KABONDO DIVISION JOINT EVALUATION TEST

Kenya Certificate of Secondary Education (K.C.S.E)

INSTRUCTIONS TO CANDIDATES

- Write your name, school and Index number in the spaces provided above.
- Answer ALL the questions in the spaces provided

<table>
<thead>
<tr>
<th>Question</th>
<th>Maximum</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1-15</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>16</td>
<td></td>
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<td>18</td>
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<td>20</td>
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<td>21</td>
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</tbody>
</table>

For Examiners Use Only

This paper consists of 14 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.
1. Give importance of having the following in computer laboratory (3mks)
   i). Standard furniture in the laboratory
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   ii). Antiglare screen /monitor
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   iii). UPS
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. Distinguish between ROM and RAM (2mks)
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

3. Explain the following computer crimes (2mks)
   i). Fraud
   __________________________________________________________
   __________________________________________________________
   ii). Alteration
   __________________________________________________________
   __________________________________________________________

4. a). Define
   i) Firewalls
   __________________________________________________________
   __________________________________________________________
   ii) Data encryption
   __________________________________________________________
   __________________________________________________________

5. Differentiate between the following terms as used in word processing (3mks)
   a). Drop Cap and Case
   __________________________________________________________
   __________________________________________________________
b). Superscript and Subscripts

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

c). Indent and tab

___________________________________________________________________

6. a). State and explain any one type of computer processing file (1mk)

___________________________________________________________________
___________________________________________________________________

b). List any two file organization methods (2mks)

___________________________________________________________________
___________________________________________________________________

7. Describe the following terms as used in internet
a). Webpage (1mk)

___________________________________________________________________

b). Blog (1mk)

___________________________________________________________________

c). Hyperlinks (1mk)

___________________________________________________________________

d). Web portal (1mk)

___________________________________________________________________

8. a). Give four advantages of DTP over a word processor (2mks)

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
b). Differentiate between the following

i). Kerning and tracking  

ii). Margins and column guides

9. Define the term simulation

10. Differentiate between baseband and broadband signal as used in networking

a). Baseband signal

b). Broadband signal

11. Explain how the operating system controls the following resources

i). Processor

ii). Main memory

iii). Input and output devices

12. What is deadlock in reference to operating systems
13. a). The most popular type of electronic data storage currently use magnetic disk storage such as hard disk or Winchester disk. Give reasons as to why they are popular (2mks)
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

b). Outline two advantages of hard disk over floppy disk (2mks)
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

14. Define the following computer crimes
a. Piracy (1mk)
___________________________________________________________________
___________________________________________________________________

b. Industrial espionage (1mk)
___________________________________________________________________
___________________________________________________________________

15. Explain two ways of protecting data and information against unauthorized access (2mks)
___________________________________________________________________
___________________________________________________________________

SECTION B 60 MARKS

Answer question 16 and any three questions

16. A.) List two examples of

i). Third generation languages (2mks)
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

ii). Object oriented languages (2mks)
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
b). Define

i). Object code

ii). Source code

c). Differentiate between a compiler and an interpreter (2mks)

e). A car rental firm leases its cars for Kshs.2500.00 per day. The manager gives a discount based on the number of days that the car is rented. If the rental period is greater than or equals to 7 days then a 25% discount is given. Write a pseudocode to accept a car number and the rental period, and calculate the total amount earned by the company when a car is leased. (7mks)

17. a). Subtract $0111/2$ from $1001/2$ (2mks)

b). Using two’s compliment, subtract 7 from 4 and give the answer in binary notation. (4mks)
c). Convert

i). $91_{16}$ to octal (3mks)

ii). $337_8$ to hexadecimal (3mks)

iii). $9.625_{10}$ to binary (3mks)

18. A school computer laboratory is scheduled to undergo major renovations. The lab is scheduled to receive new computers whose specifications are given below.

- Pentium IV 2.0GHz processor
- 40 GB HDD
- 3 ½ FDD
- 256MB RAM
- 56 X CD ROM
- 17” SVGA TFT MONITOR

The computers are going to be networked and will be able to browse the internet

a). Explain what is meant by the terms

i). FDD (2mks)

ii). HDD

18. A school computer laboratory is scheduled to undergo major renovations. The lab is scheduled to receive new computers whose specifications are given below.

