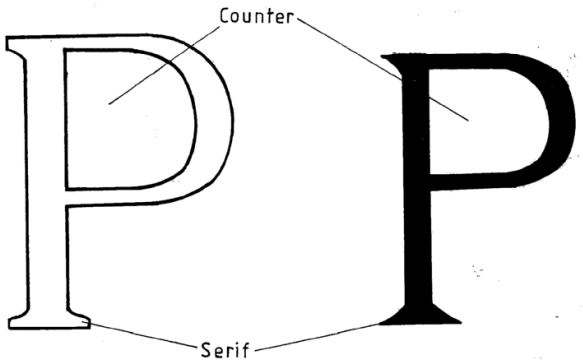
Majority of the candidates scored quite well on the qualities that make lettering effective in a layout. However, they were not familiar with ***"Counter"*** and "**Serif"** parts of letter ***"p"*** and scored poorly in this part of the question.

Expected Responses

(a)

(i) Spacing between letters, words and lines.
(ii) Appropriateness/suitability of letters to theme/function.
(iii) Clarity of letters for legibility /readability due to size/font, boldness and colour.
(iv) Attractiveness due to typeface/font, colour style.

(b)



Question 9

(a) Describe the process of trimming, mounting, framing and display in reference to picture presentation.

(b) Using **one** illustration for each, show the difference between matt and window mounting.

The question tested candidates on the process of mounting 2 – dimensional works of Art and Design. Specifically, they were required to describe the process of trimming, mounting framing and display in reference to picture presentation. They were also expected to use an illustration for each to show the difference between "***matt"*** and ***"window"*** mounting.

Weaknesses

This question was optional and those candidates who selected it were generally weak and scored poorly. They failed to comprehend the process of mounting pictures for display and therefore, performed poorly. They were also not familiar

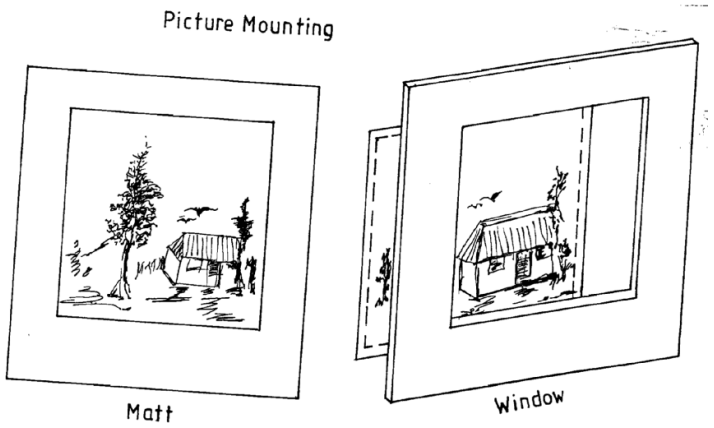
with matt and window mounting, and therefore, failed to create appropriate illustrations to differentiate between the two techniques.

Expected Responses

(a) Frames always improve the appearance of 2-dimensional artwork and make displays more attractive. The simplest kind of a frame is a mount. The following is the process of trimming, mounting, framing and displaying artwork in reference to picture presentation.

(i) Select pictures for mounting. Measure and cut edges to neaten to required size.
(ii) Select a piece of cardboard ensuring it is wider the picture.
(iii) Measure margins for top and sides equal and the bottom should be slightly wider.
(iv) Apply glue on the cardboard or back of the picture and stick it on the cardboard.
(v) Select suitable frame, measure and mark all round to determine the length and width.
(vi) Mark the dimensions of the picture on the frame to determine the position of the picture on the frame and cut through following the margins.
(vii) Position the picture and fix it from behind onto the frame using glue/ paste.
(viii) Select suitable wall or room with adequate natural lighting and air.
(ix) Place the pictures at a comfortable eye-level ensuring good spacing between them.

(b)



15.3 PAPER 2 (442/2)

15.3.1 ALTERNATIVE A: DRAWING OR PAINTING

Question 1 and 2

You are instructed that the use of rulers and other mechanical devices is forbidden in this alternative.

EITHER

DRAWING

1 From memory, make a drawing of children modelling at a fashion show.
The drawing should be in an area of 35cm by 45cm.

OR

PAINTING

2 From imagination, create a painting inspired by the following remark:

"There is drama in the courtroom as the sentence is pronounced over a hardcore criminal."

The painting should be in an area of 35cm by 45cm.

In ***question 1***, the candidates were required to make a drawing of children modeling at a fashion show using the usual drawing tools. ***Question 2***, the other optional task required the candidates to produce a painting from memory based on a courtroom drama after a hardcore criminal had been sentenced.

The questions were generally testing candidates' ability to interpret the theme, use of media, application of elements and principles of Art and Design, organization (layout) and presentational skills.

Weaknesses

According to the candidates work, some misinterpreted the theme ***"Children modeling at a fashion show"*** and instead portrayed children modeling using clay. The use of media, practical application of the elements and principles of organization were not well executed by a considerable number of candidates. Many candidates had difficulties in rendering correct proportions of the children at the fashion show.

The painting ***"Courtroom drama after a hardcore criminal is sentenced"*** was quite challenging to most of the candidates who selected this option. Again, most candidates failed to render the correct proportions of the hardcore criminal and other human forms in the courtroom. Portrayal of mood in the courtroom was not properly attained by most of the candidates work. They also failed to define and show the textural effects of forms in their compositions. Poor rendering of perspective and poor presentation were the other evident weaknesses noticed.

15.3.2 ALTERNATIVE B: GRAPHICS

*You are instructed that the use of rulers and other mechanical devices as well as tracing paper is **allowed**.*
The colour of the working surface (paper) will not be considered as one of the colours required in any question.

EITHER

3 A pop music group called Firebrand, requires a design for the cover of their newly released CD/Album. The name of the new release is called "Fill me up."
In three colours produce an illustrated design for the front and back of the CD/Album
The design should be within an area of 28cm by 48cm.

OR

4 Family Welfare Society of Kenya (FAWESO) is an organisation that advocates peace and stability in a family and campaigns against vices such as domestic violence, separation and divorce.
Design a three colour illustrated wall hanging highlighting the organisations campaigns.
The completed work should include the organisations logo and the motto "Upholding family values."
The design should measure 35cm by 52cm.

Questions in this alternative were based on Graphics. In ***question 3,*** the candidates were required to design an illustrated front and back cover of a CD/Album for a pop music group called Firebrand for their new release ***"Fill me up". Question 4,*** the other option required the candidates to design an illustrated campaign wall hanging for an organization ***"FAWESO"*** that advocates for peace and stability in a family and whose motto is ***"Upholding family values"***.

Weaknesses
The candidates work showed weaknesses in imagination and creativity in general. Some candidates' interpretation of the cover of the CD/Album was wrong and came up with inappropriate solutions to the task. Their work also showed poor arrangement and organisation of forms on the cover of the CD/Album. Other notable weaknesses were poor lettering, inappropriate spacing of letters and words and general lack of precision of forms in the cover of the CD/Album.

For the design of the wall hanging for FAWESO, an organization that advocates for peace and stability in a family, candidates who opted for this question had challenges interpreting the theme. Most of them had difficulties in portraying the organization's campaigns against domestic violence, separation and divorce. They also failed to incorporate the organizations logo and motto ***"Upholding family values.*** Poor rendering of illustrations and letterforms, poor layout, poor graphic presentation and finish were the other common weaknesses noticed in the candidates' wall hangings.

Advice to Teachers

Teachers are therefore advised to teach graphic design more comprehensively and expose candidates to practical exercises to enhance the theory. They should also introduce emerging issues in society, visual symbols, typographic illustrations, lettering, layouts, simplicity and clarity in Graphic Design processes and presentation/finish.

16.0 AGRICULTURE (443).

The year 2008 K.C.S.E Agriculture Examination tested the candidates' competence in understanding the agricultural principles, concepts and practices as stipulated in the syllabus. The examination tested a wide range of knowledge and skills in order to bring out the different abilities of the candidates. The examination consisted of three papers, ***Paper 1 (443/1)***, ***Paper 2 (443/2)*** and ***Paper 3 (443/3)***.

- ***Paper 1 (443/1)*:** This was a theory paper covering ***General Agriculture***, ***Crop production***, ***Agriculture, Economics*** and ***Soil and Water Conservation.*** It had three sections, A, B and C, which were marked out of 30, 20 and 40 marks respectively.
- ***Paper 2 (443/2):*** This was also a theory paper but covered ***Livestock Production***, ***Farm Power***, ***Farm Machinery***, ***Farm Structures*** and ***Farm Tools and Equipment.*** It had three sections, A, B and C, which were also marked out of 30, 20 and 40 marks respectively.
- ***Paper 3 (443/3):*** This was a project paper with two project questions, ***Project A*** and ***B***. Project A required candidates to prepare ***Compost Manure*** while B was on production of either ***Carrots*** or ***Bulb onions***. Candidates selected and carried out only one of the two projects.

16.1 CANDIDATES' OVERALL PERFORMANCE.

The table below shows the general performance of candidates in the year 2008 K.C.S.E Agriculture Examination. Performance in the years 2006 and 2007 has also been included for comparison.

Table 21: Candidates' Overall Performance in Agriculture in the years 2006, 2007 and 2008

Year	Paper	Candidature	Maximum Mark	Mean Score	Standard Deviation
2006	1		90	32.67	11.99
	2		90	37.53	12.57
	overall	**107,068**	**180**	**77.56**	**24.00**
2007	1		90	26.94	12.04
	2		90	53.98	16.89
	Overall	**121,193**	**180**	**87.34**	**28.00**
2008	1		90	32.32	15.11
	2		90	25.59	11.64
	Overall	**134,039**	**180**	**67.10**	**27.32**

The following observations can be made from the table above:

16.1.1 Candidates' performance in ***paper 1 (443/1)*** improved. This is shown by the rise in the mean score from ***26.94*** in the year 2007 to ***32.32*** in the year 2008. The mean score for ***paper 2 (443/2)*** drastically dropped from ***53.98*** in the year 2007 to ***25.59*** in the year 2008.

16.1.2 The candidates' overall performance declined as shown by the subject mean score, which declined from ***87.34*** in the year 2007 to ***67.10*** in the year 2008.

16.1.3 The overall standard deviation for the whole paper declined from ***28.00*** in the year 2007 to ***27.32*** in the year 2008.

16.1.4 The candidature increased from ***121,193*** in the year 2007 to ***134,039*** in the year 2008. A similar trend was also observed between the year 2006 and 2008. This is a likely indication of increasing popularity of the subject in schools.

A number of questions in the year 2008 K.C.S.E Agriculture examination were not adequately answered and as a result, candidates posted low performance in the items. This report highlights these questions, giving the expected responses and advice to teachers on the possible methodologies to emphasize during instruction.

16.2 PAPER 1 (443/1)

Question 5

State **two** effects of siltation in dams.

The item required candidates to apply the knowledge acquired from soil erosion and water pollution to respond to the question.

Weaknesses.

Most candidates interpreted the word ***"siltation"*** to be derived from the word salt.

Expected Responses

- Causes water pollution.
- Interferes with hydroelectric power generation.
- Leads to decline in fish population.
- Reduction of water volume.

Advice to Teachers.

During instruction, teachers should emphasize and ensure that learners understand the technical terms used in agriculture.

Question 26(a)

State and explain **five** roles of agriculture in economic development of Kenya.

The question was derived from the sub-topic, ***"Role of Agriculture in the Economy"***. Candidates were expected to state the roles and explain the contribution of each role in economic development.

Weaknesses

Instead of giving explanations, most candidates repeated the roles to disguise them as explanations.

Expected Responses

- ***Source of food supply:*** It supplies food to the population. It ensures healthy and strong people who participate in economic development activities. Money saved is used on other economic activities.
- ***Source of employment:*** It provides direct employment to farmers and farm workers and indirect employment in the agro-based industries. It provides employment to over 70% of Kenya's population.
- ***Foreign exchange earner:*** Through exportation of agricultural products such as tea, coffee, pyrethrum, horticultural and livestock products. Foreign currency earned is then used to import products such as machinery. Saves money that would have been put on importing these commodities.
- ***Source of raw materials for industries:*** Most agricultural products such as rice, hides and skins, coffee, tea, etc require processing before use. Industries such as rice mills, leather tanning and canning factories have been set up to use them as raw materials.
- ***Provides market for industrial goods:*** It provides a market for industrial goods such as agro-chemicals, tools, equipment and machinery.
- ***Source of income/revenue:*** This is used to purchase farm inputs such as tools, fertilizers, pesticides and machinery. The government earns revenue from income tax on agricultural produce to finance development projects.
- ***Promotes international relationships:*** This creates jobs and foreign market.

Advice to Teachers

The candidates should be developed and trained on how to interpret the rubric and respond to essay items that require a restricted response. The requirements of specific objectives in the syllabus should be effectively addressed during instruction.

Question 28(a)

Explain why settlement schemes were established in Kenya soon after independence.

The item was developed from the sub-topic, *"**Settlement and Resettlement"*** in the syllabus. It required candidates to explain the objectives of land settlement and resettlement.

Weaknesses

Most candidates were able to state the objectives of establishing settlement schemes but could not give explanations. Instead, most of them repeatedly wrote the objectives for settlement and resettlement.

Expected Responses

- To transfer land from Europeans to Africans to enable Africans to own land.
- To settle the landless/squatters by transferring them to new land allocations.
- To make use of underutilized/idle land to increase production.
- To create employment /self-employment opportunities on farms to increase production of crops and livestock.
- To increase agricultural production through better methods of land utilization and foreign markets for increased exports to earn foreign exchange.
- To ease population pressure on land by transferring people from overpopulated areas to sparsely populated areas.

Question 28(b)

State and explain the various land tenure systems practised in Kenya.

The question was set from the sub-topic, *"**Land Tenure Systems"*** in the syllabus. Candidates were expected to give the different types of land tenure systems and the unique features of each through an explanation.

Weaknesses

Most candidates were not able to give an explanation to each of the land tenure systems they had written.

Expected Responses

- ***Leasehold/landlordism/tenancy:*** It gives an individual the right to own and use land at a fee for a specific period. It gives legal rights to a tenant to use land.
- ***Company/concession/plantation:*** A company and the government enter an agreement on the use of land for a specific period.
- ***Communal land tenure:*** The whole community has the right to the use of land/each member of the community has equal rights to use of land.
- ***Individual ownership/individual owner operator/freehold:*** Land is owned by an individual/farmer who either makes use of it or leases to another person to farm.
- ***State ownership:*** The government (state) controls land use/the right to use of land.
- ***Co-operative land tenure:*** Land is owned by a group of members (co operative) who run it on co-operative basis.

Advice to Teachers

The instruction should be tailored to the specific objectives stipulated in the syllabus and learners trained on how to answer essay questions that require restricted responses.

16.3 PAPER 2 (443/2)

Question 7

What is dry cow therapy?

The item was developed from the topic, ***Livestock Production*** and required candidates to define dry cow therapy practice as used in dairy cattle management during drying off.

Weaknesses

Many candidates confused ***"dry cow therapy"*** with ***"drying off".***

Expected Responses

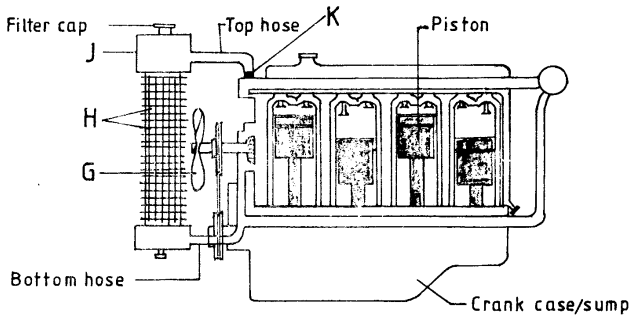
Is the application/infusion of antibiotics into the teat canals of the cow's udder after drying off to prevent mastitis/bacterial infection.

Advice to Teachers

Topic areas involving practices in agriculture should be taught practically to enhance understanding and retention by learners/candidates.

Question 27

The diagram below shows the cooling system of a tractor engine. Study it carefully and answer the questions that follow.



(a) Name the parts labelled **G**, **H**, **J** and **K**.

(b) State the functions of the parts labelled **G**, **J** and **K** in the cooling system.

This question required candidates to identify and give the functions of the labelled parts of a tractor engine cooling system.

Weaknesses

Most candidates were not able to positively identify and give the functions of the labelled parts.

Expected Responses

(a) ***G*:** Fan.
H: Fin/radiator fin.
J: Head tank.
K: Thermostat.

(b)

G (Fan): Blowing air currents through the fins to cool the hot water coming from the engine

block as it moves to the head tank for further circulation.

J (Head tank): Holding/storing water for the cooling system.

K (Thermostat): Regulation of water temperature in the engine.

Question 31

(a) Describe how the following tractor components are used to attach implements to the tractor:

(i) Three (3) point linkage/hitch.

(ii) Power Take Off shaft (P.T.O)

(b) Describe how the ignition system of a tractor petrol engine works.

In part (a) of the question, candidates were expected to give the procedure of attaching implements to a tractor using the three-point linkage and the power take off (P.T.O) shaft. In part (b) of the question, candidates were required to give the sequence of events during ignition.

Weaknesses

Most candidates avoided this question and the few who attempted it did not perform well. They were not able to single out how the various parts and modifications on the three-point hitch/power take off (P.T.O) shaft attach implements on a tractor.

Expected Responses

(a)

(i) The three-point linkage.

- The three-point hitch/linkage is used to attach the trailed or mounted implements onto a tractor.
- The lower links are hitched to the lower links of the implement while the adjustable top link is attached to the top link of the implement.
- The adjustable top link on the tractor is used to lift the implement through the hydraulic power system when in operation or during transportation.
- The lower links are used to hold the implement in place to provide stability.
- The check chains on the lower links prevent the implement from coming into contact with the tractor tyres when the tractor is moving.

(ii) P.T.O Shaft.

- It transmits power from the tractor engine to operate various mounted and stationary implements.
- The extension shaft of the P.T.O connects the P.T.O shaft to the implement shaft.
- The extension shaft has universal joints at both ends for adjusting the distance between the tractor and the implement.
- The short splined shaft at the rear of the tractor is also used for attaching/coupling to the implement.

(b)

- The battery/generator supplies sparks for ignition to occur.
- The ignition coil changes the low voltage from the battery to a high voltage current required by the spark plugs in petrol engine.
- The condenser absorbs self-induced current in the primary current to prevent the contact breaker points from excessive pitting.
- It stores electric current for a short time.
- The condenser passes on the electric current to the distributor, which distributes the high voltage current to the spark plugs.
- This causes a spark to occur in each cylinder in the required firing order.

- The contact breakers' function is to interrupt the normal flow of current in the primary circuits.
- The spark ignites the air-fuel mixture in the cylinder and the tractor engine starts.

(b)

- In this system the battery or generator supplies sparks which are required for ignition to take place.
- The ignition coil changes the low voltage from the battery to a high voltage current required in the spark plug in petrol engine.
- The condenser absorbs self induced current in the primary circuit hence preventing the contact breaker point from excessive pitting.
- It stores electric current for a short time
- The condenser passes on the electric current to the distributor which distributes the high voltage current to the spark plugs.
- This causes the spark to occur at each cylinder in the required firing order.
- The contact breakers' function is to interrupt the normal flow of current in the primary circuits.
- An electric spark from the plug then ignites the air-fuel mixture in the cylinder, then the tractor engine starts.

