**NAME:..........................................................…………………………………………… ADMISSION NO:.........................**

**CANDIDATE SIGNATURE:......................... DATE :.......................**

**444/1**

**WOODWORK**

**PAPER 1**

**TIME:2 HOURS 30 MINUTES**

**MECS JOINT EXAMINATION 2022**

**Kenya Certificate of Secondary Education**

**WOODWORK**

**PAPER 1**

**Instructions to candidates**

Write your name and admission number in the spaces provided above

Sign and write the date of the examination in the spaces provided

You should the following for the exam

Drawing instruments

A3 drawing paper

**Answer all the questions in the space provided**

**SECTION A (40MARKS)**

1. State four factors that determine the appearance of grains in timber. (2mks)

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b) List four characteristic of trees that produce hardwoods. (4mks)

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1. Name two tasks that can be performed using each of the following tools. (4mks)
2. Back saw.

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1. Hand saw

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b) Using a labelled sketch, give the meaning of the term ‘’saw Kerf’’. (3mks)

1. Name four measuring tools that may be used in a workshop. (2mks)

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1. Sketch and label the pictorial view of ta mortice gauge. (4mks)
2. a) Make sketches to show the following methods of matching veneers. (6mks)
3. Side to side pattern.
4. Slip match pattern.
5. ‘’v’’ match pattern.
6. State two safety precautions to be observed while using contact glue. (2mks)

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1. Name four characteristics of polyvinyl glue. (4mks)

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1. State three precautions to be observed to ensure there is no damage of a saw blade when in use. (3mks)

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1. Outline four measures to be taken to ensure efficient planning when using a bench plane. (4mks)

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1. Sketch an exploded pictorial view of an open corner bridle joint. (3mks)

**SECTION B (60MKS)**

11.Below is a sketch of polygon ABCDE. Given that AB =45 BC=30 CD=35 DE=35 EA=30, angle EAB=90° and angle ABC=130°. Draw the polygon and hence reduce it in the ratio 2:3 using A as the center of reduction. 15 MKS

12a) Other than food, state and explain two favourable conditions for fungal growth in timber. (4mks)

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b) Using sketches (labelled) show the difference between an auger bit and twist drill bit. (6mks)

c) Name five sources of business capital. (5mks)

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13. With the aid of sketches describe the ripping and cross cutting operations on a piece of timber. (8mks)

b) State two advantages and two disadvantages of quarter sawing method of timber. (4mks)

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c) List three precautions to be observed to prevent splitting the work piece when marking a hole using a chisel. (3mks)

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14. List six items that should be in a first Aid Kit and state each its use. (6mks)

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b) State five characteristics of timber that has been attacked by dry rot. (5mks)

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c) The time taken for timber to season in open air seasoning depends on various reasons state four of these reasons (4mks)

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15. Describe the oven dry method of determining the percentage moisture content of a piece of timber. (6mks)

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b) Outline the procedure of making a groove in a work piece using a plough plane. (7mks)

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c) State two precautions to be observed when using a steel tape measure. (2MKS)

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