

Name: ..... Adm No: .....

Class: .....

Candidate's Signature:.....

**444/1**  
**WOOD WORK**  
**Paper 1**  
**JULY / AUGUST 2016**  
2½ hours

## **MAKUENI COUNTY CLUSTER PREPARATORY EXAMINATION 2016**

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

**444/1**  
**WOOD WORK**  
**Paper 1**  
2½ hours

***Instructions to candidates***

- (a) Write your name and index number in the spaces provided above.
- (b) Sign and write the date of examination in the spaces provided above.
- (c) Candidates should have the following materials for this examination
  - Drawing instrument
  - Drawing paper size A3
- (d) This paper has **TWO** sections: **A** and **B**.
- (e) Answer **ALL** the questions in Section **A** in the spaces provided, from section **B** answer question 11 on A3 paper provided and any other three questions in the spaces provided after question 15.
- (f) All dimensions are in millimeters unless otherwise stated.
- (g) This paper consists of 12 printed pages.
- (h) Candidates should check the question papers to ascertain that all the pages are printed as indicated and that no questions are missing.
- (i) Candidates should answer the questions in English.

**SECTION A**

**Answer all questions in this section in the spaces provided.**

1. State any two safely precautions to be observed when.
  - i) Grinding tools (1 mark)  
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  - ii) Sharpening tools (1 mark)  
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2. a) State two important rules to be observed before operating machines in the workshop (1 mark)  
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  - b) What determines the size of a surface planer? (1 mark)  
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  - c) Show by means of sketches two typical uses of a sliding bevel. (2 marks)

3. a) Name one man – made board made from

i) Wood fibres (½ mark)

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ii) Wood particles (½ mark)

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b) State any two factors to consider when :

i) Making an order for plywood (2 marks)

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ii) Determining the method of timber conversion (2 marks)

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4. Differentiate between the following terms as used in woodwork.

i) Countersinking and counterboring (3 marks)

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ii) Paring and chopping (3 marks)

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5. a) List four precautions to be observed when using a hand saw (2 marks)

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b) Name the metal most commonly used for making a jackplane

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c) List – two advantages of a metal plane over a wooden plane (2 marks)

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6. a) Outline the process of boring a hole on wood using an expansive bit (4 marks)

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b) List down 2 advantages and 2 disadvantages of using paint on wood surfaces. (2 marks)

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c) Differentiate between apprenticeship training and craft training. (2 marks)

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7. a) Name the iron monger used for the following purposes

i) Keeping the cabinet door in a closed position without locking (1 mark)

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ii) Pulling or pushing drawers (1 mark)

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(1 mark)

iii) Protecting the Mortise cut

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b) Sketch the following methods of nailing

i) Dovetail nailing

(1 mark)

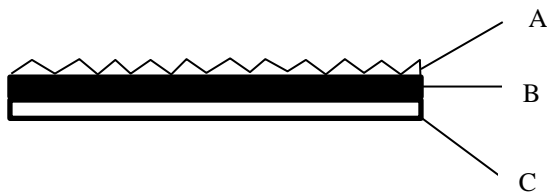
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ii) Staggering nailing

(1 mark)

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8. a) The figures below shows an abrasive material.



i) Name part A and C

(1 mark)

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ii) State the method used in manufacturing the abrasive shown above.

(1/2 mark)

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b) Name two natural materials to be used for part – A above

( 1/2 mark)