Advice to Teachers

Teachers should expose learners to the various components and systems of a tractor through practical lessons/demonstrations. Field visits to established farms with tractors should be used in schools where a tractor is not available. Guest speakers can be utilised in areas where the teacher is not well versed with the instruction content on tractors.

16.4 PAPER 3 (443/3 –PROJECT).

This is the agriculture project paper administered to provide an opportunity for the candidates to show and put into practice, the psychomotor skills acquired during the four years period in secondary school.
Candidates are tested in practical skills in the growing of a selected crop from land preparation to harvesting, rearing selected livestock to maturity or constructing a farm structure such as beehive, feed trough, rabbit hutch, compost pit/heap, among others. The instructions are taken to schools, which then provide the required inputs for candidates to carry out the project work independently. The project takes eight months, from February to September of the given year. In the year 2008, candidates chose between preparation of compost manure and production of either carrots or bulb onions. The agriculture teacher's duty was to objectively assess and evaluate each candidate's work at all the stages of project implementation.

16.5 GENERAL ADVICE TO TEACHERS.

16.5.1 The whole syllabus should be effectively covered during instruction because examination questions will be drawn from the entire syllabus.

16.5.2 The teacher/school should acquire the relevant reference materials and assist candidates to obtain and use the recommended textbooks.

16.5.3 The use of textbooks by teachers should always be guided by the syllabus. The specific objectives stipulated in the syllabus should be correctly interpreted to ensure the topics in question are taught adequately and effectively.

16.5.4 A variety of teaching methods and resources should be utilised by teachers to ensure that the content is effectively delivered during instruction. Resource persons/guest speakers and field visits should be arranged and used in areas where the teacher and the school lack the resources to teach the topic/lesson effectively.

16.5.5 All the suggested practical activities in the syllabus should be carried out to prepare candidates adequately for questions that require application of psychomotor skills acquired during instruction.

17.0 WOODWORK (444)

This was the first time the subject was tested after it had been phased out in the year 2006. The subject was tested using a ***theory paper (444/1)*** and a ***project paper (444/2)*** which for the first time in the year 2008 was administered and scored by the subject teachers.

17.1 CANDIDATES' GENERAL PERFORMANCE

The table below gives performance in the subject for the year 2008. Since the syllabus did not change, performance statistics for the years 2003, 2004 and 2005 have also been given for comparison.

Table 19 : Candidates' Overall Performance in Woodwork for the Years 2003, 2004, 2005 and 2008.

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2003	1		60	18.16	7.49
	2		40	30.99	5.90
	Overall	**1,126**	**100**	**4919**	**11.20**
2004	1		60	24.50	8.69
	2		40	30.67	5.90
	Overall	**1,156**	**100**	**54.11**	**14.00**
2005	1		60	19.35	7.72
	2		40	32.70	4.65
	Overall	**1,052**	**100**	**51.70**	**10.00**
2008	1		60	27.84	9.23
	2		40	18.61	4.93
	Overall	**98**	**100**	**46.45**	**12.89**

From the table above, it is to be observed that:

17.1.1 Candidature for the subject declined significantly in the year 2008 when compared to the year 2005. This was as a result of the subject being phased out of the syllabus in the year 2006.

17.1.2 There was an improvement in the performance of the ***theory paper (444/1)*** where the mean improved from ***19.35*** in the year 2005 to ***27.84*** in the year 2008.

17.1.3 Performance in the ***project paper (444/2)*** dropped significantly from ***32.70*** in the year 2005 to ***18.61*** in the year 2008. This could have been attributed to the fact that majority of the examination centres did not have adequate facilities.

17.1.4 The decline in performance in the ***project paper (444/2)*** resulted in a decline in the overall performance in the subject.

Questions which were poorly done are briefly discussed below.

17.2 PAPER 1 (444/1)

Question 2

(a) State **six** factors that may hinder the growth of trees.

(b) Calculate the wet weight of a piece of timber given that:

dry weight = 40g
moisture content = 32%

Candidates were expected to be able to calculate the weight of a given sample of timber.

Weaknesses

The candidates were unable to relate the dry weight to the moisture contents.

Advice to Teachers

Teachers should keenly take the students through the calculations for moisture content of a given piece of timber and more so how to use the formula.

Expected Responses

(a)

- Destruction by animals.
- Fire.
- Harsh weather conditions.
- Creeping plants.
- Plant diseases.
- Human destruction.
- Parasitic plants.
- Insect attack.

b) Moisture content = (wet weight – dry weight) x 100%

$= (\frac{x-40}{40})x100\% = 32$

$= (x-40)\ 2.5 = 32$

$= 2.5x - 100 = 32$

$= x = \frac{132}{2.5}$

$= 52.8g$

Question 5

(a) Explain the term countersinking.

(b) Sketch a counter sunk screw in position.

Candidates were expected to know the difference in types of screws in terms of the shape of their heads and lengths to be able to explain ***'countersinking'***. They were also expected to sketch and show the correct position of the screws in a piece of wood.

Weaknesses

A number of candidates were unable to clearly explain the term countersinking. They were also unable to correctly sketch a countersink screw in position.

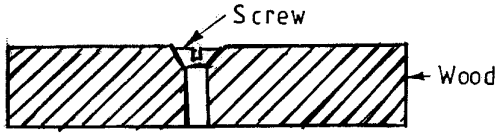
Advice to Teachers

Teachers should comprehensively cover all the methods of joining timber using screws and nails. There should be emphasis on the workshop practice rather than theory alone.

Expected Responses

a) Countersinking is the preparation of the top of a pilot whole to facilitate the drawing of a countersink screw flush slightly below the wood surface.

b)



Question 8

With the aid of sketches, differentiate between the following types of matching veneers:

(a) book and slip;
(b) diamond and reverse.

Candidates were expected to show the differences of the veneers by use of cross-sectional sketches.

Weaknesses

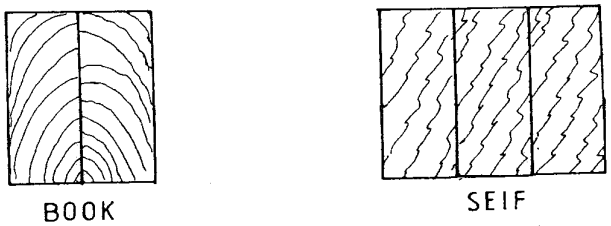
From the candidates' responses it was evident that they did not have any knowledge of veneers.

Advice to Teachers

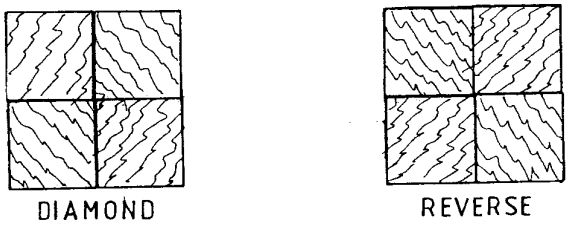
Teachers should make sure that all the topics in the syllabus are covered adequately. Use of sample materials displayed in the workshop should be encouraged. Visits to factories that make and deal in timber products should also be encouraged.

Expected Responses

(a)



(b)



Question 11

Figure 4 shows an isometric view of a block in 1st angle projection.

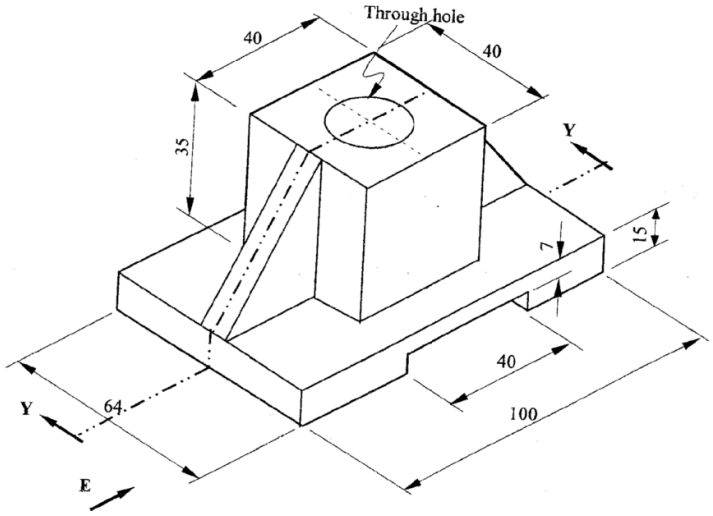


Figure 4

Draw full size and indicate the major dimensions:

(a) Sectional front elevation (y–y).
(b) End elevation in the direction of arrow E.
(c) Plan.

Candidates were expected to interpret the block and draw the three views in orthographic projection, showing all types of lines.

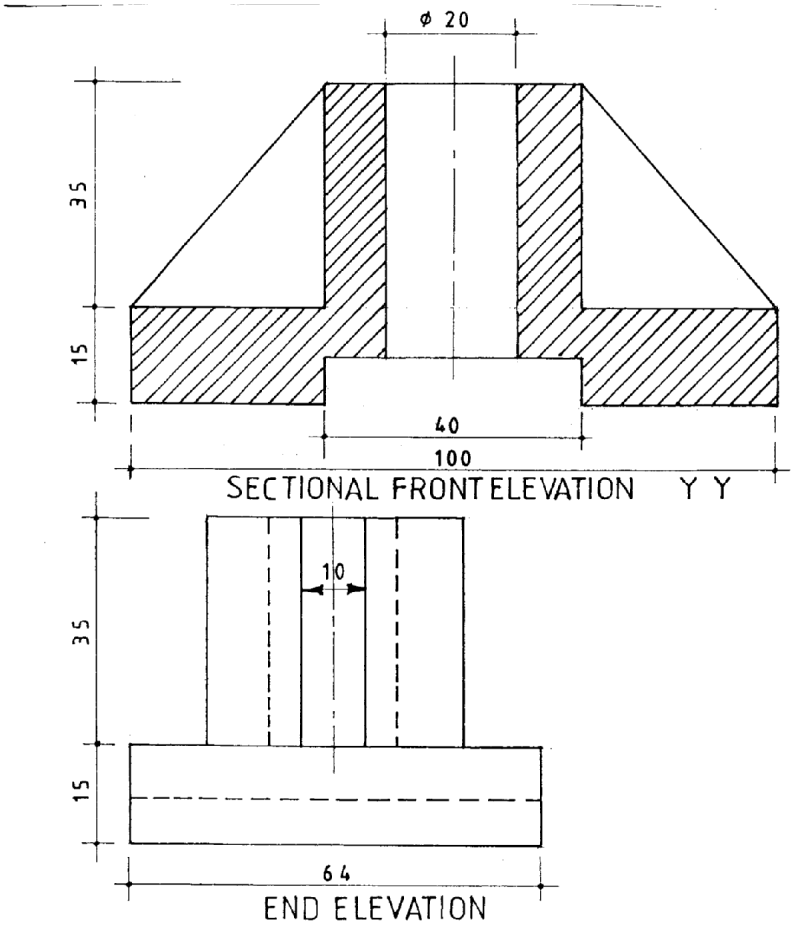
Weaknesses

Some candidates were able to produce the views but were not keen in centre lines and correct dimension lines with arrows.

Advice to Teachers

Teachers should stress on detailing of the views.

Expected Responses


ϕ 20
35
15
40
100
SECTIONAL FRONT ELEVATION Y Y
10
35
15
64
END ELEVATION

18.0 METAL WORK (445)

In the years 2006 and 2007 there was no KCSE examination in Metalwork. When the examination resumed in the year 2008 it comprised, as in the previous years, a ***theory paper (445/1)*** marked out of 100% but scaled down to 60% and a ***project paper (445/2)*** constituting 40% of the overall marks.

18.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows candidates performance in Metalwork in the year 2008. Performance statistics for the years 2003, 2004 and 2005 have also been given for comparison.

Table 23: Candidates' Overall Performance in Metal Work in the years 2008, 2005, 2004 and 2003

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2003	1		60	23.93	8.39
	2		40	33.28	5.68
	Overall	**358**	**100**	**57.23**	**12.22**
2004	1		60	22.29	9.27
	2		40	34.23	3.34
	Overall	**365**	**100**	**54.36**	**14.00**
2005	1		60	23.40	9.60
	2		40	34.90	3.24
	Overall	**311**	**100**	**57.74**	**12.00**
2008	1		60	23.62	6.95
	2		40	35.62	4.57
	Overall	**89**	**200**	**59.24**	**9.39**

From the table above, the following observations can be made:

18.1.1 There was hardly any difference in the mean score for ***paper 1 (445/1)*** in the year 2008 and the mean scores of years 2005, 2004 and 2003.

18.1.2 In ***paper 2 (445/2,*** the mean score improved by ***0.72*** from ***34.90*** in 2005 to ***35.62*** in the year 2008.

18.1.3 The overall mean score improved from ***57.74*** in the year 2005 to ***59.24*** in the year 2008.

18.1.4 The statistics for the year 2008 compare favourably with those for the years 2005, 2004 and 2003 despite the interruption in the years 2006 and 2007.

18.2 PAPER 1 (445/1)

In this part of the report, some analysis of the questions which were poorly performed in ***paper 1 (445/1)*** will be made. The questions include ***5, 7, 8, 13*** and ***15.*** It should be noted that the discussions will focus on the candidates' weaknesses, the expected responses and appropriate advice to teachers and students.

Question 5

(a) Explain the following faults as applied to gas welding:

(i) backfire;
(ii) flashback.

(b) State **two** causes of each of the faults in (a) above.

Candidates were required to explain the terms ***"backfire"*** and ***"flashback"*** and state two causes of each.

Weaknesses

Most candidates could only guess the meaning of each fault and ended up giving the wrong explanations and causes.

Expected Responses

(a)

(i) ***Backfire*** is a condition whereby the flame momentarily recedes back into the tip before being expelled with a loud (pop) sound.

(ii) ***Flashback*** on the other hand is a condition where the torch stays lit instead of expelling the flame.

(b) The causes of backfire include leaks, overheated torch, dirty tip and partially blocked tip by molten pool while flashback can be caused by improper pressure, overheated torch, faulty tip and kinked hoses.

Question 7

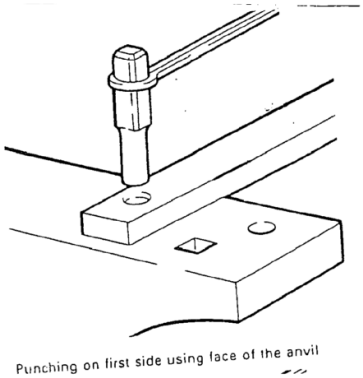
With the aid of labelled sketches, outline the steps of punching a hole in a metal bar on an anvil.

Candidates were required to illustrate how a hole is punched in a flat bar.

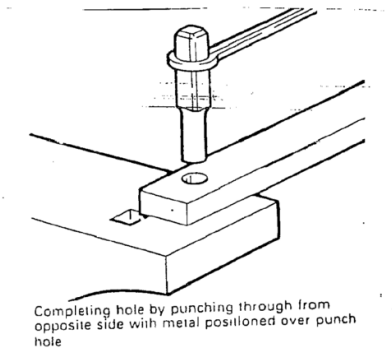
Weaknesses

Most candidates failed to bring out the difference in punching a hole in sheet metal and punching a hole in a metal bar. Some candidates also failed to illustrate their responses and left out some aspects like safety and correct placement of the work piece on the anvil.

Expected Responses



Punching on first side using face of the anvil



Completing hole by punching through from opposite side with metal positioned over punch hole

Question 8

(a) State **four** differences between soft soldering and brazing.

(b) Describe **three** methods of strengthening an edge of sheet metal.

Candidates were expected to list several differences between ***soft soldering*** and ***brazing*** and also describe three methods of strengthening a sheet metal edge.

Weaknesses

The majority of the candidates knew that soldering and brazing are both joining methods by heating. However, very few candidates were able to state the difference between the two processes. Both processes use different filler rods and flux and also require different working temperatures. A brazed joint is stronger than soldered joint. In part (b) of the

question the methods of strengthening an edge of a sheet metal which include bending and flattening, wire edging and beading or false wire edging were not known to candidates.

Expected Responses

(a)

- Require different working temperatures.
- Both use different filter rods.
- Soldering – different flux.
- Brazed joint is stronger than soldered joint.

(b)

- By bending and flattening.
- By wire edging (bend over a wire and return it).
- By bending (bend over wire and remove it).

Question 13

(a) Name the most suitable metals for making each of the following items and state **two** reasons for each choice:

(i) soldering wire;
(ii) surface plate;
(iii) twist drill.

(b) Illustrate each of the following forms of metal supply and state **two** applications of each form:

(i) zed bar;
(ii) angle bar;
(iii) square pipe.

(c) Describe each of the following metal finishing processes:

(i) bluing;
(ii) lacquering;
(iii) planishing.

The candidates' knowledge on various compositions and forms of materials was being tested in this question.

Weaknesses

Most of the candidates did not know the materials that constitute soldering wire, surface plate and twist drill and the reasons why each of these materials is used. Although part (b) of the question was straight forward, some candidates were not able to state where the various forms of metal are used. In part (c) of the question, the candidates displayed limited knowledge in various finishing processes.

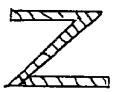
Expected Responses

(a) (i) ***Soldering wire:*** Alloy of tin and lead. It should have low melting temperature, low surface tension and high capillary resistance to corrosion.

(ii) ***Surface plate:*** Cast iron should be self lubricating, have a hard surface and should be easy to make.

(iii) ***Twist drill:*** High speed steel. Should be resistant to rust, retain hardness even at high temperatures and should be hard.

(b)

(i)  For roofwork and window frames

(ii)  Steel structures and frames

(iii)  Furniture, fences, gates

(c)

(i) ***Bluing:*** A method of finishing metal articles using heat to achieve a corrosion resistant surface. Done by heating metal until colour changes to blue then dipping the work into light oil allowing it to cool.

(ii) ***Lacquering:*** A process of metal finishing using lacquer for preservation and beauty. The types of lacquer used include hot, gum cellulose and synthetic and is applied using a brush, dipping or spraying.

(iii) ***Planishing:*** It is a process of finishing by making even decorative dents on sheet metal using a planishing hammer and stake. The process includes annealing, picking, buffing and cleaning.

Question 15

(a) State **three** differences between cold and hot forging.

(b) Figure 5 shows a chain support eye to be made from a 6 mm silver steel rod.

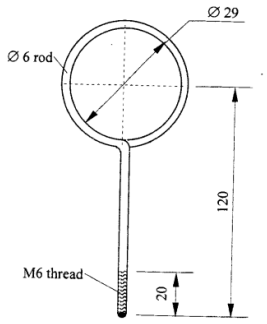


Figure 5

(i) Determine the total length of the rod
(ii) Outline the procedure of forming the eye
(iii) Outline the procedure of cutting the threads.

This question on forging required the candidates to state the difference between ***cold*** and ***hot*** forging and outline how certain operations in a given article are carried out.