- Pentium IV 2.0GHz processor
- 40 GB HDD
- 3 ½ FDD
- 256MB RAM
- 56 X CD ROM
- 17” SVGA TFT MONITOR

The computers are going to be networked and will be able to browse the internet

a). Explain what is meant by the terms

i). FDD (2mks)

ii). HDD
iii). SCGA

iv) TFT

The computer is to be networked. Name one extra device that should be fitted on every computer to enable this to happen (1mks)

c) The computer is to receive internet facilities through the server on a dial-up system. Name and describe the function of a special device that needs to be connected to the server to complete the connection. (1mk)

d). i) the school has to apply star topology to link up the computer. List two advantages of this type of topology (1mk)

ii). Name the central device used to connect the computers in this topology (1mk)

e). List two types of topologies that the school could have opted for (1mk)
f). List four advantages of using a network (2mks)

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

g). i). Data transmission via the internet is done using a mode known as switching. Describe this data transmission mode (1mk)

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

ii). Name two other modes of transmission (1mk)

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

h). i) The school’s LAN is done using UTR cable. List two advantages of using this type of cable (1mk)

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

ii). List two advantages of using fibers cable in networking (1mk)

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

i). Data flows in the school’s LAN in a duplex manner. Discuss two other types of data transmission in network giving examples (2mks)

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
19. a). Consider the topologies demonstrated in the diagram below.

i). Identify the network topologies (3mks)

A. 

B. 

C. 

i). Identify the network topologies (3mks)

A. 

B. 

C. 


ii). In topology A, identify the network device that should be at the end point 1 and 2 (1mk)

__________________________________________
__________________________________________

iii). Which of the above topologies is likely to be used in a wide area network? (1mk)

__________________________________________
__________________________________________
__________________________________________

iv). Highlight three disadvantages of topology B (1mk)

__________________________________________
__________________________________________
__________________________________________
__________________________________________

v). Identify the device labeled X topology A (1mk)

__________________________________________
__________________________________________
__________________________________________

b). State two main classes of network software (2mk)

__________________________________________
__________________________________________
__________________________________________
__________________________________________

i). Repeaters

__________________________________________
__________________________________________
__________________________________________
__________________________________________

ii). In topology A, identify the network device that should be at the end point 1 and 2 (1mk)

__________________________________________
__________________________________________

iii). Which of the above topologies is likely to be used in a wide area network? (1mk)

__________________________________________
__________________________________________
__________________________________________

iv). Highlight three disadvantages of topology B (1mk)

__________________________________________
__________________________________________
__________________________________________
__________________________________________

v). Identify the device labeled X topology A (1mk)

__________________________________________
__________________________________________
__________________________________________

b). State two main classes of network software (2mk)

__________________________________________
__________________________________________
__________________________________________
__________________________________________

i). Repeaters

__________________________________________
__________________________________________
__________________________________________
__________________________________________
ii). Network hub

iii). Fibre optic cables

iv). Network interface Card (NIC)

20. a). Define the following terms
   i). Database
   (1/2mk)

   ii). Database management system
   (1/2 mk)

   iii). Hierarchical database
   (1mk)

   iv). Relational database
   (1mk)

   v). Network database
   (1mk)

b). List the advantages of using an electronic database system for storage of data over the file approach
(4mks)
c). Study the spreadsheet below and answer the questions that follow

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WESTERN COMP BOOK CENTER SALES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>BOOK TITTLE</td>
<td>PRICE PER BOOK</td>
<td>BOOKS SOLD</td>
</tr>
<tr>
<td>3</td>
<td>D BASE IV</td>
<td>400.00</td>
<td>145</td>
</tr>
<tr>
<td>4</td>
<td>LOTUS FOR DUMMEIES</td>
<td>460.00</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>OFFICE WORD IN THREE DAYS</td>
<td>300.00</td>
<td>65</td>
</tr>
<tr>
<td>6</td>
<td>LEARNING C++ IN 3 DAYS</td>
<td>700.00</td>
<td>100</td>
</tr>
<tr>
<td>7</td>
<td>TEACH YOURSELF PASCAL</td>
<td>700.00</td>
<td>200</td>
</tr>
<tr>
<td>8</td>
<td>COMPUTER STUDIES</td>
<td>500.00</td>
<td>300</td>
</tr>
<tr>
<td>9</td>
<td>THE CLEVER FOOL COMPUTER</td>
<td>300.00</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

i). Write down the formula that can be used to find the price of the most costly book (3mks)

iii). Write down the formula that can be used to determine the average price of the books (1mk)

iv). Write down the formula in cell D6 that can be used to find the new price per book if they went up by a percentage written in cell B 10 and the formula has to be entered only in cell D3 then be copied to others (1mk)
v). Write down the output in D7 if in B6 is 10%  

