18.0 WOODWORK (444)

Woodwork is tested using a theory paper worth 60 marks and a project paper worth 40 marks. The project is administered in the schools. It is marked by the teachers and candidates scores sent to KNEC.

Table: 29 Candidates Overall Performance In Woodwork In 2008, 2009, 2010 And 2011

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2008	1	98	60	27.84	9.23
	2	98	40	18.61	4.93
	Overall	**98**	**100**	**46.45**	**12.89**
2009	1	424	60	28.27	10.30
	2	424	40	18.84	6.07
	Overall	**424**	**100**	**47.12**	**15.49**
2010	1	375	60	30.18	8.31
	2	375	40	20.18	4.55
	Overall	**375**	**100**	**50.01**	**12.27**
2011	1	447	60	21.24	9.46
	2	447	40	14.28	5.18
	Overall	**447**	**100**	**35.49**	**13.93**

From the table, it is to be observed that:

1. The candidature has increased from 375 in 2010 to 447 in 2011.
2. Performance in both theory and project work dropped significantly in 2011.
3. The overall mean for the subject dropped from 50.01 in 2010 to 35.49 in 2011. The significant drop in performance was attributed mainly to failure to cover the set syllabus well and in time to allow for thorough revision.

Questions which were performed poorly ar briefly discussed below:-

1. (a) **Requirement**

Safety attire required in a workshop.
Weakness
Some candidates did not know the term attire.

Possible cause of weakness
Teachers not explaining technical terms and meanings of words.

Advice to teachers
Make sure your explain all technical terms and meanings of words.

Expected Response:
Safety attire
- Apron/overall
- Gloves
- Goggles
- Helmet
- Boots

2. (a) **Requirement**
Factors to consider when making an order for plywood.

Weakness
No correct answers from the majority of candidates.

Possible causes of weakness
Lack of tuition.

Advice to teachers
Cover each topic in detail. All topics can be tested therefore each should be covered in detail.

Expected Response

Factors to consider when ordering for plywood
- Number of veneers
- Surface finish
- Nominal thickness
- Sheet size
- Face Veneer

(b) **Requirement**
Factors to consider when determining the method of conversion of timber.

Weakness
Many candidate had incorrect answers or did not attempt the question

Possible cause of weakness
Lack of tuition

Advice to teachers
Cover each topic to detail

Expected Response

Factors to consider when determining the method of conversion of timber are:
- Log size/diameter

- Type of wood
- Structured defects
- Timber use
- Type of sawing machine
- Propotion of hardwood to sapwood.

3. Requirement

Outlining the procedure of drilling, a hole using an expansive bit.

Weakness
Candidates did not know "expansive bit".

Possible causes of weakness
Lack of tuition and exposure to different kinds of bits.

Advice to teachers

You may not have all the tools in the workshop therefore it is important to organize site visits to construction sites and woodwork shops in your local areas.

Expected Response

Drilling hole using expansive bit:
- Locate and mark the centre of the hole.
- Set the expansive bit at ϕ 60mm and drill hole midway.
- Set the bit at ϕ 30mm and continue to drill the hole till the screw tip shows on the other side.
- Turn the work and finish drilling from the opposite side.

4. (b) Requirement

Outline the procedure of setting saw teeth

Weakness
Procedure not in a sequential order.

Possible causes of weakness
Lack of tuition and enough exposure to questions which demand logical presentation of facts.

Advise to teachers
Teach the candidates how to outline procedures in correct sequence.

Expected Response
Setting saw teeth
- Mount the saw blade between holding block and fix in a vice.
- Select appropriate setting tool
- Bend every alternate tooth in one direction and the remaining teeth in the opposite direction.
- Check to fonfirm alighnment.

5. Requirement

Outline of the procedure of re-conditioning a Jock Plane blade.

Weakness
Candidates missed the grinding before honing

Possible causes of weakness
Lack of practice of re-conditioning blades.

Advise to teachers
Give candidates a chance in the workshop to re-condition blades using the correct procedure.

9. (a) **Requirement**

Reasons for using wood fillers

Weakness
Most candidates did not know "wood fillers".

Possible causes of weakness
Lack of tuition.

Advice to teachers
Cover topics and sub-topics adequately.

10. **Requirement**

(a) To construct a quadrilateral ABCD of given measurements and
(b) Reduce the sides in ratio 5:7
(c) Measure length of side BG

Weakness
Most candidates did not know how to reduce the quadrilateral in the given ratio of sides.

Possible causes of weakness
Candidates not having covered the sub-topic "Reduction of figures to given scales".

Advice to teachers
Cover syllabus topics adequately.

14. (a) **Requirement**
Preparation of a cutting list for the construction of a door.

Weakness
Candidates did not know the difference between a cutting list and a bill of material.

Possible causes of weakness
Lack of practice or exercises in preparation of a cutting list of materials for a project.

Advise to teachers
Expose students to exercises on preparation of the cutting list.

Expected Response:
Cutting List

PART DESCRIPTION	WIDTH (mm)	THICKNESS (mm)	LENGTH
Stiles	75	50	4000
Bottom Rail	100	50	1000
Top Rail	75	50	1000
Transom	100	50	1000
Mullion	75	50	1200
Panels	150	25	6000
Beading	ACCEPT REASONABLE LENGTH		