Weaknesses

The most challenging part of this question was the calculation of the total length of the wire and the procedure of forming the eye.

Expected Responses

(a)

- Cold forging produces better finish than hot forging.
- Cold forging work hardens and leaves the work stressed.
- Cold forging requires ductile material and of small cross-section unlike hot forging.

(b) (i) Total Length

$$\text{Eye}: \ \pi D \text{where} D = 29 + 3 + 3 = 35$$

$$\pi \times 35 = \frac{22}{7} \times 35 = 110$$

$$\text{Straight part}: 102 - \left(\frac{22}{7} + 6\right) = 120 - 20.5 = 99.5$$

$$\text{Total length} = 100 + 99.5 = 209.5\text{mm}$$

(ii) Forming the Eye

- Mark the required length for the eye.
- Bend the rod to 90^0.
- Form the eye on anvil by start, further and closing.
- Hammer the eye on the anvil flat.

(iii) Cutting Thread

- Hold the work piece in the vice.
- Chamfer the end to be threaded.
- Select the correct die M6.
- Fix the die in the die stock.
- Adjust the die to maximum opening.
- Fit the die square at the end of the bar.
- Apply cutting lubricant.
- Start cutting the thread.
- Continue cutting and reversing to beak the chips.
- Remove the die.
- Adjust the depth of the cut.
- Repeat thread cutting until the right depth is achieved.

18.3 GENERAL COMMENTS

The poor performance by the candidates in all the questions cited above can mainly be attributed to poor tuition and lack of adequate exposure to appropriate practical work. Teachers are advised to ensure that all the topics in the syllabus are adequately taught and students should be given appropriate exercises for application of the skills learnt.

18.4 PAPER 2 (445/2)

As in the previous years, the Council designed a suitable project for this level together with a very comprehensive marking scheme. The subject teachers used the working drawings to supervise the fabrication of the project and also used the marking scheme to mark the projects. The assessment of the project did not require the involvement of external examiners.

19.0 BUILDING CONSTRUCTION (446)

Building construction had been phased out from the syllabus in the year 2006. It was tested for the first time in the year 2008 after it was re-introduced in the syllabus. It is tested using one theory paper and a project paper which is administered and scored by the subject teachers.

19.1 CANDIDATES' GENERAL PERFORMANCE

Table 24: Candidates' Overall Performance in Building Construction for the Years 2003, 2004, 2005 and 2008.

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2003	1		60	22.15	8.70
	2		40	28.93	4.39
	Overall	**721**	**100**	**51.08**	**10.93**
2004	1		60	21.72	11.50
	2		40	30.35	4.07
	Overall	**661**	**100**	**51.30**	**14.00**
2005	1		60	24.99	10.25
	2		40	30.52	4.07
	Overall	**629**	**100**	**54.99**	**13.00**
2008	1		60	15.78	5.36
	2		40	33.83	2.47
	Overall	**18**	**100**	**49.61**	**5.98**

From the table above, it can be observed that:

19.1.1 Very few candidates ***(18)*** sat for the Building construction examination in the year 2008 when compared to the year 2005 when the candidature was ***629***.

19.1.2 Performance in the ***theory paper (446/1)*** declined from a mean of ***24.99*** in the year 2005 to ***15.78*** in the year 2008.

19.1.3 Performance of the ***project paper (446/2)*** was much better than that of the year 2005. This could be attributed to the fact that external assessors were not sent to assess the projects.

19.1.4 Overall performance for the subject declined by about ***6.00*** points but as schools pick up in the next few years', performance is expected to improve.

Questions which were performed poorly are briefly discussed below:

19.2 PAPER 1 (446/1)

Question 2

Figure 1 shows a T-junction wall.

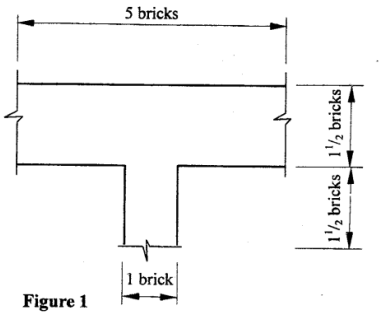


Figure 1

Sketch the bonding details of two alternative plan courses in English bond.

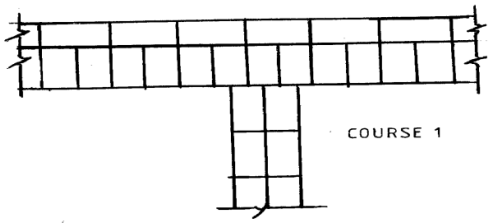
The question required the candidates to sketch alternate plan courses of a T-junction wall of different thicknesses. It also demanded the bonding details, detail of joining the two different wall sizes at the T-junction, plan course one and plan course two of bricks wall in English bond.

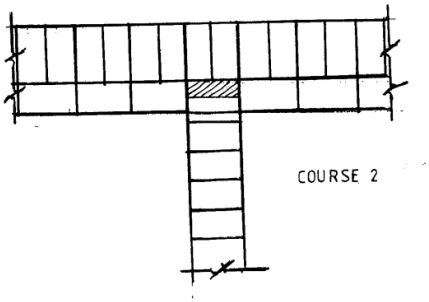
Weaknesses

Candidates were unable to layout the bonding details as required in English bond, interpret the drawing in order to provide the plan courses one and two and bond the point at the T-junction.

These weaknesses could have been as a result of teachers avoiding the teaching of this part of the syllabus and the use of theoretical as opposed to practical teaching of the syllabus where laying out the bricks in the workshop in order to master the bonding skills is not practically done.

Expected Response:





Advice to Teachers

The teachers should cover the syllabus fully, sketch the bonding details in Stretcher, English and Flemish Bonds and encourage students to layout and practically construct such walls in the workshop in order to master the required skills.

Question No. 4

(a) Name **two** methods of overcoming damp penetration into a building by rain beating against the external wall and soaking through the fabric.

(b) State **four** places where vertical damp-proof courses are used.

Part (a) of the question required the candidates to give ***TWO*** methods which would help in avoiding dampness on external walls. The candidates had just to remember the methods and provide them; while in part (b) of the question, the candidates were to give the exact positions the damp-proof course are used. The candidates therefore had to have the knowledge of what a damp proof course was, the types of damp proof courses and where there they are used.

Weaknesses

The students were unable to name the methods of damp-proofing, show which type of material is applied and show which type of material goes with which method of damp-proofing. These weaknesses could have been caused by lack of practical identification of the types of damp-proofing and lack of practical application of the damp-proofing methods for the candidates to have a grasp of the skill.

Expected Responses

(a)
- Use of mastic asphalt tanking.
- Use of a hot layer of bitumen laid on walls.
- Placement of coppings on free standing walls.
- Use of D.PC on jambs and reveals.

(b)
- On jambs.
- On Reveals.
- On basement wall construction.
- On flat-roofs.
- In between free standing walls and copings.

Advice to Teachers

Apart from naming the damp-proofing materials and methods of damp-proofing, teachers should apply these methods during practical lessons such that the candidates will construct the walls and damp-proof them practically.

Question 7

(a) List **two** roof covering materials for each of the following types of flat roofs:
  (i) concrete flat roof
  (ii) timber flat roof.

(b) Name **two** occupational hazards that a mason may be exposed to.

The question expected the candidates to understand the principle of construction of flat-roofs, differentiate between concrete flat roofs and Timber flat roofs and list the materials for constructing both the concrete and timber flat roofs.

Weaknesses

The candidates were unable to differentiate between the materials used for constructing timber flat roofs and concrete flat roofs. This could have been as a result of learning of the different types of flat roofs theoretically and not even sketching the different types of the flat roofs.

Expected Responses

(a) (i)
- Stone chippings mixed with tar.
- Stopping screed.
- Built up roofing flat.

(ii)
- Two coat asphalt.
- Aluminum paint on asphalt.
- Sheet metal work.

(b)

- Inhaling of dust particles of both cement and lime.
- Collapsing buildings
- Falling objects
- Scaling of high heights.

Advice to Teachers

Students should sketch both the concrete flat roofs and the timber flat roofs and make scale drawings of concrete flat-roofs and timber flat roofs with the assistance of their teachers.

Question 10

Figure 3 shows a block in isometric view.

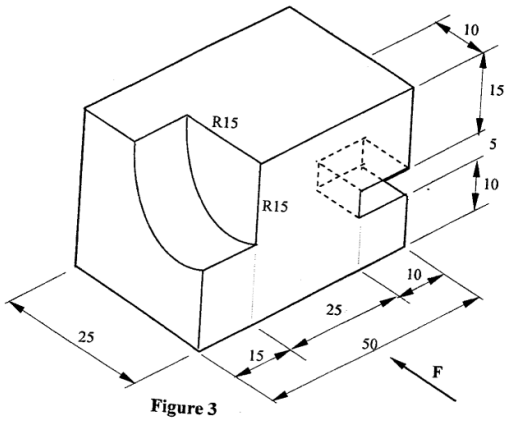


Figure 3

Draw the figure in first angle orthographic projection.

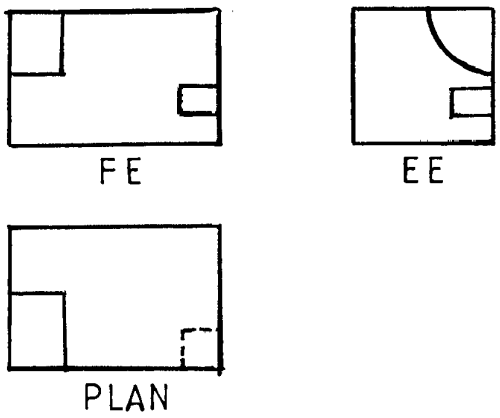
The question required the candidates to draw the object in first angle projection. The candidates were to interpret angle orthographic projection, come up with the plan, front elevation and end elevation of the figure provided and sketch objects in isometric views.

Weaknesses

The candidates were unable to extract the exact view from the object given and interpret the object to have a clear picture of the views required.

These weaknesses could have been caused by lack of sufficient exercises in the area, poor exposure to such work and lack of syllabus coverage.

Expected Responses



Advice to Teachers

Teachers are advised to give students more exercises on this topic, give enough examples for students to master the concepts and cover the syllabus exhaustively.

Question 13

(a) State **two** principles that make a drainage pipe to discharge through gravity effectively.

(b) State **five** advantages of P.V.C. rain water pipes over sheet metal pipes.

(c) Sketch and label a shallow concrete inspection chamber.

This question called on the candidates to have knowledge on the principle of free flow through gravity, modes of discharge and its process and method of drainage.

Weaknesses

The candidates were unable to clearly state the principles of free flow through the effects of gravity and state modes of drainage discharge. This could have been as a result of candidates concentrating only on methods of drainage and lack of emphasis on principles of drainage through gravity.

Expected Responses

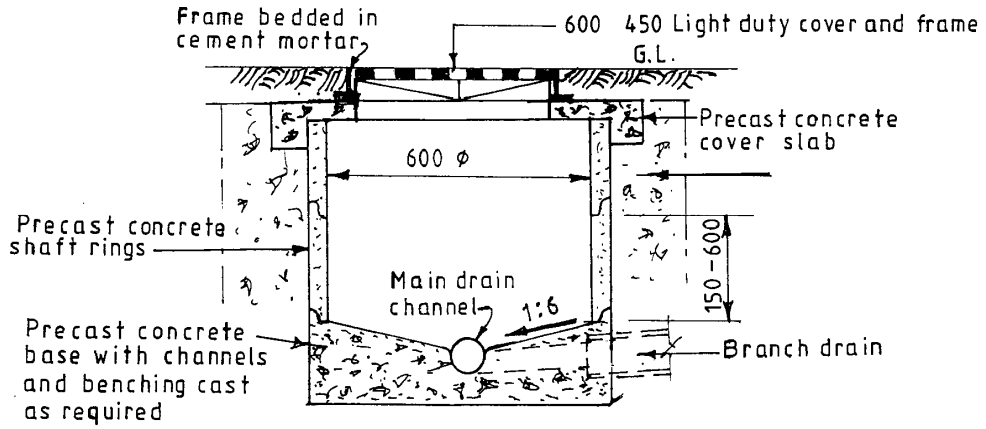
(a)

- The correct pipe size to use.
- Proper selection of correct gradient to use.
- Correct jointing.

(b)

- Easier to join.
- Gutter bolts not required.
- Has self sealing joint due to the joining comp used.
- Corrosion is eliminated.
- Breakages are reduced.
- Better flow properties which usually allow smaller sections and lower falls to be used.

(c)



Advice to Teachers

Teachers should expose students to sketches on drainage through gravity, cover the methods of drainage and practically build a sample of a drainage system of a small residential house.

Question 15

(a) State **four** methods of dropping concrete safely into a trench bottom more than 1.2 metres deep.

(b) Sketch and label a cross-section of a trench boning rod in position as used in levelling the bottom of the trench.

(c) With the aid of labelled sketches, show **three** methods of reducing levels on a slopping site.

In this question, candidates were required to state methods of concreting and its placement at a depth of 1.2 metres, provide a sketch of a cross-section of a trench bottom with boning rods in position and to show methods of reducing levels.

In part (a) of the question, candidates had to have mastered the knowledge and principles on concrete mixing, its preparation, transportation and placement. The main issue being how to place it after undergoing the listed process. When placing it, one should avoid segregation. This must be mastered by the candidates. In part (b) of the question, the candidates had to be well prepared on how leveling of the trench bottom is done. They had to know how the preparation of leveling the trench bottom is done using boning rods. Candidates were required to have mastered the use of pegging the foundation bottom, maintain level and the effective use of boning rods. In part (c) of the question, candidates were required to show by sketching methods of reducing levels.

Weaknesses

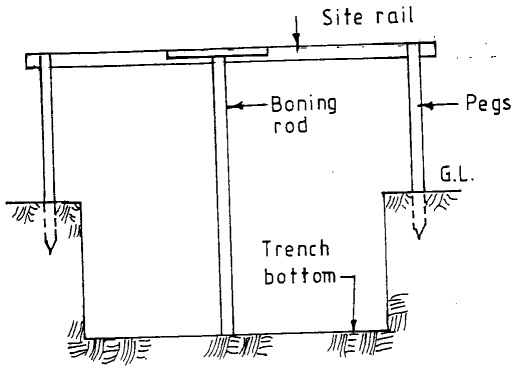
In part (a) of the question, candidates did not understand the concrete mixing, preparation, transportation and placement principles, while in part (b), candidates lacked concepts on how to level trench bottoms coupled with the use of boning rods. In part (c) of this question, candidates could not show by sketching the different methods of reducing levels. These weaknesses were as a result of candidates not having mixed, transported and placed concrete practically. It was also evident that candidates lacked practical knowledge on the leveling of a trench bottom using boning rods and lack of practice in sketching the different methods of reducing levels.

Expected Responses

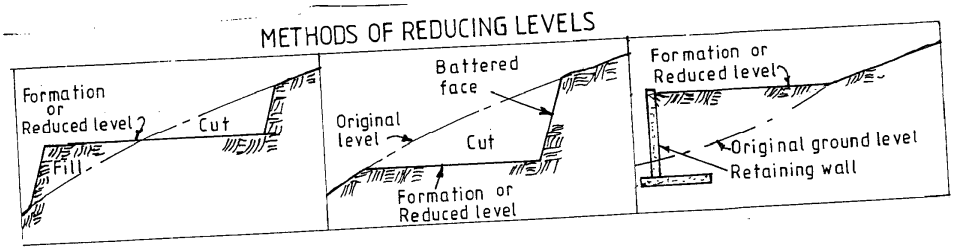
(a)

- Chutes.
- Hoist.
- Convey belt.
- Cranes.
- Steped platform.
- Men with Karai on linen.

(b)



(c)



Advice to Teachers

Teachers should practically mix, transport and place concrete, level trench bottoms and when leveling use both the sprite level and straight edge method, as well as the boning rods method

20.0 POWER MECHANICS (447)

There was no KCSE examination for Power Mechanics in the years ***2006*** and ***2007.*** When the examination resumed in the year ***2008,*** the format for both ***Paper I (447/1)*** and ***Paper 2 (447/2)*** was still the same as in the previous years.

20.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows the candidates' performance of candidates in both papers for the year 2008. Statistics for the years ***2003, 2004*** and ***2005*** have also been provided for comparison.

Table 25: Candidates' Overall Performance in Power Mechanics for the Last Four Years

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2003	1	**311**	60	30.42	8.43
	2		40	23.64	4.96
	Overall		**100**	**54.18**	**11.44**
2004	1	**286**	60	33.65	8.08
	2		40	27.57	3.86
	Overall		**100**	**61.22**	**10.00**
2005	1	**213**	60	34.31	8.48
	2		40	27.60	4.57
	Overall		**100**	**61.79**	**11.00**
2008	1	**57**	60	24.28	9.32
	2		40	25.49	6.88
	Overall		**100**	**49.77**	**14.67**

From the table above, the following observations can be made:

20.1.1 The candidature dropped drastically from ***213*** in the year ***2005*** to ***57*** in the year 2008.

20.1.2 The mean score for ***paper 1 (447/1)*** dropped significantly from ***34.31*** in the year ***2005*** to ***24.28*** in the year ***2008***.

20.1.3 There was also a drop in the mean score for ***paper 2 (447/2)*** from ***27.60*** in the year 2005 to ***25.49*** in the year 2008.

20.1.4 The overall mean score for the subject declined by ***12.02*** marks from ***61.79*** in the year ***2005*** to ***49.77*** in the year 2008.

The two year break had a very adverse effect in both enrollment and performance for this subject. It is hoped that in the future performance and enrollment in the subject will improve.

20.2 PAPER 1 (447/1)

The questions which were noted to have been poorly done by candidates in ***paper 1 (447/1)*** will be briefly discussed below. These include ***questions 4, 5, 7, 9, 13*** and ***15***.

Question 4

(a) State **four** characteristics of a good flux.

(b) Give **two** examples of dry lubricant.

Weaknesses

Most of the candidates did not have the background information on what a flux was and its function in joining metals. Similarly, the candidates needed to know what dry lubricants are in order to get the expected responses.

Expected Responses

(a)

- To clean the joint.
- Should form a non-corossive residue.
- Should be fluid at soldering temperature.
- Should easily be displaced by the molten solder.

(b)
- Graphite, Silicon and Molytidenum disulphide.

Question 5

(a) Name parts (a),(b), (c) and (d) of the camlobe shown in figure 2.

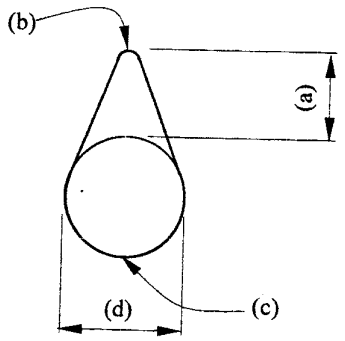


Figure 2

(b) Give **three** advantages of a pressurized water cooling system over thermo-syphon cooling system.

Candidates were required to identify the main parts of a camlobe and also give the advantages of pressurized water cooled system.

Weaknesses

About **60%** of the candidates displayed limited knowledge in camlobe construction and also the operation of a pressurized water cooled system.

Expected Responses

(a) ***Camlobe***
A: Cam Lift.
B: Nose tip apex.
C: Heel.
D: Base diameter.