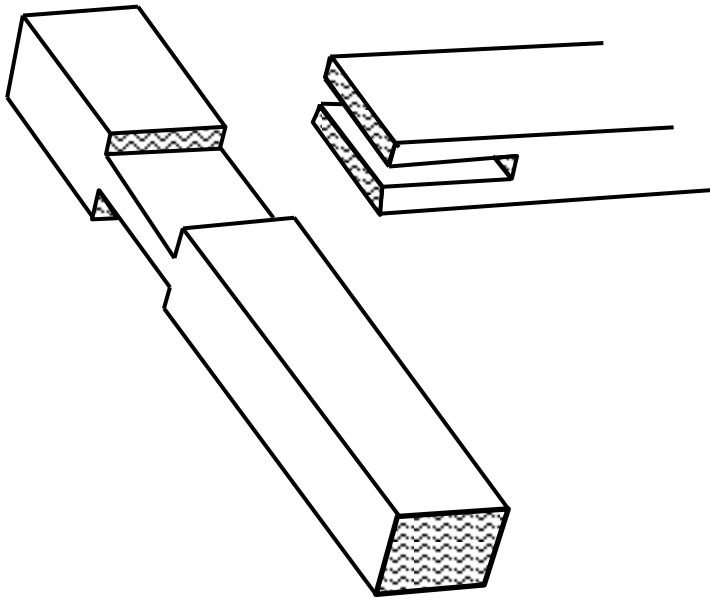
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9. Illustrate two methods in edge treatment on a block board

(2 marks)

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10. The figure 2 below shows an exploded view of a joint used in woodwork. Sketch the views of the assembled joint in first – angle projection.