(1mk)

d). State any four advantage of using an electronic spreadsheet as compared to a traditional worksheet  

(2mks)
INSTRUCTIONS TO CANDIDATES

- Write your name, school and Index number in the spaces provided above.
- Answer **ALL** the questions in the spaces provided
- Answer all questions
- All questions carry equal marks
- Passwords should not be used while saving
- Make a print out of the answer on the answer sheet
- Hand in all the print out and the CD

This paper consists of 3 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no question.
1. The data in the table was extracted from a survey data on employment

**Table 1: EMPLOYEE TABLE**

<table>
<thead>
<tr>
<th>Name</th>
<th>Year of birth</th>
<th>Employee ID No.</th>
<th>Employee ID No.</th>
<th>Job category</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAISY</td>
<td>1980</td>
<td>13144</td>
<td>01</td>
<td>GK4</td>
</tr>
<tr>
<td>DAVID</td>
<td>1970</td>
<td>11100</td>
<td>04</td>
<td>GK3</td>
</tr>
<tr>
<td>DOREEN</td>
<td>1984</td>
<td>14010</td>
<td>02</td>
<td>GK1</td>
</tr>
<tr>
<td>DAVIN</td>
<td>1976</td>
<td>12110</td>
<td>05</td>
<td>GK1</td>
</tr>
<tr>
<td>ALLAN</td>
<td>1973</td>
<td>11410</td>
<td>03</td>
<td>GK2</td>
</tr>
<tr>
<td>KATE</td>
<td>1968</td>
<td>10570</td>
<td>04</td>
<td>GK3</td>
</tr>
<tr>
<td>ZEDDY</td>
<td>1990</td>
<td>11040</td>
<td>05</td>
<td>GK3</td>
</tr>
<tr>
<td>PIUS</td>
<td>1998</td>
<td>15978</td>
<td>03</td>
<td>GK2</td>
</tr>
<tr>
<td>ZION</td>
<td>1992</td>
<td>17192</td>
<td>02</td>
<td>GK4</td>
</tr>
<tr>
<td>BOB</td>
<td>1993</td>
<td>18965</td>
<td>05</td>
<td>GK4</td>
</tr>
</tbody>
</table>

**Table 2: EMPLOYMENT TYPE**

<table>
<thead>
<tr>
<th>Job category</th>
<th>Job Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GK1</td>
<td>Casual</td>
</tr>
<tr>
<td>GK2</td>
<td>Temporary</td>
</tr>
<tr>
<td>GK3</td>
<td>Contract</td>
</tr>
<tr>
<td>GK4</td>
<td>Permanent</td>
</tr>
</tbody>
</table>

**Table 3: EMPLOYER TABLE**

<table>
<thead>
<tr>
<th>EMPLOYER ID</th>
<th>EMPLOYER NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>ONYANGO</td>
</tr>
<tr>
<td>02</td>
<td>WAMBUA</td>
</tr>
<tr>
<td>03</td>
<td>OSHIRO</td>
</tr>
<tr>
<td>04</td>
<td>KATANA</td>
</tr>
<tr>
<td>05</td>
<td>AWINJA</td>
</tr>
</tbody>
</table>

a. i). Create a database named “STAFF” to store the above (14mks)

ii). Create relationships between the tables (4½mks)

iii). Use forms to enter data into the tables (10½mks)
b. i). Generate a report to display the name year of birth, age and employer’s name for the employees who will be over 30 years old by the year 2015. (10mks)

ii). Compute the mean age of employees on the report you created in b (i) above (2mks)

c. i). Create a query to display the employees and their job description. Save the query as “STAFF TYPE”

ii). Create a pie chart based on the query in c (i) above to display the promotion of the employees in various job description. Save the report as CHART

d. Print
   i). Three tables
   ii). Two report

   iii). Out put of query results for STAFF TYPE

2. Design a sample school newsletter. Use the sample attached as your reference and save publication as SCHOOL NEWS (20mks)

   **Required**
   a. Set the publication size to A3 and four newspaper columns of equal width (8mks)

   b. Set the inside margins to 1 “, the outside to 0.8” and the top and bottom to 0.5 “(4mks)

   c. Insert page numbers at the bottom right of the publication (4mks)

   d. The title should be in reverse text insert relevant clip arts as shown (10mks)

   e. Print the publication (4mks)