(b) ***Cooling Systems***
- Positive circulation is faster.
- Less mass of water needed.
- Smaller and lighter radiator required.
- Small bore water pipes used.
- Water level not critical.
- Engine operating temperature more accurate.

Question 7

(a) Give **two** reasons for inclining the kingpin of a vehicle steering system.

(b) State **three** advantages of a rear engine rear wheel drive vehicle over a front

engine rear wheel drive vehicle.

Candidates were expected to identify kingpin indination as one of the angles in the steering geometry and explain why it is necessary in the steering system. In part (b) of the question candidates were expected to state the advantages of having an engine at the back of a vehicle.

Weaknesses

About **90%** of the candidates failed to give satisfactory responses to the questions mainly due to lack of adequate knowledge.

Expected Responses

(a) ***Inclining Kingpin***

- Reduces wheel scrub.
- Eases steering effort.
- Reduces road shock.
- Reduces type wear.
- Compliments caster angle.

(b) ***Advantages***

- Excellent traction especially in hill climbing.
- Compact and accessible power transmission assembly.
- Large passenger space.

Question 9

(a) State the operational difference between a single-acting damper and a double-acting damper.

(b) State **three** factors that determine the friction of a surface.

The candidates were required to compare single and double acting dampers and give the operational differences between the two types of dampers. Part (b) of the question was a basic question calling for factors that determine the friction of a surface.

Weaknesses

Although dampers is a simple sub-topic in suspension systems, most candidates did not seem familiar with dampening and how it is achieved.

Expected Responses

(a) ***Single acting dampers*** act in one direction while ***double acting dampers*** are constructed in such a way that they will react to both bump and rebound.

(b)

- Load on the surface.
- Finish of a surface.
- Material of a surface.
- Speed between the surfaces in contact.

Question 13

(a) State **two** advantages and **two** disadvantages of brazing over fusion welding.

(b) Explain **four** possible causes of a bad brazed joint.

(c) Outline the procedure of brazing a joint.

Candidates were required to compare brazing with welding and state the advantages and disadvantages of the former over the latter. More details were required regarding defects in brazing and the actual procedure of brazing.

Weaknesses

The majority of the candidates confused these two distinct operations and presented them as one operation.

Expected Responses

(a) ***Advantages***

- Requires less heat then fusion welding.
- Produces less distorted joint.
- Joints are easier to machine.
- Faster process.

Disadvantages

- Ferrous metals produced a different colour from that of base metal when brazed.
- Strength of joints deteriorates at temperatures above 250° C.

(b)

- Inadequate cleaning of the joint.
- Using wrong or insufficient flux.
- Using wrong welding rod.
- Incorrect welding temperature.

(c)

- Obtain and set the welding equipment, clean the two parts to be joined by removing oxide and dirt.
- Place the two parts on a table. Hold them in position, select the correct filler rod and flux.
- Preheat the two pieces evenly, applying more heat for thicker pieces.
- Heat the metal at weld start, play the torch over this part in a circular motion.
- When metal is red hot, heat rod slightly and stock it into the flux.
- Hold the end of the fluxed rod just ahead of the torch. Apply more heat to the metal until the flux and rod start to flow.
- Machine the finished joint if necessary.

Question 15

Figure 6 shows a cross-section of a fuel injector of a diesel engine.

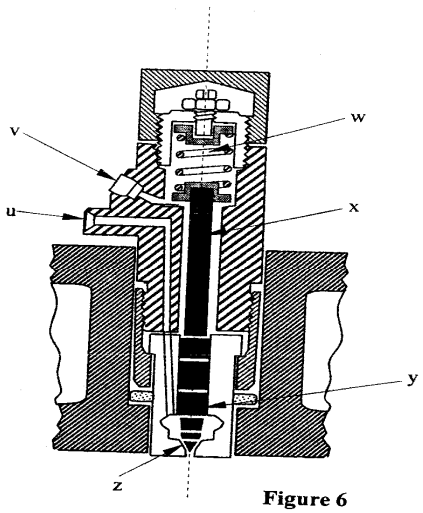


Figure 6

This was a precise question addressing the main parts of a typical fuel injector and how it works.

Weaknesses

Very few candidates attempted this question and those who attempted it performed very poorly. Apparently, the teaching or coverage of this syllabus sub-topic was totally ignored. Teachers should ensure that all the syllabus topics are covered adequately.

Expected Responses

(a)
U: Fuel inlet.
V: Leak of return.
W: Spring.
X: Spindle.
Y: Nozzle.
Z: Seat.

(b)

- When the standing pressure in the delivery pipe and the injector is exceeded by the pressure built up in the chamber of the injection pump, the delivery valve of the pump is forced away from its seat. This higher pressure acts immediately. In the Annular space of the injector, and by acting on the face of the needle value, produces a force which tends to lift the value away from the seat. When this force exceeds that applied to the valve by the spring, the valve moves away from its seat, and atomized fuel is sprayed into the combustion chamber.
- Continued movement of the pump plunger results in uncovering of its spill port and the pressure in the pump chamber collapses. The injector needle returns to it seat by its spring, and the closing of the pump delivery valve by its spring ensures that fuel under pressure just less than that required for injection is trapped in the pipeline and injector body.

20.3 PAPER 2 (447/2)

This practical paper, as in the previous years, was composed of ten (10) equally weighted exercises which were compulsory. The paper test various aspects including the following:

- Related drawing.
- Metal fabrication.
- Precision measurements.
- Changing engine parts.
- Disassembling and assembling components.
- Connecting electric circuits.
- Operating gas welding equipment.
- Simple calculations.

All the exercises were quite well done despite the slight drop in the mean score compared to the previous years. The candidates' performance in a few areas particularly in the use of measuring tools and setting of various gas welding flames require a lot of improvement.

21.0 ELECTRICITY (448)

Although there was no examination offered in Electricity in the years **2006** and **2007**, the format and syllabus for the two papers did not change when the examination resumed in the year **2008**.

21.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows the candidature and the overall performance of candidates in the Electricity examination in the year **2008.** For purposes of comparison, the statistics for **2003**, **2004** and **2005** have also been given.

Table 25: Candidates' Overall Performance in Electricity for the Years 2008, 2005, 2004 and 2003

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
	1		60	29.57	9.15
	2		40	23.16	5.33
2003	**Overall**	**492**	**100**	**52.63**	**12.63**
	1		60	31.22	9.64
	2		40	24.57	4.59
2004	**Overall**	**515**	**100**	**56.68**	**12.00**
	1		60	36.77	9.76
	2		40	25.43	4.37
2005	**Overall**	**443**	**100**	**62.20**	**12.00**
	1		60	26.67	10.78
	2		40	21.83	6.54
2008	**Overall**	**48**	**100**	**48.53**	**15.29**

From the table above, the following observations can be made:

21.1.1 The candidature declined from ***443*** candidates in the year **2005** to ***48*** candidates in the year **2008.**

21.1.2 The mean score for ***paper 1 (448/1)*** declined by ***10*** marks from ***36.77*** in the year **2005** to ***26.67*** in the year **2008.**

21.1.3 The mean score for ***paper 2 (448/2)*** declined from ***25.43*** in the year **2005** to ***21.83*** in the year **2008**.

21.1.4 The overall mean score for the subject declined significantly from ***62.20*** in the year **2005** to ***48.53*** in the year **2008**.

The drop in candidature and the mean score in all the papers can be attributed to the interruption for the two years when the examination in Electricity was not offered.

21.2 PAPER 1 (448/1)

The questions which were reported to have been poorly done will be analyzed with a view to identify the candidates' weaknesses and offer suggestions on some of the remedial measures to be taken to improve performance in the subject in the future. The questions to be analyzed in paper 1 (448/1) include ***3, 6, 9, 10, 13*** and ***15.***

Question 3

(a) Give **two** reasons why aluminium is preferred to copper for overhead power line cables.

(b) In a 12 volt dc system a 40 watt solar panel is exposed to the sun for six hours daily. Calculate the number of days it will take to fully charge a 60 ampere-hour battery.

The candidates were required to identify the properties of aluminium which make it a better power conductor than copper. In the second part of the question, candidates were expected to do some power related calculations.

Weaknesses

The responses given by the candidates in this question indicated that they had very limited knowledge in materials and calculation of energy.

Expected Responses

(a)

- Are lighter than copper cables.
- Are cheaper than copper cables.
- Are more corrosion resistant than copper.

(b) Current for solar panel is I+$\frac{40w}{12v}$

$\therefore$ rate of charge=$\frac{40}{12}$ x 6AH/day

No of days required for full charge is

$\frac{60\ A\text{-}h}{\frac{40}{2} \times 6} = \frac{60}{20} = 3$ days

Question 4

(a) Describe the energy conversion sequence in hydro-electric power generation.

(b) An alloy wire whose diameter is 1.0mm and resistivity is 75 μΩm is used to make a 150 ohm resistor. Calculate the length of the wire.

This question required the candidates to outline how energy is converted during generation of hydro electric power and at the same time calculate the size of a prescribed resistor wire.

Weaknesses

The question tested various concepts of fundamentals of electricity which the candidates did not seem to be conversant with.

Expected Responses

(a)

Potential energy ~~Kinetic energy~~ ~~mechanical~~ Energy electrical energy

(b) Length of the wire is given

lu $I=\frac{aR}{P}$

$$A=\pi\left[\frac{D}{2}\right]^2=\frac{\pi D^2}{4}$$

$$\therefore l=\frac{\pi D^2 R}{4P}$$

$$=\frac{3.14x(1.0x10^{-3})x150m}{4x75x10^{-6}}$$

=1.57m

Advice to Teachers

Teachers should cover all the concepts outlined in this very important syllabus topic.

Question 6

(a) Explain why electric power is transmitted at high voltages.

(b) Explain the **three** functions of a switch gear at a domestic consumer's intake point.

The question tested the candidates' knowledge in power transmission and domestic installations.

Weaknesses

Most of the candidates could not articulate why electric power is transmitted at high voltages. The second part of the question called for understanding of the functions of a switch gear which most of the candidates lacked.

Expected Responses

(a) Electric power is transmitted at high voltage in order to reduce current and therefore reduce cable sizes, power loss and cost.

(b)

- Isolation: switching off all conductors connecting to the supply.
- Circuit protection: automatically disconnects installation when current exceeds normal
- Protection against leakage of current to earth.

Question 9

(a) State **three** methods of increasing the sensitivity of a galvanometer.

(b) An electric pressing iron gets very hot when the temperature control knob is at any position.

(i) State **two** possible causes of the problem.
(ii) List, in correct sequence, the steps taken to identify the fault.

This question was based on servicing of a galvanometer and trouble shooting of a pressing iron which is a very common electrical appliance.

Weaknesses

In order to come up with a satisfactory response, the candidates needed to apply some of the skills acquired in their practicals particularly trouble shooting. Apparently, the majority of the candidates lacked the skills required.

Expected Responses

(a)

- Increasing the number of its coil.
- Using a stronger magnet.
- Using weaker hairspring or a wire suspension.
- Using a long beam of light as a pointer.

(b) (i)

- Loose control knob.
- Faulty thermostat element.
- Incorrect wiring.

(ii)

- Check the temperature control knob for tightness.
- Open the iron box and check the thermostat.
- Check the wiring for correctness.
- Logical sequence.

Question 10

(a) Explain the difference between "detailed drawing" and exploded drawing.

(b) Make a free-hand schematic drawing of an electric circuit showing two cells and one normally-open push button switch in series controlling two bells connected in parallel.

The first part of this question called for interpretation of two terms which apply to types of drawings. The second part of the question required the candidates to convert a given circuit drawing into a schematic drawing.

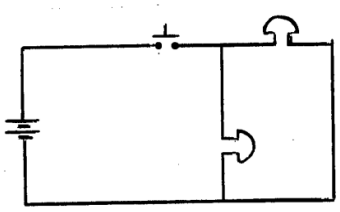
Weaknesses

Although the term *"**detailed**"* and *"**exploded**"* are commonly used in drawing, about ***80%*** of the candidates lacked the correct words to explain what the two terms mean. The use of correct symbols and conventions was lacking in the schematic drawing that was required in part (b) of the question.

Expected Responses

(a) ***Detailed drawing*** shows the parts with their sizes, materials' shapes etc./while ***exploded drawing*** shows the sequence in which all the parts are put together in the final assembly.

(b)



Question 13

(a) Explain the term "stroboscopic effect" with respect to discharge lamps.

(b) (i) Draw a labelled circuit diagram of a starter switch-operated fluorescent lamp.

(ii) Explain the purpose of each of the following features in the circuit in (b)(i) above.

I choke
II fluorescent powder.

Part (a) of this question expected candidates to explain the term ***"Stroboscopic effect"*** with respect to discharge lamps, while part (b) of the question required the candidates to draw and label a typical fluorescent lamp assembly and explain the function of two selected parts.

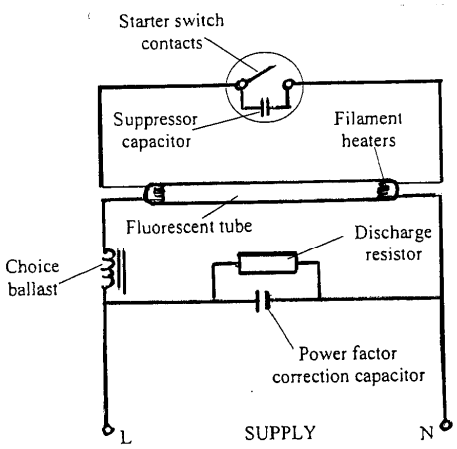
Weaknesses

Most of the drawings presented were incomplete and incorrect. Construction and operation of a fluorescent lamp should be a very familiar topic to the candidates and teachers should ensure that it is thoroughly covered.

Expected Responses

(a) ***Stroboscopic effect*** is a phenomenon whereby reversing discharge of ions and electrons by the lamp coincides with the speed of revolving machines such that the machines appear to be stationary.

(b) (i)



(ii) I ***Choke:*** induces a high voltage which enables a discharge to be initiated between the electrodes of the tube when the starter contacts open. It also keeps the discharge and lamp current at a steady value when the lamp is in operation.

II ***Fluorescent Powder:*** converts the ultra violet light emitted by the discharge and melting mercury to drop to a shadowless or coloured light.

Question 15

Figure 5 shows a Printed Circuit Board (PCB).

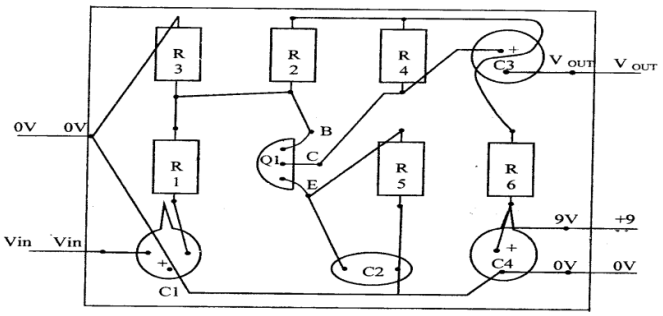


Figure 5

(a) Outline the procedure of constructing the PCB.

(b) Given that Q_1 is an NPN transistor, draw the schematic diagram of the circuit on the PCB and label all the components.

This question required the candidates to describe how printed circuit boards are constructed and also come up with a schematic diagram of the printed circuit presented.

Weaknesses

Despite handling numerous printed circuit boards particularly during the practicals, very many candidates did not seem to know how a PCB is constructed. Even presenting the given circuit in a different form proved to be a very difficult task for most of the candidates.

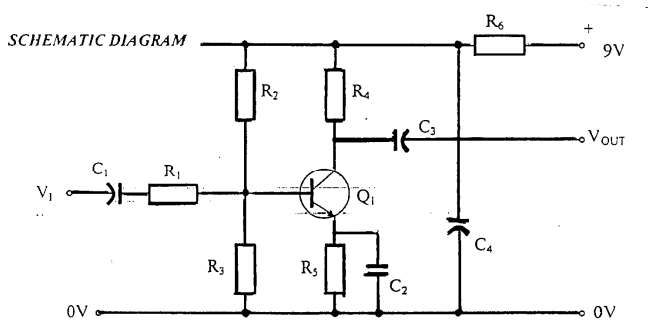
Expected Responses

(a)

(i) Draw the schematic diagram of the circuit.
(ii) Draw the PCB artwork.
(iii) Transfer the artwork to copper side of the board.
(iv) Etch the board.
(v) Drill holes for the component.
(vi) Position the components and connectors.
(vii) Solder the components and connectors.

(viii) Dress the PCB i.e. cut out the tails and close PCB surface.

(b)



21.3 PAPER 2 (448/2)

This practical paper was composed of five equally weighted exercises and the tasks incorporated included the following:

21.3.1 Connecting two different circuits.

21.3.2 Setting instruments to obtain specified readings.

21.3.3 Reading and recording various data.

21.3.4 Plotting graphs from the values obtained.

21.3.5 Fabricating sheet metal parts and assembling them.

21.3.6 Analyzing a fabricated circuit and determining its application.

21.3.7 Mounting components on domestic installation board.

21.3.8 Fixing and terminating conduits.

21.3.9 Terminating conductors at various components.

Weaknesses

The performance in this paper as reflected by the mean score was poorer than any of the previous years. The following weaknesses were noted as the candidates carried out the exercises:

- Inability to connect various circuits from given diagrams.
- Inability to manipulate the apparatus to obtain desired readings.
- Failure to complete the required tasks.
- Failure to read various instruments accurately.
- Misinterpretation of readings.

21.4 ADVICE TO TEACHERS AND STUDENTS

21.4.1 Teachers should ensure that the entire syllabus is adequately covered in good time.

21.4.2 Students should be exposed to all the relevant practical exercises in order to reinforce the theory leant.

21.4.3 Candidates should not be subjected to unfamiliar apparatus or equipment during the practical examination.

21.4.4 Candidates should:

21.4.4.1 Read carefully and follow all the instructions given in each exercise.

21.4.4.2 Be involved individually in performing various experiments.

21.4.4.3 Practise repeatedly how to perform common experiments stipulated in the syllabus.

21.4.4.4 Practise reading various instruments and meters accurately.

21.4.4.5 Learn how to interpret data and make appropriate deductions.

21.4.4.6 Master common fabrication skills that are relevant to electricity.

22.0 DRAWING AND DESIGN (449)

The Drawing and Design (449) examination was reintroduced in the year 2008 after a lapse of two years. The format for the Drawing and Design examination was the same as in the previous years. It consisted of a theory paper worth ***60%*** of the overall mark and a practical paper worth ***40%.***

22.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows candidates' performance in Drawing and Design (449) in the year **2008**. Statistics for the years **2003**, **2004** and **2005** are also included for comparison.

Table 27: Candidates' Overall Performance in Drawing and Design for the Years 2008, 2005, 2004 and 2003

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
	1		60	30.26	11.84
	2		40	23.36	5.98
2003	**Overall**	**1,537**	**100**	**52.62**	**15.67**
	1		60	24.57	9.86
	2		40	21.12	7.56
2004	**Overall**	**1,285**	**100**	**45.69**	**14.00**
	1		60	27.72	10.60
	2		40	23.29	5.94
2005	**Overall**	**1,324**	**100**	**51.00**	**14.00**
	1		60	20.42	10.51
	2		40	26.16	5.87
2008	**Overall**	**19**	**100**	**46.58**	**15.44**

From the table above, the following observations can be made:

22.1.1 There was a remarkable decline in the mean score for ***paper 1 (449/1)*** from ***27.72*** in the year **2005** to ***20.42*** in the year **2008**.