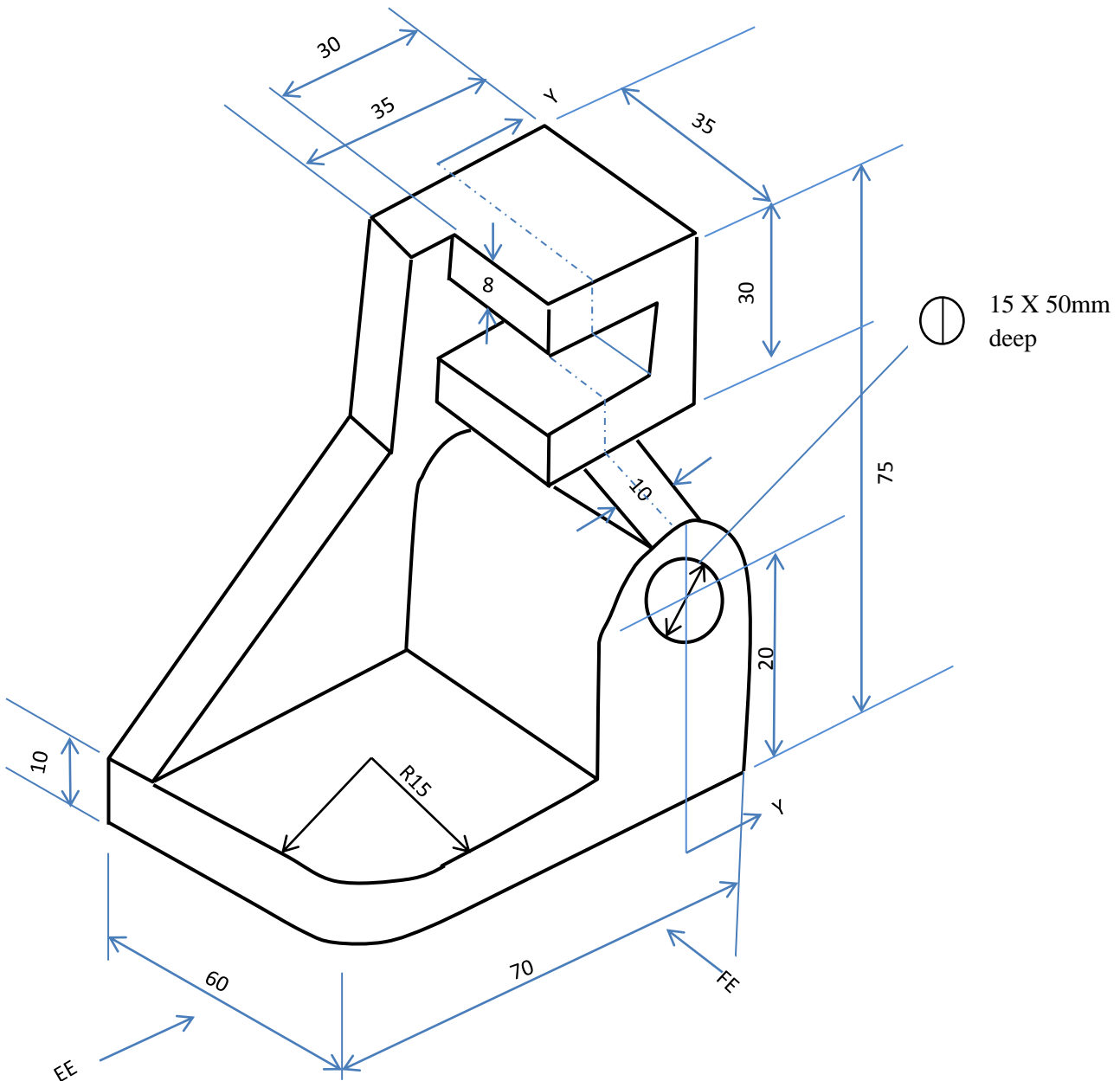


**SECTION B**

**Answer question 11 and any other three questions from this section. Candidates are advised not to spend more than 25 minutes on Questions**

11. The figure below shows an isometric block. Draw the following views ( full size) in first angle projection:

- i) Front elevation
- ii) Sectional and elevation
- iii) Plan







12. a) Outline the procedure of manufacturing chipboard from raw materials

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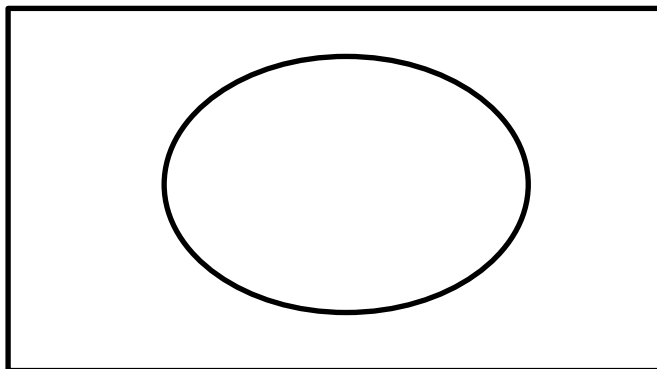
b) With aid of sketch, describe each of the following timber defects.

- i) Cupping
- ii) Twisting
- iii) Spring

(9 marks)

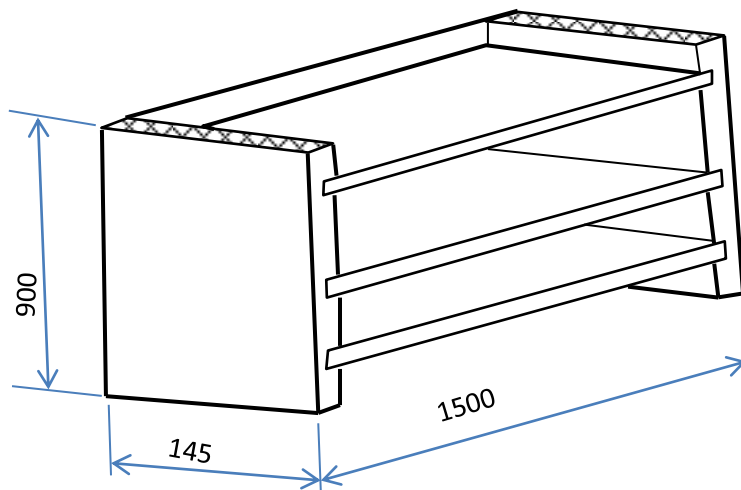
13.

a) Figure 3 shows a rectangular speaker grill with a elliptical hole. Illustrate the procedure of making out the hole using pin and string method (11 ½ marks)



b) Outline the procedure of applying a first – coat of oil paint on wooden surface (3½ marks)

14. The figure 4 below shows a bookshelf made of camphor wood. The back is fitted with a 3mm plywood. The number of screw used is 15. All members are 20mm thick.



Prepare a cutting list and using the prices given below estimate the cost of material used to make the shelf. (15 marks)

<u>Material</u>	<u>Cost</u>
Compher 150 × 25	Ksh. 300 per running metre
Plywood 2400×1200	Ksh. 600 per sheet
Screw 1 gross	Ksh. 432 per gross



d) Explain how varnish is applied to newly prepared surface.

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