22.1.2 The mean score of ***paper 2 (449/2)*** improved from ***23.29*** in the year **2005** to ***26.16*** in the year **2008**.

22.1.3 The overall mean score for the subject declined from ***51.00*** in the year **2005** to ***46.58*** in the year **2008**.

22.1.4 There was a decline in candidature from ***1,324*** candidates in the year 2005 to only ***19*** candidates in the year 2008.

22.2 PAPER 1 (4491)

The following analysis examines individual questions where poor performance was recorded in the paper. The questions discussed include questions ***1, 5, 6 7, 8*** and ***13***.

Question 1

(a) State the use and **one** advantage of each of the following drawing papers:

(i) grid
(ii) tracing

(b) State the title and role of a person with the following qualification in a design office:

(i) degree in civil engineering;
(ii) diploma in civil engineering.

The candidates' knowledge on various types of drawing paper and why they are used was tested in part (a) of the question. In part (b) of the question, candidates were required to recognize the title and role of the persons whose qualifications were given.

Weaknesses

Most of the candidates did not have the expected knowledge in related drawing and occupational information to be able to give satisfactory responses.

Expected Responses

(a) (i) ***Grid paper:*** provides initial setting of a drawing by tracing. It saves time.
(ii) ***Tracing paper:*** used for copying or developing an existing drawing. It saves time.

(b) (i) ***Engineer:*** designs structures and components. Makes engineering and management decisions
(ii) ***Technician:*** implements management and engineering decisions. Draughts and details drawings

Question 5

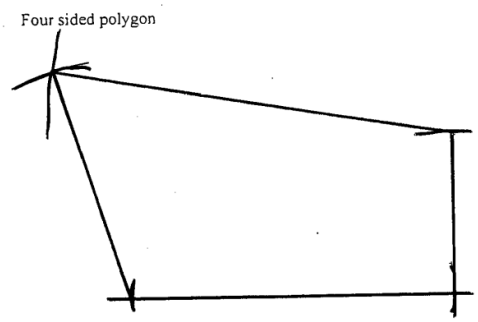
Construct a four sided polygon ABCD with side to length ratios of 2:1 : 2.5:1.5 and a perimeter of 210 mm given that angle ABC is 90°. Measure the smallest angle.

Candidates were expected to use the information given to construct the required polygon.

Weaknesses

The main weakness portrayed by the majority of the candidates was that they used calculations instead of constructing as instructed in the question.

Expected Responses



Question 6

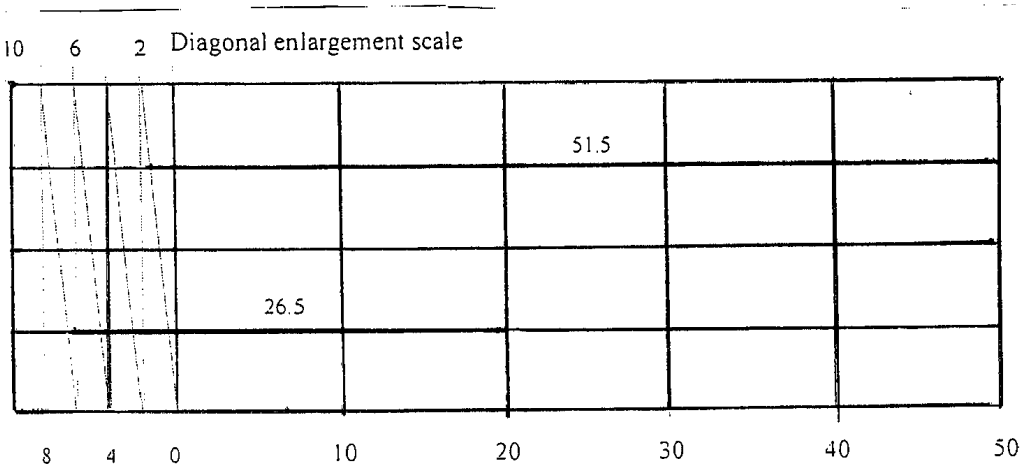
Construct a diagonal enlargement scale of 2:1 to measure to an accuracy of 0.5mm up to 60mm. Show the readings of 51.5 and 26.5 mm on the scale.

This question required the candidates to construct a diagonal scale given the ratio, accuracy and longest side.

Weaknesses

A number of candidates picked divisions off the ruler contrary to construction method which was expected in this question. They also overlooked the fact that it was an enlargement scale according to the ratio given.

Expected Response



Question 7

(a) Figure 3 shows an elevation of a template.

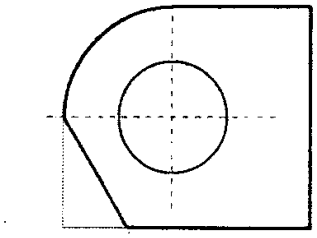


Figure 3

Measure and dimension the:
(i) circle;
(ii) radius;
(iii) angle of the slanting face.

(b) On the perspective grid provided, sketch a two point perspective of the block shown in figure 4.

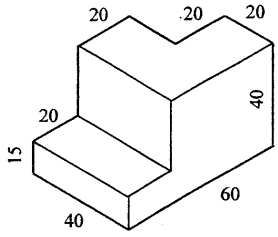


Figure 4

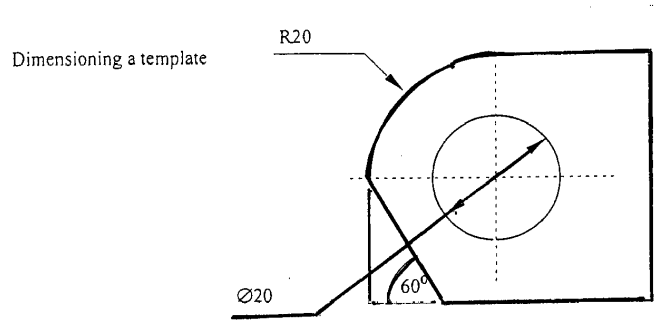
Candidates were expected to take some measurements and show them correctly in the given figure in part (a) of the question. In the second part of the question, the candidates were required to come up with a two-point perspective from a given isometric view.

Weaknesses

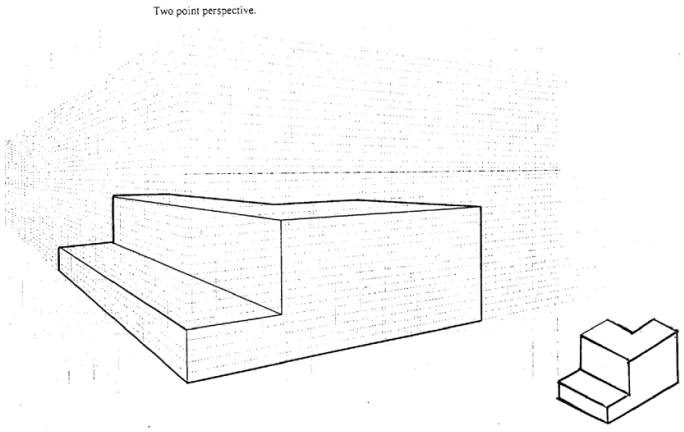
Most of the candidates displayed a lot of weaknesses in dimensioning especially circles, and arcs. They also lacked subject mastery in perspective drawings.

Expected Responses

(a)



(b)



Question 8

Construct a regular heptagon (seven-side polygon) whose sides are 25mm.

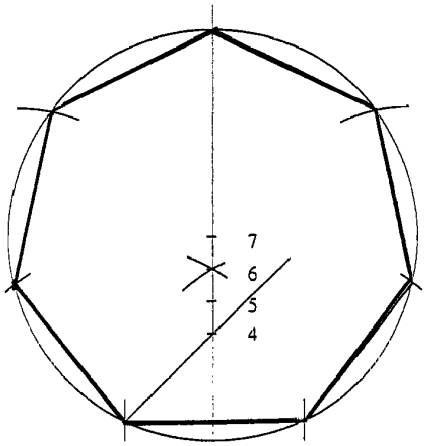
The candidates were required to construct a seven-sided polygon given the length of one side.

Weaknesses

Most of the candidates were not accurate in stepping out the length of the sides along the circumference. A few candidates had no idea of how a heptagon is constructed.

Expected Response

Regular heptagon of side length 25mm



Question 13

Figure 9 shows an isometric view of a machined block.

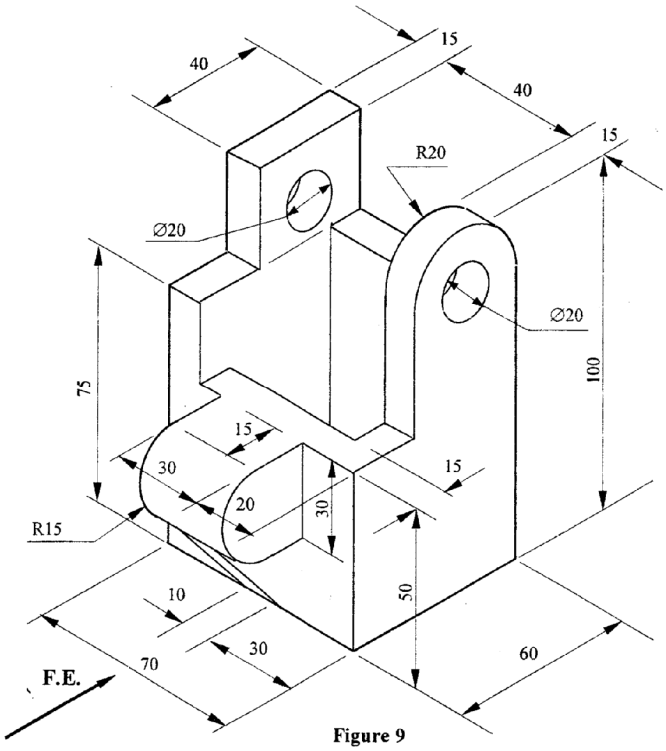


Figure 9

Draw FULLSIZE in third angle projection the three orthographic views of the block.

Candidates were required to draw the orthographic views of a block presented in isometric projection.

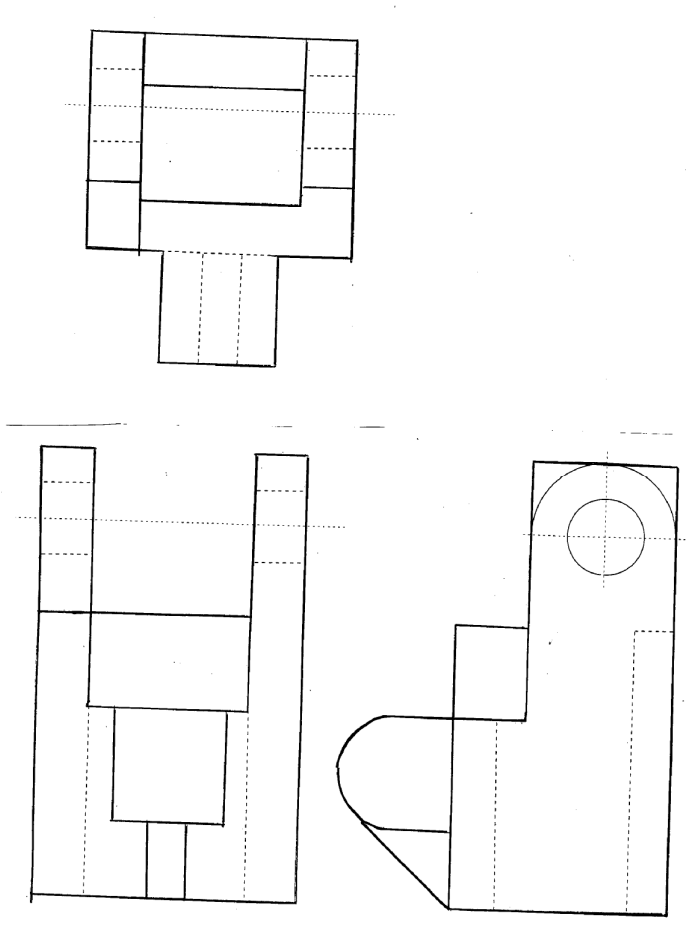
Weaknesses

Three main weaknesses portrayed in the candidates' responses were poor or wrong projection of views, poor and untidy line work and confusion of first and third projection angles.

In the expected responses, the candidates should have observed the following:

- All the orthographic views to be presented in third angle projection.
- Use one of the conventional methods in orthographic projection.
- Use of correct scale (full size) as specified in the question.
- Each view to have all the required details including centre lines and hidden details.
- Correct line work with clear distinction between various types of lines.
- Neatness in each view presented.

Expected Response



22.3 PAPER 2 (449/2)

This paper is always composed of one design question which must be attempted by all the candidates. In the year 2008, the question required the candidates to design a suitable ironing board with the following features:

- It should be easily adjustable to any desired height.
- It should be collapsible to allow for storage in limited space.
- Be stable when in use and have provision for holding the iron box.
- It should be portable.

In their responses, the candidates were expected to present rough sketches of two possible designs. In the second requirement, the candidates were to select one of the two possible designs and refine it into a pictorial drawing. The

third requirement called for the candidates to make detailed sketches of suitable mechanisms to cater for each feature cited above.

22.3.1 Weaknesses

The following weaknesses were observed in candidate's work.

- Wrong interpretation of the design problem.
- Inability to sketch neat, proportional and appropriate drawings to represent specific features.
- Failure to present clear and detailed mechanisms.
- Limited skills to present ideas in exploded form.
- Inability to identify appropriate materials and joints required to assemble various parts of the ironing board.

22.3.2 Advice to Teachers

22.3.2.1 Candidates require a lot of practice in sketching and presenting various ideas in drawing form.

22.3.2.2 Candidates also need sufficient exposure to various designs in order to develop the desired concepts.

22.3.2.3 Teachers should insist on neatness and proportionality in all the drawing assignments given to their students. Teachers should also ensure that the entire syllabus is covered including topics like materials and joining methods.

23.0 AVIATION TECHNOLOGY (450)

The year ***2008 KCSE*** examination for Aviation Technology was composed of a theory paper and a practical paper. Although both papers were marked out of ***100, Paper 1 (450/1)*** was scaled down to ***60%*** while ***Paper 2 (450/2)*** was scaled down to 40%. The format for both papers was the same as in the previous years.

23.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows the candidates' performance in the Aviation Technology (450) examination for the year 2008. Performance statistics for 2007, 2006 and 2005 have been given in the table for comparison.

Table 28: Candidates' Overall Performance in Aviation Technology for the last Four years

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
	1		60	36.81	8.07
	2		40	28.19	3.57
2005	**Overall**	**75**	**100**	**65.00**	**10.00**
	1		60	36.22	7.42
	2		40	29.59	3.23
2006	**Overall**	**46**	**100**	**65.80**	**8.00**
	1		60	31.87	6.27
	2		40	22.17	2.32
2007	**Overall**	**53**	**100**	**54.04**	**7.00**
	1		60	34.78	5.84
	2		40	26.56	2.94
2008	**Overall**	**63**	**100**	**61.33**	**7.79**

From the table above, the following observations can be made:

23.1.1 The overall mean score improved from ***54.09*** in the year 2007 to ***61.33*** in the year 2008

23.1.2 There was also an improvement in the candidates' performance in both papers in the year 2008 compared to the year 2007.

23.2 PAPER 1 (450/1)

Although the overall performance was good, it was noted that most candidates performed quite poorly in ***questions 2, 6, 7, 9, 12*** and ***14***. This part of the report will therefore focus on these questions which were poorly done and will specifically address the weaknesses portrayed and present the expected responses.

Question 2

(a) Name the **two** types of batteries used in aircraft electrical systems.

(b) State **three** main functions of battery in an aircraft electrical systems.

The candidates were required to know the common types of batteries and the function of a battery in aircraft electrical systems.

Weaknesses

Most of the candidates failed to give the correct answers mainly because of lack of knowledge in this topic. The topic should be given adequate coverage during teaching

Expected Responses

(a) Lead acid.
Nickel cadmium.

(b)

- Maintains dc system voltage under transient conditions.

- Supplies power for short term heavy load when the generator for ground power is not available.
- Supplies limited power to operate essential services in case of an emergency.

Question 6

Describe the **three** main components in a simple aircraft jet engine.

The candidates were expected to describe the main components of a simple jet engine.

Weaknesses

The candidates did not know about the construction of a simple jet engine. From their responses, it was evident that majority of the candidates had not covered this topic and could therefore not give the expected responses.

Expected Responses

- ***Compressor:*** a series of blades or airfoils, some rotating (rotors), some stationery (stators) that draw air and compress it.
- ***Combustion chamber***: Circular containers consisting of flame tubes, burners, igniters etc. in which atomized fuel and air are ignited for combustion.
- ***Turbines:*** devices comprising rotors and stators which gain toque from expanding gases to turn the compressor and other accessories.

Question 7

With the aid of a labelled sketch, describe the semimonocoque aircraft fuselage construction. (5 marks)

This question required the candidates to illustrate how a semimonocoque fuselage is constructed.

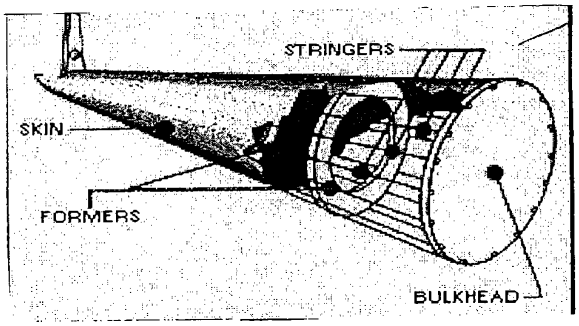
Weaknesses

The question was straight forward for the few candidates who possessed the knowledge required. However, most of the candidates had very little knowledge about fuselage and their responses left a lot to be desired.

Expected Responses

Semimonocoque literally means half a shell

- It comprises internal braces which include longitudinal and vertical members.
- Longitudinal members are stringers and or lengerons
- The skin provides cover and carries most of fuselage strength.



Question 9

(a) State **four** requirements of aircraft hardware as compared to ordinary hardware. (2 marks)

(b) List all the information contained in the manufacturer's specifications on aircraft hardware. (2 marks)

The candidates were expected to identify the unique requirements for aircraft hardware as opposed to general hardware requirements.

Weaknesses

Some candidates listed the requirements for ordinary hardware and hardly gave exclusive requirement for aircraft hardware. Similarly, there was no unique information given in part (b) of the question. A few candidates attempted to give information applicable to general hardware.

Expected Responses

(a)

- Corossion resistance.
- Tensile strength.
- Temperature resistance.
- Weight to strength ratio.

(b)

- Strength.
- Material.
- Size and tolerance.
- Finish.

Question 12

(a) With the aid of a labelled sketch define the three aircraft propeller blade angles when the engine is running.

(b) Explain the operation of an aircraft propeller.

(c) Explain the difference in operation between fine pitch and coarse pitch in a two-speed propeller.

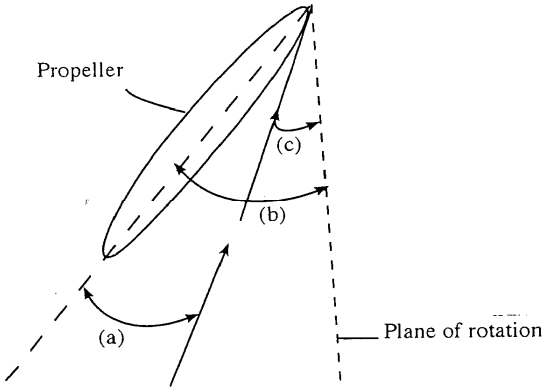
The candidates were required to have an indepth understanding of the construction and operation of an aircraft propeller.

Weaknesses

Most candidates had scanty knowledge about the propeller blade angles, the basic operation of aircraft propeller and the operational differences between fire pitch and coarse pitch.

Expected Responses

(a)



(b) The propeller consists of blades which are aerofoil section and is rotated by the engine

(i) The propeller converts engine power into aerodynamic forces.
(ii) The portion of the force acting forward is thrust power.
(iii) The portion acting in the plane of rotation is the propeller torque.
(ii) The trust conversion efficiency depends on the configuration and aircraft forward speed.
(iii) The simple fixed pitch configuration is inefficient at most speeds while the variable pitch constant speed propeller is reasonably efficient at most aircraft speeds.

(c) ***Fine pitch propeller***

- Has low blade angle which moves forward a small distance through the air and will take a small volume of air.
- Requires relatively low power to rotate, allows high propeller speed to develop and achieves only limited airspeed.

Coarse pitch propeller

- Has high blade angle which will advance a long distance through the air and will take large volume of air.
- Requires greater power to rotate, limits propeller speed than can be developed and achieves high speeds.

Question 14

(a) Outline the procedure of repainting an aircraft.

(b) Explain **two** ways in which each of the following factors can cause an accident in aviation industry:

(i) technical defect;
(ii) weather;
(iii) servicing error;
(iv) pilot error.

The candidates were expected to outline the steps of repainting an aircraft body and also explain how some given factors can cause an accident.

Weaknesses

The main weaknesses portrayed by the candidates was lack of completeness in their answers which was an indicator that finishing and safety had not been exhaustively taught. Teachers should ensure that even the minor syllabus topics like finishing are thoroughly covered.

Expected Responses

(a)

- Position the aircraft in the painting hanger.
- Earth or bond the aircraft.
- Mask areas not to be painted

- Remove the old paint.
- Clean the aircraft surfaces to be painted.
- Inspect and rectify any defects.
- Pre-treat the surface.
- Prepare and apply the primer.
- Prepare and apply the paint.
- Polish the surface.
- Unmask the aircraft.
- Remove the earthing/bonding.
- Complete the documentation.
- Discharge.

(b) (i) ***Technical defect:***
- Can result in failure of entire aircraft.
- Failure of navigational and other equipment.

(ii) ***Weather:***
- may lead to pathological (uncontrollable) condition.
- can cause instant failure, for example: - lightning strike.

(iii) ***Servicing error***
- Unknown engine fault.
- Failure to conform with preventative maintenance schedule.

(iv) ***Pilot error***
- Can lead to wrong decision or action.
- Can cause omission or incompetence.

23.3 PAPER 2 (450/2)

This paper, as in the previous years, comprised of ***ten (10)*** compulsory questions which were equally weighted in terms of marks and time allocation. At each station the candidates were required to carry out certain tasks that were examined. The tasks included the following:

- Preparing parts list for a given assembly.
- Making an undercarriage bracket to a given size and shape.
- Interpreting weather photographs.
- Connecting and examining electrical circuiting.
- Identifying aircraft parts and taking measurements.
- Identifying defects in some parts and materials.
- Making aerofoils and relating them to an aircraft.
- Carrying out experiment related to aircraft instruments.
- Determining suitability of aircraft hardwares.
- Performing an experiment related to propulsion.

23.3.1 Weaknesses

The following weaknesses were noted:

23.3.1.1 ***Failure to follow instruction***: ***Question 1*** was a related drawing question and some candidates did not read the instructions given. They went ahead to redraw the assembly instead of preparing a parts list as instructed in the question. In ***question 4***, the female connector was the one to be crimped while the male connector was to be soldered. Some candidates failed to follow this specific instruction.

23.3.1.2 ***Inability to measure accurately and make deductions:*** In ***question 5***, the candidates were to determine the condition of the cylinder bore from the measurements taken. Some candidates failed to draw the desired deductions due to incorrect measurements taken.

23.3.1.3 ***Identification of parts:*** Naming of parts, components and material is a requirement in this paper and some candidates had difficulties in getting the correct names or terminologies for different parts, materials etc

23.3.1.4 ***Inability to determine condition of parts***: In some ***questions like 6(a)*** and ***9***, the candidates were required to determine the condition of some hardware and parts by examination or measurement. The

majority of the candidates could not identify the rejection criteria for those defective parts and hardware.

23.3.2 Advice to Teachers

The teachers should ensure that all the syllabus topics are taught exhaustively and that relevant exercises are given to the students to reinforce the theory covered. The students should also be given adequate time to apply the concepts taught and each student should be encouraged to participate in doing the actual experiments and practical exercises. Appropriate teaching aids like aircraft components and models should also be used.

24.0 COMPUTER STUDIES (451)

This was the third time the subject was tested under the revised syllabus. The subject is tested using one theory paper, a practical and a project paper.

24.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows performance in Computer Studies in the years 2006, 2007 and 2008.

Table 29: Candidates' Overall Performance in Computer Studies for the last three years.

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2006	451/1		100	51.51	18.22
	451/2&3		100	57.57	16.77
	Overall	**4,181**	**200**	**109.08**	**32.00**
2007	451/1		100	45.89	18.3
	451/2&3		100	63.62	15.44
	Overall	**4,732**	**200**	**109.54**	**30.00**
2008	451/1		100	38.78	15.64
	451/2&3		100	53.13	15.74
	Overall	**5,498**	**200**	**91.66**	**29.46**

From the table above, it is to be observed that:

24.1.1 Candidature in the subject increased from ***4,732*** in the year 2007 to ***5,498*** in the year 2008 representing a ***16.2%*** increment.

24.1.2 Performance in ***paper 1 (451/1)*** declined significantly from a mean of ***45.89*** in the year 2007 to a mean of ***38.78*** in the year 2008, representing a ***7.11%*** decline.

24.1.3 Performance in both the ***practical paper (451/2)*** and the ***project paper (451/3)*** declined from a mean of ***63.62*** in the year 2007 to ***53.13*** in the year 2008.

24.1.4 Overall performance in the subject declined from a mean of ***109.54*** in the year 2007 to ***91.66*** in the year 2008.

Questions which were poorly performed are briefly discussed below.

24.2 PAPER 1 (451/1)

Question 8 (b)

Describe each of the following types of computers:

(b) embedded.

The candidates were expected to describe an embedded computer.

Weaknesses

Some candidates did not answer this question correctly. This could have been caused by lack of familiarity or poor instruction by the teacher on types of computers or classification of computers.

Expected Response

It is a computer that is within other device such as lifts, petrol pumps, etc.

Advice to Teachers

Teachers should teach various classifications of computers including emerging ones.

Question 10 (a)

List **four** stages in data collection.

The question required candidates to list four stages in data collection.

Weaknesses

The question was easy but some candidates were not able to list the four stages, possibly because they had not been taught.

Expected Responses

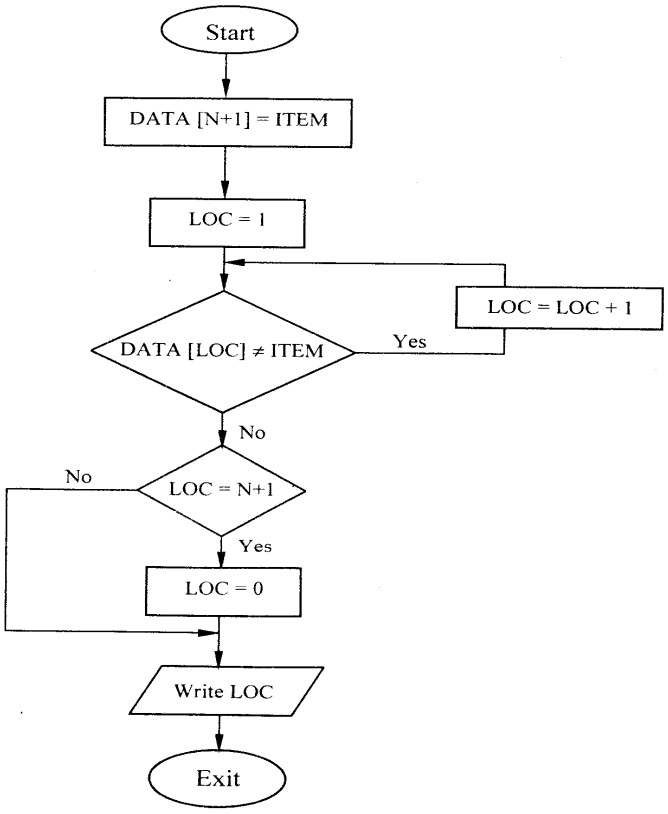
- Data creation.
- Data preparation.
- Conversion.
- Validation.
- Sorting.
- Control.

Advice to Teachers

It is advisable that the stages are listed in their logical sequence to show better understanding of the stages.

Question 16 (a)

Study the flow chart below and answer the questions that follow.



If DATA is the following sorted list of 13 elements, such that N = 13:
(where N is the number of elements in the list),11, 22, 30, 33, 40, 44, 55, 60, 66, 77, 80, 88, 99.

(a) Determine the output from the flowchart if ITEM is:

(i) 40

(ii) 99

(iii) 120

(iv) 5

This question required candidates to analyse the flowchart and predict the output if the flowchart is fed with the given data.

Weaknesses

Most candidates did not dry run the flowchart correctly and hence failed to obtain the required output.

Expected Responses

The most appropriate way of approaching this type of question is to list each item that is computed and then go through every step in the flowchart for instance;

When ITEM = 40, N = 13 and the elements of the list are given, one can come up with a table as shown below

Item	Loc
40	1
	2
	3
	4
	5

Step 1
Data [N+1] i.e. DATA [13+1]
= 40

Step 2
Loc 1

Step 3
Compare Data [Loc] with item in this case Data[1] = 11
Since they are not equal increment Loc by 1. Continue with the process until Loc = 5 where you exit the loop.

Step 4
The decision box is comparing Loc = 5 with 14 and since they are not equal you follow the No path write Loc as 5 and exit.

(i) = 5
(ii) = 13
(iii) = 0
(iv) = 0

Question 16 (b)

Explain the purpose of this flowchart.

This question required the candidates to explain the purpose of the flowchart.

Weaknesses

Some candidates could not explain the purpose probably due to failure to get the output of the flowchart.

Expected Responses

From the given output one would be quick to note that it is searching for the location of a number in the list and writing 0 if the number is not in the list.

Question 16(c)

Write a pseudocode for the above flowchart.

Candidates were required to write a pseudocode for the flowchart.

Weaknesses

Some candidates did not write the pseudocode correctly. The main cause of the weaknesses observed in this question is lack of familiarity with analysis of flowcharts, as well as lack of ability to convert a flowchart to a pseudocode. Inadequate preparation by the teachers was noted.

Expected Responses

The question required direct translation from the flowchart to a pseudocode. It was therefore expected that the candidates would come up with the following pseudocode.

```
1       Set DATA[N+1] = ITEM
        Set Loc = 1     [initialization]
2       Repeat Step 3 while DATA[LOC] ≠ ITEM
3       LOC = LOC + 1 [Increment Loc by 1]
4       If LOC = N + 1 then set LOC = 0
5       Print LOC
6       Exit
```

Advice to Teachers

Teachers should also advise candidates to always test their program designs by use of sample test data such as the one provided in the question. Testing one's design is a major ingredient of program development.

24.2 PAPER 2 (451/2)

Question 1b (i) & (ii)

1 The information given below is on products, suppliers and orders for a departmental store.

- Table 1 (products table) contains four fields representing product ID, the name of the product, the retail price of a unit of the product and the number of units of the product in stock respectively. The unique identifier of a product is its "**product ID**".

- Table 2 (suppliers table) contains five fields representing supplier ID, the name of the supplier, the supplier's contact address, town and telephone number respectively. The unique identifier of a supplier is the "**supplier ID**".

- Table 3 (orders table) contains seven fields representing order ID, products ID, supplier ID, the wholesale price of a unit of the product ordered from the supplier, the number of units of the product, the date the product was ordered and the date the ordered product was received respectively. The unique identifier of a product is its **order ID**.

Table 1 (Products table)

1	Kimbo 1kg	100	300
2	Cowboy 1kg	120	180
3	Batteries AAA	50	200
4	Salt 1kg	25	45
5	Sprite 300ml	20	87
6	Dasani 500ml	30	65
7	Baking flour 2kg	89	89
8	Batteries D	60	32
9	Layersmash 70 kg	1,050	54
10	Omo 200g	35	21

Table 2 (Suppliers table)

1001	Eveready	54839	Kitale	77777
1002	Unilever	2361	Thika	256782
1003	Bidco	3345	Nairobi	345671
1004	Cocacola	45621	Nairobi	456781
1005	Unga Ltd	52428	Nakuru	26314
1006	Kay Salt	64365	Mombasa	332233

Table 3 (Orders table)

10001	1	1002	23	20	12/04/07	13/04/07
10002	5	1003	16	40	11/11/06	
10004	2	1002	25	400	08/08/06	23/09/06
10005	4	1002	18	45	04/04/07	
10006	8	1006	24	50	12/12/06	
10008	7	1005	56	100	02/02/06	
10010	6	1003	20	20	14/03/07	
10013	5	1002	16	100	04/05/07	06/05/07

(i) Create the relationships between the tables.

(ii) Create a query to show the name of each product ordered, the retail price, the number of units ordered and the wholesale price.
The query should contain products whose retail price is below Kshs.50.
Save as CHEAP.

Part b (i) of this question required candidates to create relationships between the three tables while part (b) (ii) required the candidates to create a query from the given tables in order to display products whose retail price is below Kshs.50. The query was to display product name, retail price, the number of units ordered and the wholesale price.

Weaknesses

In part (b) (i) of this question, some candidates did not complete relationship creation while others could not link the fields that were related. This may have been caused by lack of knowledge on the purpose of enforcing referential integrity in a relationship. In part (b) (ii) of the question, some candidates chose the wrong fields, especially for the retail price. They selected all the four fields from the orders table instead of selecting retail price from the products table as well as the product name while the other two fields were to be selected from the orders table. This may have been caused by wrong naming of fields, they named both retail price and wholesale price the same way e.g price or unit price hence the failure to distinguish between the two when creating the query

Advice to Teachers

In part (i) of the question, candidates should have created a relationship between the three tables by linking the product ID from the products table with product ID in the orders table and then link the supplier ID in the suppliers table with the supplier ID in the order table. After linking, candidates were required to ensure that the link depicts the one to many relationships for each link. This could have been done by enforcing referential integrity constraints in order for the relationship to be reliable.

Candidates need to be keen when selecting fields for query creation. When setting up a selection criteria, they should be keen so that they apply the criteria on the correct field. Teachers should guide candidates on factors to consider when naming fields in a database and when selecting fields for a query. Teachers should teach the importance of relationships and data integrity.

Question 2 d (i)

2 Faida distributors sells its products using ten sales representatives who are deployed at various regions. Each sales representative presents weekly sales to the sales manager. Four values are submitted each month as shown in table 4 below. (Values are in Ksh)

Table 4

1	O. Ouko	12345	23405	17200	19450
2	J. Wariahe	34470	24500	19465	20200
3	B. Achieng	33000	26760	30750	19225
4	Z. Kazungu	15430	17665	12992	15789
5	R. Wambua	33412	37895	40217	22433
6	S. Musuva	13415	29334	20780	22900
7	N. Wanjiku	14520	28455	30200	16700
8	F. Chepkoech	25240	34285	25750	25625
9	G. Juma	30420	20400	24600	30200
10	P. Kamau	35520	32255	35400	31500

Each sales representative is paid a monthly commission depending on performance. Sales in the range of Ksh 0-65,000 attract a commission of 5%. Any additional sales attract a commission of 12%.

(d) Use functions to determine the:

(i) commission for each sales representative;

This question required the candidates to use a function to determine the commission for each sales representative. This question called for the use of a selection function since the percentage commission was based on a range of total sales.

Weaknesses

Quite a number of candidates were unable to compute the commission. Some candidates decided to use manual computation and inserted a figure as commission; this was not as per expectation since the question was testing on use of spreadsheet functions. This was probably caused by inadequate preparation on the use of functions in spreadsheets.

Expected Responses

Assuming the total sales for the first sales representative is in column F in cell F4 then the following formula would be ok if typed in cell G4

=FI(F4>65000,65000*0.05 + (F4-65000* 0.12, F4*0.05)
0r

=IF(F4<=65000, F4*0.05, 65000 * 0.05 + (F4–65000) * 0.12)

After computing the commission for the first cells representative, the candidates should then have copied the formula into the rest of the column so as to compute for the remaining cells representative.

Advice to Teachers

Teachers should give more time and more examples on how to use functions.

25.0 FRENCH (501)

In the year 2008, the KCSE examination for French was tested in the following three papers:

- **Paper 1 (501/1):** tested Listening Comprehension, Dictation and Composition.
- **Paper 2 (501/2):** tested Reading Comprehension and Grammar.
- **Paper 3 (501/3):** tested Reading Aloud, Exposé and Conversation. This is an oral paper.

25.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows candidates' performance in French (501) in the years 2007 and 2008.

Table 30: Candidates' Overall Performance in French in the Years 2007 and 2008

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2007	1		45	18.34	7.97
	2		30	13.32	6.75
	3		25	15.72	4.54
	Overall	2,118	**100**	**47.28**	**17.00**
2008	1		45	17.42	7.70
	2		30	13.01	5.44
	3		25	16.09	4.33
	Overall	2,219	**100**	**46.65**	**16.13**

The following observations can be made from the table above:

25.1.1. The general performance in the year 2008 French examination declined when compared to that of the year 2007. This is attested by the overall mean of ***46.65*** in the year 2008 as compared to ***47.28*** in the year 2007.

25.1.2 The candidature increased slightly from ***2,118*** in the year 2007 to ***2,219*** in the year 2008.

25.1.3 The mean scores for ***papers 1 (501/1)*** and ***2 (501/2)*** declined in the year 2008 when compared to the year 2007.

25.2 PAPER 1 (501/1)

This paper consists of three sections:

25.2.1 Section 1: Listening Comprehension

This section deals with different situations such as advertisements, interviews, news items, etc. and is marked out of 15 marks. The students are required to listen (two) 2 times with pauses to answer questions.

Weaknesses

Candidates were unable to identify the 24 hour clock, dates, parts of the body, colors, seasons, directions, weather and nasal sounds as spoken in context. They had difficulty in grasping various topics which are within the syllabus such as sports, holidays, and tourism. Their grasp of grammar seems to be limited as they were unable to use nouns, passé composé and infinitifs. The students were also not aware of the currency in use in France.

Advice to Teachers

The syllabus expects the candidates to understand French spoken in different registers and at normal speed as spoken by a native French speaker. The teachers need to do their best to inculcate grammar and handle all the topics as expected in the syllabus. The teachers also need to train their students from the first year in listening comprehension and expose them to different types of situations. They should also enable the candidate to be able to distinguish different French phonetic sounds.

25.2.2 Section 2: DIctée

Dictée consists of a passage recorded on a tape, including punctuation marks and is marked out of 5 marks. The passage is read three times. The first time it is read through for the students to acquaint themselves with the text. The second time, it is read with pauses calculated to enable the candidates to write down what he/she has heard. The third and the last time, it is read through without pauses.

Weaknesses

The candidates were unable to differentiate between l'imperfect and passé compose. They demonstrated little knowledge of punctuation marks, gender and number agreements.

Advice to Teachers

Teachers are advised to insist on correct punctuation marks, gender, tense and number agreements. The students should be trained to identify and associate spellings to pronunciations. From the first year dicteé should be used as a learning tool rather than as an assessment tool.

25.2.3 Section 3: Composition

The section is divided into 2 questions, each testing a different type of writing. It is marked out of 25 marks.

1. In 120–150 words, write in French on:

   Either

   (a) Vous restez seul(e) à la maison pendant l'absence de votre famille. Quelles activités ferez-vous?

   Or

   (b) Le Ministre de l'Education va visiter votre école. Dites ce que vous allez faire avant et pendant la visite.

2. In 150–180 words, write in French, a composition beginning as follows:

   Either

   (a) La plage était déserte. Il faisait noire . . .

   Or

   (b) Nous étions en train de dîner quand ma sœur est tombée de sa chaise . . .

The first choice was based on activities to be done either alone at home, or for a visit of an official in one's school. Both tested the use of various forms of future tense. The second question is a descriptive essay to be written in past tense.

Weaknesses

The candidates exhibited lack of inability to follow instructions, not writing the correct length nor in the required tense. They made a lot of 'faux amis', mistakes that can only occur due to confusion of the meanings of French and English words. ***Question 2(b)*** was unpopular as the students do not like open ended topics.

Advice to Teachers

The teacher should insist on the students following correct format, tense and length. Expressions to be used orally and in writing need to be practiced. Learners need also to be trained to accept and correctly interpret open ended questions.

25.3 PAPER 2 (501/2)

This paper consists of two sections:

25.3.1 Section 1: Reading Comprehension

This section is marked out of 15 and consists of a number of passages which the students are to read, understand and answer correctly questions based on the content of the passage.

Weaknesses

The candidates were unable to transfer their knowledge correctly despite the fact that they understood the passages. Inability to use 'on doit', 'il faut', the imperative or the infinitive mode or 'nominalization' of adjectives. This translated into inability to communicate. Grammar is not a major concern at this point but the absence of correct grammar causes the answers not to make sense. Many candidates answered out of context.

Advice to Teachers

Teachers should train their students to interpret correctly the passages by using a variety of passages for example:- Letters, messages, dialogues etc. They should instill correct use of basic grammar as required by the teaching syllabus.

25.3.2 Section 2: Grammar

This section is marked out of 15 marks and tests the use of pronouns, prepositions, adjectives, verbs and modes.

Question 6

Beginning as indicated, complete the sentences below, making all appropriate changes. Avoid unnecessary repetitions.

Example:

– Tu vois toujours tes amis?

– Non .....

– Non, je ne les vois plus.

(*a*) – As-tu déjà téléphoné à ton professeur?

– Non, je .....

(*b*) – Quand Louis a vu l'embouteillage, il est parti à pied.

– C'est vrai?

– Oui, en .....

(*c*) – Vos parents, ont-ils assez d'argent pour vos études?

– Oui, ils .....

(*d*) – Ces garçons pensent toujours à leurs examens?

– Bien sûr, ils .....

(*e*) – Ne prenez pas cette route dans la nuit!

– Qu'est-ce que vous dites?

– Je vous demande .....

.....

(*f*) – André, tu dois faire la vaisselle tout de suite!

– Comment, maman?

– Il faut que .....

The candidates were required to rewrite sentences and make necessary changes.

Weaknesses

The candidates were unable to transform sentences as required.

Advice to Teachers

More practice required in the transformation sentences.

The candidates were to fill in the blanks with one word only. This is a cloze test and they did well.

Question 8

Match the answers in column "B" with the questions in column "A".

COLUMN A	COLUMN B
(*a*) Qu'est-ce qu'il a vu hier?	(i) A minuit.
(*b*) Comment est-il venu ici?	(ii) Pour les études.
(*c*) Quand part-on?	(iii) 2000.
(*d*) Ce train roule à combien de kilomètres à l'heure?	(iv) A vélo.
	(v) à 80.
(*e*) Pourquoi va-t-il à l'étranger?	(vi) Une belle voiture.
	(vii) Une copine.
	(viii) Pour moi.

This was matching of questions to corresponding answers.

Weaknesses

The candidates did not follow instructions and used arrows rather than the space provided to show their choice. Those who rewrote the questions and answers made spelling errors.

Advice to Teachers

Teachers should train the candidates to follow instructions and be vigilant when they make spelling mistakes in transferring written words.

25.4 PAPER 3 (501/3)

This is an oral paper which tests the candidates' knowledge of communicative and grammatical skills, that is, their ability to understand the input stimulus and instructions as well as demonstrate their productive skills in an oral context. These aspects were examined in 3 sections and were marked out of 25 marks.

- **Section 1 Reading aloud (cards A and B).**
- **Section 2 Exposé (cards A, B, C and D).**
- **Section 3 Conversation.**

Each candidate is given 15 minutes to prepare after choosing a card at random for sections 1 and 2. Use of dictionaries is not allowed.

25.4.1 Section 1: Reading Aloud

The candidates are expected to read in correct French, respecting liaison, intonation, articulation, punctuation as well as show comprehension. It could be a dialogue, a monologue or a description. Both cards have equal levels of difficulty.

Weaknesses

Lack of respect for liaison and improper pronunciations were principal faults of the candidates. In card A reçu, match, amour, cents seize, 75, were noted while in Card B gentile, D, jardin, tous, euros, mets were noted.

Advice to Teachers

More practice in phonetics, allocating some time for speaking in French and theatre are recommended.

25.4.2 Section 2: Exposé

Candidates were to pick a card at random from the 4 subjects provided and were to analyze and synthesize their ideas in a coherent and logical manner with appropriate vocabulary and expressions. The cards had such varied topics as dangers of smoking, music, higher education and inter-tribal marriages.

Weaknesses

Card A: Most candidates were able to talk on the subjects but did not come out clearly on pros and cons of university education.
Card B: Some candidates did not have enough time to speak on disadvantages of music having exhausted the allocated 2 minutes on advantages.
Card C: Some candidates did not understand which public to address on dangers of smoking.
Card D: Some candidates talked generally on marriages rather than on inter-tribal marriages.

Advice to Teachers

Teachers should give a lot of practice to students in debates, public speaking and encouraging the use of different ways of expressing one's opinion.

25.4.3 Section 3: Conversations

Candidates were expected to converse on topics chosen by the examiner, understand the questions and respond appropriately, building on the questions and sustaining conversations by talking in context more than the examiner.

Weaknesses

Candidates had difficulties in the use of conditional, passé compose and future simple. A few struggled to understand the questions but on the whole they were comfortable and expressed themselves well.

Advice to Teachers

Teachers should encourage conversations by asking questions which will elicit explanations and not just a simple ***'yes'*** or ***'no'*** answer. Group work should be encouraged and pair work for dialogues with emphasis on correct grammar.

26.0 GERMAN (502)

German is examined in the following three papers.

- **Paper 1 (502/1):** This paper tests Listening and Writing Skills (functional and creative).
- **Paper 2 (502/2):** This paper tests Grammar and Reading Comprehension.
- **Paper 3 (502/3):** This paper tests Reading and Oral skills (communication skills) which includes Intonation and Pronunciation.

26.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows the performance of candidates in German in the years 2007 and 2008.

Table 31: Candidates Overall Performance in German for the last two years

YEAR	PAPER	CANDIDATURE	MAXIMUM SCORE	MEAN SCORE	STANDARD DEVIATION
2007	1		35	22.06	4.73
	2		40	20.38	8.10
	3		25	16.74	3.75
	Overall	**418**	**100**	**59.18**	**15.00**
2008	1		35	22.91	5.84
	2		40	22.20	8.49
	3		25	17.72	3.82
	Overall	**386**	**100**	**62.90**	**16.63**

The following observations can be made from the table above:

26.1.1 There was a remarkable improvement in the general performance of the candidates in the year 2008 German examination (***mean of 62.90***) as compared to the candidates' performance in the year 2007 ***(mean of 59.18).***

26.1.2 The candidates registered higher means and standard deviations in all the three papers in the year 2008 German examination as compared to the year 2007.

26.1.3 There was a decrease in candidature in the year 2008 when compared to the year 2007.

26.2 PAPER 1 (502/1)

This paper tests listening skills, writing skills and vocabulary. ***Section I*** tests general, selective and detailed listening and ***section II*** tests writing skills and vocabulary. In section II, the candidates are expected to write a composition in form of a letter or an essay of about 250 words. The paper carries a maximum of ***35 marks***.

WEAKNESSES

The candidates had a challenge of picking out the required information from the dialogues and the read out texts. In the writing section, the sentence construction was poorly done and affected the delivery of the required information. Lack of appropriate expressions and variety of vocabulary also affected the performance of this section.

ADVICE TO TEACHERS

The teacher should expose the learners to more listening accompanied by questions of different types in order to practice picking out the required information from dialogues and read out texts. The basic sentence structures, basic grammar and frequently used expressions should be emphasized in teaching, writing and marking of the same in the classroom level. The teachers should try and use additional materials (supplementary) other than the course books to enrich vocabulary and expressions.

26.3 PAPER 2 (502/2)

Grammar and Reading skills are tested in this paper. These two form section I and II, ***Grammar*** in ***section I*** and ***Reading comprehension*** in ***section II***. In section I, the candidates are expected to fill in blanks in given sentences, combine or change sentences according to their grammatical structure and/or rewrite sentences in accordance to the instructions. In section II candidates are expected to read and respond to questions on a fictional and non- fictional text.

WEAKNESSES

In ***Section I***, the learners had problems in applying the learnt grammar in new situations as asked for in the Examination. The conjugation of irregular and modal verbs posed a challenge to many. The candidates have greatly improved in ***Section II*** of this paper. The lifting of whole excerpts from the texts has reduced. Candidates are slowly learning to use their own words to answer the questions.

ADVICE TO TEACHERS

More written grammar exercises should be given to the learners. Conjugation of irregular verbs and modal verbs should be practiced more. Learners seem to have learnt good reading strategies and also how to reformulate sentences using own words without changing the meaning. More practice with varied texts will give learners more necessary confidence to attempt new texts.

26.4 PAPER 3 (502/3)

This paper consists of a reading aloud passage, a presentation of a chosen topic and a discussion with the examiners on the already presented topic or a related one. Articulation, pronunciation and intonation are tested.

WEAKNESSES

Candidates had difficulties reading aloud correctly typical German sounds, numerals, compound words, umlauts, long sentences, short and long vowels, dates and time. There was a general lack of use of prosodic elements. In the presentation of topics, the candidates lacked adequate examples, vocabulary and correct sentence structures for the selected topics.

ADVICE TO TEACHERS

Teachers should put a deliberate effort to train pronunciation, articulation and intonation. When training, teachers should use cassettes with varied, authentic recorded passages. In order to train rich, well-organised presentations, debates and class discussions should be encouraged. Oral book reports should be encouraged in the German club and presented regularly in class together with free talks on various interesting topics to practice vocabulary and self expression.

27.0 MUSIC (511)

The year 2008 KCSE Music examination comprised of three papers 1, 2, and 3. Candidates were examined in a wide range of skills cutting across the whole syllabus.

- ***Paper 1 (511/1):*** Practical performance.
- ***Paper 2 (511/2):*** Aural skills.
- ***Paper 3 (511/3):*** Basic skills.

27.1 GENERAL CANDIDATES' PERFORMANCE

The table below shows the candidates' performance in KCSE Music (511) examination for the last four years. ***Practical performance*** and ***Aural skills*** are combined to form ***Paper 1*** (Practical paper) while ***Paper 2*** consists of ***Basic skills, History, Analysis*** and ***General Music knowledge.***

Table 32: Candidates' Overall Performance in Music for the Last Four Years

Year	Paper	Candidature	Maximum Marks	Mean Score	Standard Deviation
2005	1		100	54.36	13.70
	2		100	49.05	13.43
	Overall	**1,478**	**200**	**103.41**	**24.00**
2006	1		100	55.78	15.78
	2		100	47.62	14.72
	Overall	**1,299**	**200**	**103.4**	**27.00**
2007	1		100	55.54	13.87
	2		100	50.57	13.33
	Overall	**1,301**	**200**	**106.12**	**24.00**
2008	1		100	46.06	10.80
	2		100	47.39	16.55
	Overall	**1,452**	**200**	**93.70**	**24.77**

From the table above, the following observations can be made:-

27.1.1 The candidature in Music increased by ***151 candidates*** from ***1,301*** in the year 2007 to ***1,452*** in the year 2008. This is an indication that the subject is once again regaining its popularity.

27.1.2 Both papers recorded a slight decline in performance. The year 2008 performance was the lowest in the four years.

27.2 PAPER 1 (511/1)

The practical performance paper comprised of presentation in each of the following areas:

- African piece, own choice (song, dance or instrument).
- Western set piece (voice or instrument).
- Technical exercises (As prescribed in the syllabus sight singing/sight reading).

Weaknesses

Most of the candidates were well prepared for the Music practical paper. They had rehearsed well and the items presented were relevant. However some weaknesses were observed in isolated examination centres. There was bias in the choice of either voice or instruments. Most candidates presented voice for both African and Western pieces. There were few candidates presenting instruments due to the unavailability of instruments which could also be attributed to the fact that most teachers were specialists in voice. In the area where each candidate was required to present either a Folk Song or Dance or Instrumental performance, candidates from upcountry schools performed much better than those from urban schools.

In the area that required each candidate to sight sing/sight read a 4 bar melody, to display his/her skills in reading music, a number of candidates were not able to interpret the melodies as required especially:

- Identifying the time signature.
- Identifying the key signature.
- Selecting convenient tempo.
- Reading ahead.

Advice to Teachers

Teachers should train all music students to read music while in the early stages, that is, Form I. This area of study requires continuous and consistent practices. The skill should be developed gradually starting with simple material to more complex music.

27.3 PAPER 2 (511/2) AURALS

Instructions in this paper were administered through a pre-recorded cassette player. There were 5 tasks all of which were compulsory covering the following areas:

- ***Test One:*** Rhythm.
- ***Test Two:*** Melody.
- ***Test Three:*** Intervals.
- ***Test Four:*** Candences.
- ***Test Five:*** Modulation.

The following tasks seemed difficult to some candidates

27.3.1 Rhythm

Candidates were required to write the following rhythms as sounded on the drum.

Drum Rhythm

You are to write on monotone the rhythm of the following repetitive drum pattern.
You are required to add time signature and bar lines and also group the notes.
The rhythm pattern will be played four times.

Here is the crotchet pulse followed by the first play through.
(Pause 2 seconds)

(Pause 3 seconds)

(Silence: 30 seconds)
Here is the second play through
(Silence: 30 seconds)
Here is the third play through
(Silence: 30 seconds)
And now, the fourth and last play through.
(Silence: 60 seconds)

Candidates were required to write the rhythm of the following melody on Monotone.

Rhythm of a melody in simple time.
You are to write the rhythm of this melody on monotone, adding the time signature.
It begins on the first beat of the bar.
The melody will be played four times.
Here is the crotchet pulse followed by the first play through.
(Pause: 2 seconds)

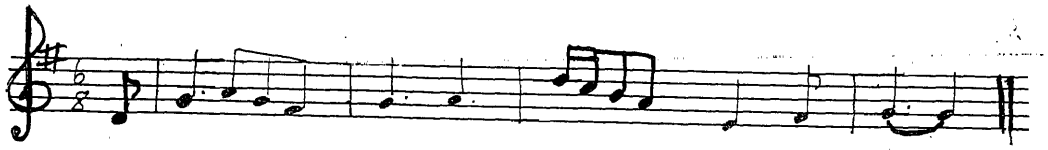
(Pause 30 seconds)

(Silence: 30 seconds)

Here is the second play through
(Silence: 30 seconds)
Here is the third play through
(Silence: 30 seconds)
And now, the fourth and last play through.
(Silence: 60 seconds)

Candidates were required to write the rhythm of the following melody which is in compound time.

Rhythm of a melody in compound time.
You are to write the Rhythm of a melody in compound time. It begins on the first beat of the bar. The melody will be played four times.
Here is the dotted crotchet pulse followed by the first play through.
(Pause: 2 seconds)



(Silence: 30 seconds)

Here is the second play through
(Silence: 30 seconds)
Here is the third play through
(Silence: 30 seconds
And now, the fourth and last play through
(Silence: 60 seconds)

Weaknesses

Some candidates were not able to identify the correct rhythms even the simple one with long note values. However this was observed in isolated examination centres. Most of the problems were observed in the area where candidates were expected to write the rhythm in compound time.

Advice to Teachers

Teachers should use simple activities to develop skills in this area. Such activities include the following:

- Response to rhythms sounded by the teacher on various instruments.
- Echo/Rhythms sounded by the teacher.
- Identity rhythms from a melody.

Candidates should be trained to internalize the rhythm before they rush to write it at the first play.

27.3.2 Melody Writing

Candidates were required to write the following melodies:

Test 2 (a): Melody in a major key

You are to write the following melody in the key of C major. The melody will be played through once, then the first phrase will be played twice and the second phrase twice. Finally the whole melody will be played right through once again. Write the treble clef and the key signature of C major now.

(silence: 10 seconds)

The melody is in 6/8 time. Write the time signature now.

(silence: 10 seconds)

The melody beings on the last beat of the bar. Here is the crotchet pulse.

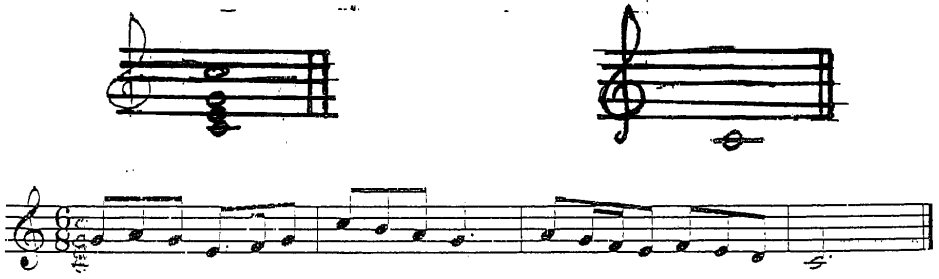
(Pause: 2 seconds)

(♩.= 52) ♩. ♩. ♩. ♩. ♩. ♩.

Here is the tonic chord of C major and the key note followed by the whole melody.

(Pause: 2 seconds)

(Pause: 2 seconds)



And now, here is the tonic chord and key-note again followed by the first phrase.

(Silence: 40 seconds)

Here is the first phrase again.

(Silence: 40 seconds

Now here is the keynote and the second phrase.

(Silence: 40 seconds)

Here is the second phrase again.

(Silence: 40 seconds)

Finally here is the tonic chord followed by the whole melody.

(Silence: 60 seconds)

Test 2 (b) Melody in a Minor key

You are to write the following melody in the key of D minor. The melody will be played through once, then the first phrase will be played twice and the second phrase twice. Finally the whole melody will be played right through once again. Write the treble clef and the key signature of D minor.

(Silence: 10 seconds)

The melody is in $\frac{4}{4}$ time. Write the time signature now.

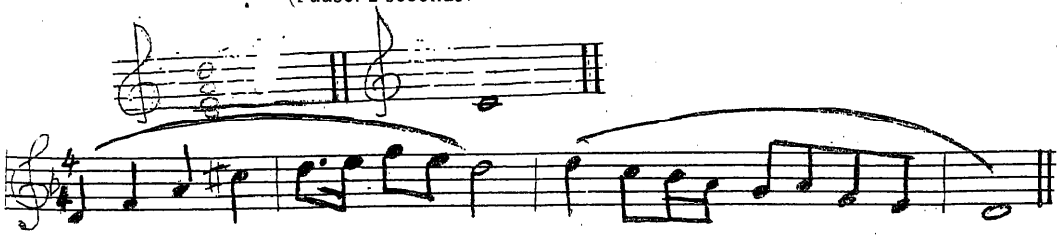
(Silence: 10 seconds)

The melody begins on the first beat of the bar. Here is the crotchet pulse.

(Pulse: 2 seconds)

(♩ = 88) ♩ ♩ ♩ ♩ ♩ ♩

Here is the tonic chord of D minor and the key note followed by the whole melody.
(Pause: 2 seconds)



(Silence: 10 seconds)

And now, here is the tonic chord and key-note again, followed by the first phrase.
(Silence: 40 seconds)

Here is the first phrase again
(Silence: 40 seconds)

Now here is the keynote and the second phrase.
(Silence: 40 seconds)
Here is the second phrase again.
(Silence: 40 seconds)
Finally, here is the tonic chord and the keynote, followed by the whole melody.
(Silence: 60 seconds)

Weaknesses

Most candidates had problems in writing the correct pitch and value of the notes especially where notes, quavers and semiquavers and dotted notes were involved. The melody (2b) in the minor key seemed to be more challenging. Most candidates were not able to give the correct pitches.

Advice to Teachers

Learners should be given more exercises in melody writing. They should be trained to listen to melodies and identify/recognize correct pitches, rhythms and phrases.

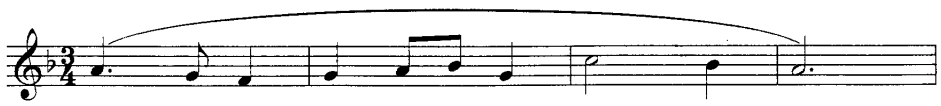
27.3.3 General Advice to Teachers

Most of the candidates seem to perform poorly in Aurals. This is a common problem every year. The foundation of musical education is ear training. Teachers therefore need to give this area more attention. Ear training is a sound preparation for practical music work. Serious ear training should start in form one when the student decides to study music as part of his/her course. This should be continued through out the school life. It is expected that ear training develops the power of listening as opposed to hearing.

27.4 PAPER 3 (511/3)

Question 1(a)

Continue the following opening to make a melody of sixteen bars for voice, introducing a sequence and a triplet. Modulate to the relative minor before returning to the tonic key. (12 marks)



The question required candidates to complete the melody up to a total of 16 bars. In this composition they were expected to use simple devices including ***sequence, triplet*** and ***modulation*** to develop the melody.

Weaknesses

Quite a good number of candidates were not able to use the sequence and triplet in context. This was an indication that the teachers did not give adequate practice in melody writing.

Expected Responses

- 16 bar melody.
- Sequence.
- Triplet.
- Phrase marks.
- Modulation.
- Cadences.
- Lyricism (sing ability, climax leaps and steps).
- Variety of rhythm.

Advice to Teachers

Teachers should give more guidance to the learners in the use of the various composition devices including ***sequence, triplets, duplets*** and ***modulation***. There is need for the candidates to do a lot of practice in melody writing. All melodies written by students should be performed and analysed in the class.

Question 3(c)

The soloist enjoys some freedom during the performance of a traditional folk song. Outline **three** tasks this freedom enables the soloist to carry out.

The question required the candidate to outline the soloist's responsibilities in a folksong performance.

Weaknesses

Majority of the candidates were not able to answer this question correctly. It was evident that the candidates were not able to interpret the question correctly. The candidates gave answers such as "***Wearing special costume", "dancing freely", "explaining the background information of the song", "announcing the title of the song***". The points mentioned are true but cannot be considered to be tasks of the soloist in a folksong performance. The question called for the duties/responsibilities in the performance by the soloist as the leader.

Expected Responses

- Determines the pitch of the song.
- Sets and controls the tempo of the performance.
- Can improvise the text.
- Cues the entries.
- Determines the length of the performance.
- Sets the mood of the performance.

Advice to Teachers

Teachers should encourage the students to participate in various types of musical performances. It is important that candidates analyse questions to find out what they require before attempting to answer them.

Question 6(c), (d), (e) and (g).

(*c*) What term can be used to describe the melodic progression of the notes in the larghetto section (bar 1, last beat to bar 4, first beat)?

(*d*) Name the following chords from Section 1:

(i) First chord of bar 1
(ii) First chord of bar 6.

(*e*) Describe the time variations in the work.

(*g*) With reference to bars 1 – 14 of Section 4, state the relationship between the Soprano voice and Violin 1.

Candidates were required to answer questions relating to analysis of prescribed work: ***Dido and Acneas*** by ***Henry Purcel***.

Weaknesses

It was evident that most of the candidates did not understand the questions that referred to the score. They did not understand the direction. They were not able to follow the score in order to identify the various characteristics.

Expected Reponses

c) Most candidates were not able to identify the type of progression as scalic or stepurise movement. Even those candidates who were able to identify the movement lacked the correct vocabulary for the description.

d) i) Subdominant chord (iv) (C E^r G).
ii) Submediant chord (vi) (E^b G B).

g) The two parts are performing in unison.

Advice to Teachers

Teachers need to give more attention to the study of analysis. Students should be given more exercises in analysis in addition to the prescribed works. Analytical skills should be developed gradually from the early stages (Form I) starting with very simple concepts to more complex skills.

27.4.1 General Advice to Teachers

Music is a practical subject and therefore all lessons must involve the students in the various activities relating to listening and performing. This is the only way the students will enjoy the subject. Skills in music should be developed gradually from simple to complex. Performing and listening to various types of music gives the students more understanding of the concept.

28.0 BUSINESS STUDIES (565)

Business Studies is comprised of ***Commerce, Accounting, Economics*** and ***Office Practice*** which were formerly tested as separate subjects. It also borrows from ***Entrepreneurship***. One of the major objectives of Business Studies is to expose the candidates to broad areas of study and leave them to specialize at post secondary level. For those who may not go for further education, the objective is to enable them be self reliant and partake of national development.

Business Studies as such was tested in two papers. ***Paper 1 (565/1)*** had 25 short answer structured items and was marked out of 100 marks, while ***paper 2 (565/2)*** had six extended answer questions out of which the candidates were expected to attempt five questions. The paper was also marked out of 100 marks.

28.1 CANDIDATES' GENERAL PERFORMANCE

The table below shows candidates' overall performance in Business Studies (565) in the year 2008. Performance statistics for the years 2006 and 2007 are also provided for comparison.

Table 33: Candidates' Overall Performance in the year 2008, 2007 and 2006

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2006	1		100	54.46	18.61
	2		100	38.02	18.19
	Overall	**110,630**	**200**	**92.47**	**35.00**
2007	1		100	64.03	18.76
	2		100	46.27	15.54
	Overall	**118,361**	**200**	**110.29**	**32.00**
2008	1		100	43.79	15.96
	2		100	31.65	16.81
	Overall	**127,500**	**200**	**75.45**	**31.28**

From the table above, the following observations can be made:

28.1.1 The subject attracted an increased candidature of ***127,500*** in the year 2008 up from ***118,361*** in the year 2007.

28.1.2 Candidates performed better in ***paper 1 (565/1)*** when compared with ***paper 2 (565/2)*** as per the respective means of ***43.79*** and ***31.65***. This implies that most candidates found it easier to tackle the short answer questions found in paper ***1 (565/1)*** compared to extended answer questions in paper ***2 (565/2)***.

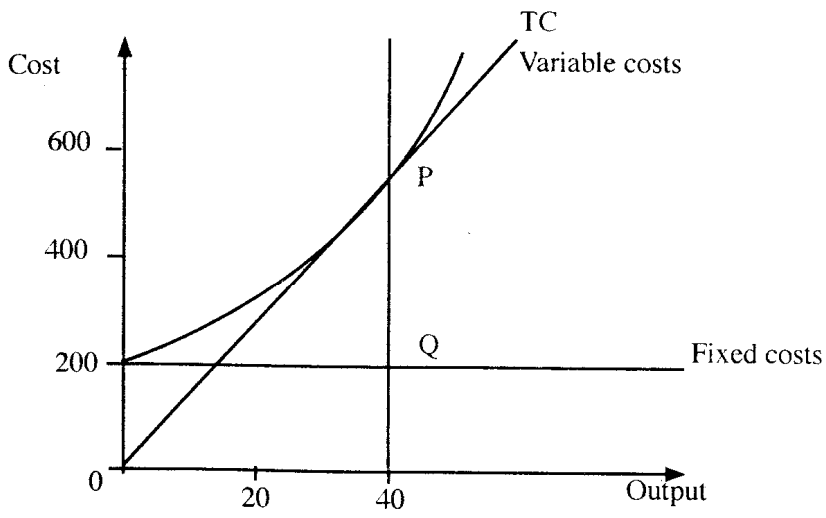
28.1.3 Performance in the subject declined in the year 2008 ***(mean of 75.45)*** when compared to the year 2007 (***mean of 110.29).***

This report discusses some of the questions that candidates found challenging in the two papers offered for the Business Studies examination.

28.2 PAPER 1 (565/1)

Question 4

The diagram below shows total cost curve of a firm in the short-run.



Calculate the average variable cost of the firm.

This question required the candidate to calculate the average variable cost of the firm using the diagram.

Weaknesses

The question was poorly performed since most candidates were unable to determine the cost values from the diagram. They seemed to be very ignorant in the application of knowledge from this area of the syllabus.

Expected Response

$$\frac{PQ}{40} = \frac{500 - 200}{40} = \frac{300}{40} = 7.50$$

Advice to Teachers

Teachers should ensure that the topic on costs is thoroughly covered and enough practice given to candidates because it seems this topic is neglected. Students should be exposed to such diagrams to be able to interpret them well.

Question 9

The following balances were extracted from the books of Solai Traders as at 31st May 2006.

	Sh.
Current assets	220,000
Capital	425,000
Net profit	85,000
Creditors	98,200
Accrued expenses	11,800

Determine:
(a) Working capital
(b) Return on capital

The question required candidates to use the figures given to determine the values of Working capital and Return on Capital.

Weaknesses

The question was poorly performed because most candidates mixed up the figures and were unable to use them correctly when calculating working capital and return on capital.

Expected Responses

(a) Working capital = CA - CL
= 220000 – (98200 + 11800)
= Shs.110000

(b) Return on Capital = $\frac{\text{Net Profit}}{\text{Capital Invested}} \times 100$
= $\frac{85000}{425000} \times 100$
= 20%

Advice to Teachers

Teachers should be able to explain to candidates when different balances (figures) are applied in different formulae. Formulae should be emphasized and exercises given to internalize them.

Question 10

On 31 December 2005, Kiwa had accrued expenses of Sh.24,000. On 31st December, 2006, the accrued expenses were Sh.30,000. In 2006 expenses paid for amounted to Sh.85,000.
Determine the expenses for the year 2006.

The question required the candidates to determine the expenses for the year.

Weaknesses

Most candidates were unable to determine the expenses for the year when given accrued expenses at the beginning and at the end of the year respectively. Learners showed clear lack of knowledge in this area.

Expected Responses

Expenses for the year

Expenses A/c

	Shs		Shs
Cash (paid)	85000		24000
Bal c/d (31 Dec. 2006)	30000	31st 2005 Bal. b/d	91000
	115000		115000

OR

Expenses paid for 2006		85000
Add: Accrued expenses (31/12/06)		30000
		115000
Less: Accrued expenses (31/12/05)		24000
		91,000

Advice to Teachers

A lot of exercises should be given to learners in this area. Practice should be enhanced to enable learners tackle such questions from all the angles.

Question 15

State **four** reasons why ethical practice is necessary in Product Promotion.

The question required candidates to give reasons why ethical practice is necessary in product promotion.

Weaknesses

Most candidates seemed not to understand the meaning of the term "***ethical practice***". They mostly gave advantages of product promotion.

Expected Responses

- To encourage selling of quality goods.
- To safeguard cultural practices.
- To encourage disclosure of information about the product.
- To ensure compliance with existing Government Legislation.
- To curb environmental degredation.
- To safeguard competitors in the market.
- To safeguard consumers against misleading advertisements.

Advice to Teachers

Teachers should expose their students to the various terms as used in content areas in the syllabus. Such terms must be used during teaching, exercises given and regularly evaluated. Learners should also be made aware of emerging issues in business

Question 24

Visitors to the offices of Triple B Enterprises have been complaining of lack of etiquette from the secretaries. Highlight **four** measures that the secretaries can take to improve the office etiquette.

Weaknesses

Most candidates missed the point by giving what the firm or the management would do to improve the etiquette, yet the question required measures that could be taken by the secretaries themselves. Many candidates also confused the office etiquette with the other qualities of an office worker.

Expected Responses

- Show respect to both colleagues and visitors.
- Observe courtesy in dealing with people.
- Be organized at work at all times.
- Be honest/truthful in performing duties.
- Co-operate with other workers, management and visitors.
- Be punctual for work and when offering service.
- Be loyal to the organization.
- Cultivate diplomacy when dealing with people.
- Be of good judgment.
- Be accurate in execution of work.
- Have initiative in offering solutions.

Advice to Teachers

Teachers should clearly show their students the three categories of the qualities of a good office worker; personal attributes, basic knowledge, skills, and office etiquette.

28.3 PAPER 2 (565/2)

Question 1 (b)

With the aid of a diagram, explain the behaviour of average cost curve in the short run for a firm with fixed production capacity.

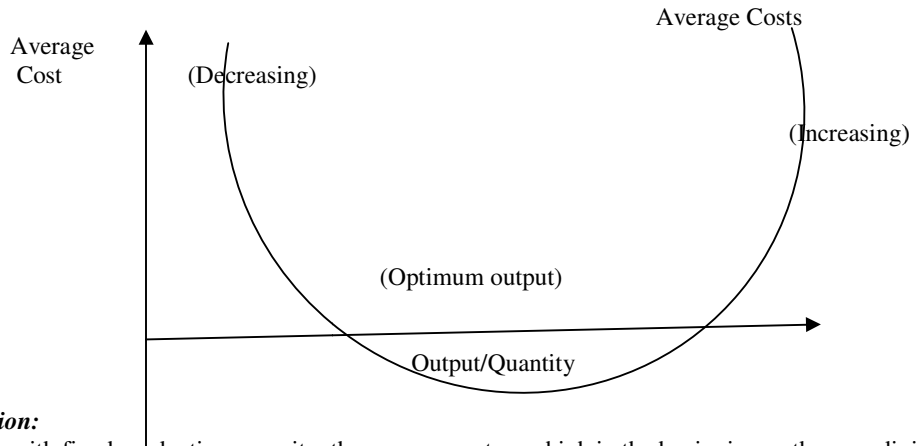
The question required the candidates to draw a diagram and use it to explain the behavior of the average cost curve of a firm with fixed production capacity, in the short run.

Weaknesses

Majority of the candidates displayed lack of knowledge of the behavior of the average cost curve. Many candidates guessed and therefore drew irrelevant curves.

Expected Responses

b)



Explanation:

For a firm with fixed production capacity, the average costs are high in the beginning as they are divided among few production units. As production increases, the average costs fall as they are divided among more production units (as the firm experiences economies of scale). The average costs will continue falling to a minimum level, then start to rise as more costs are incurred over time (as a firm starts experiencing diseconomies of scale).

Advice to Teachers

Teachers should emphasize the different characteristics of the cost curves. Regular practice must be given in this topic.

Question 4 (b)

Memon Traders does not keep a complete set of accounting records. The following information relates to the year ended 31 December 2006.

(i) Extract of cash summary was:

Cash receipts	
Cash sales	420,200
Commission received	36,400
Cash payments	
Purchases	260,000
General expenses	50,000
Insurance	14,800

(ii) Extract of assets and liabilities:

	1.1.06 Sh.	31.12.06 Sh.
Stock	65,000	92,500
Insurance paid in advance	16,200	4,000
Commission receivable	8,400	10,200
Unpaid General expenses	48,000	70,000

Additional information

Included in credit sales are drawings of stock valued at Sh 25 000.

For the year ended 31 December 2006, determine the following:

(i) Total sales
(ii) Total purchases
(iii) Commission receivable
(iv) Insurance expense
(v) General expenses

The question required candidates to determine the values of Total Sale, Total Purchases, Commission receivable, Insurance expenses and General expenses using the information given.

Weaknesses

Most candidates were unable to determine the sales, purchases, commission receivable, insurance expenses and general expenses using the information given. This was a clear lack of knowledge in incomplete records. This area of the syllabus is seemingly ignored by teachers, or learners are rushed through the topic.

Expected Responses

(i) Total sales for the year

Sales = Case Sales – drawings
= 420200 – 25,000

= Shs.395200

(ii) Total Purchases

Purchases = Cash Purchases
= Shs.260,000

(iii) Commission receivable for the year

Commission Receivable a/c

	Shs		Shs
Bal b/d	8400	Cash	36400
Profit Loss A/c	38200	Balance c/d	10200
	46600		46600

OR

Cash Received		36400
Add: Balance c/d	10200	
		46600
Less: Balance b/d	8400	
Commission Receivable (P&L) c/d	38200	

(iv) ***Insurance expenses for the year A/c***

	Shs.		Shs
Balance b/d	16200	Profit and Loss	27000
Cash	14800	Balance c/d	4000
	31000		31000

OR

Cash Paid		14800
Add: Balance b/d	16200	
		31000
Less: Balance c/d	4000	
		27000

(v) ***General expenses***

General Expenses A/c

	Shs		Shs
Cash	50000	Balance b/d	48000
Balance c/d	70000	Profit & Loss A/c	72000
	120000		120000

OR

Cash Paid		50000
Add: Balance c/d	70000	
		120000
Less: Balance b/d	48000	
General Expenses (Profit & Loss A/c)	72000	

Advice to Teachers

Teachers should teach end of year adjustments as it forms an integral part of updating incomplete records. Learners must be given sufficient practice in this topic.