

GENERAL CERTIFICATE OF EDUCATION BOARD
Technical and Vocational Education Examination

JUNE 2021

INTERMEDIATE LEVEL

Specialty Name (Specialty Acronym)	CARPENTRY AND JOINERY
Subject Title	CARPENTRY
Subject Code No.	5495
Paper No.	2

Duration: THREE HOURS

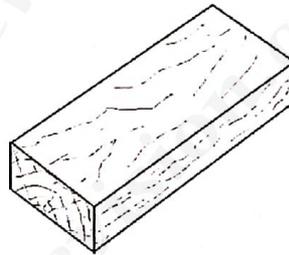
- This Paper has **SEVEN QUESTIONS** in Three **SECTIONS**. You are expected to **ANSWER FIVE QUESTIONS** selected as follows:
- Two from **SECTION A**.
- Two from **SECTION B**.
- Section C has **ONE COMPULSORY QUESTION**.
- **ALL QUESTIONS CARRY EQUAL MARKS**.
- Read the Questions Carefully before answering.
- Use sketches and diagrams where necessary.
- Written answers should be brief and straight to the point.
- You are allowed to use drawing instruments and calculators
- This paper shall be evaluated on **70 marks** and weighted as **35%** of the total subject's marks

You are reminded of the necessity for good English and orderly presentation of work required and neatness.

Turn Over

- 1) Seasoning constitutes an important aspect of wood processing before being put into use.
- Define the term seasoning. (2 marks)
 - Express any two reasons for which timber must be seasoned after conversion. (2 marks)
 - Give four principles of wood seasoning. (2 marks)
 - With the aid of neat sketches, illustrate any two methods of seasoning timber. (4 marks)
 - In tabular form, state any two advantages and two disadvantages of any seasoning method. (4 marks)
- 2) While on internship on a building site, an intern may be expected to assist in the transportation of materials besides carrying out of minor tasks expected of him.
- List five safety precautions to be observed on the site when using a ladder. (5 marks)
 - Cite any four personal safety rules on the site. (4 marks)
 - Define work accident. (1 mark)
 - Prescribe four measures to be taken on the site in the handling of manufactured boards. (4 marks)
- 3) a) Outline two reasons why floor boards are preferably rift sawn. (2 marks)
- b) On the sketch of a piece of wood in figure 1, indicate the following: tangential faces, radial face, transversal face and the arris. (3 marks)

Figure 1



- Enumerate any four uses of plywood in structural work. (4 marks)
- Sketch a coach screw used in wooden structure and name its parts. (5 marks)

- 4) The diagram below represents the plan of a stair case. You are required to

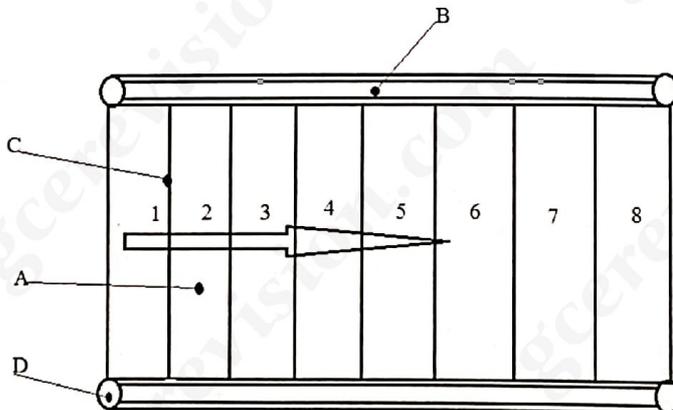


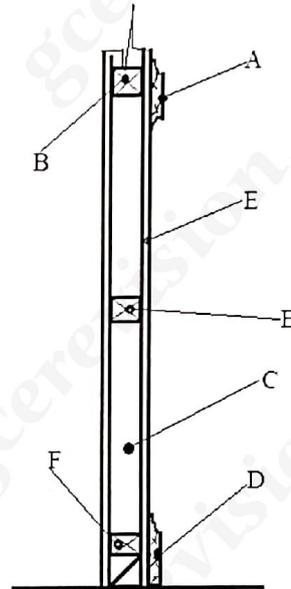
Figure 2

- Give the names of the parts indicated (2 marks)
- Differentiate between a private staircase and a public staircase (4 marks)
- State four basic requirements to be considered when designing stairs (4 marks)
- Sketch the joint between the riser and the tread (2 marks)
- Give the name of the stair shown in figure 2 above. (2marks)

- 5) Wooden partitions have become an integral part of internal construction.
- Define the term partition. (1 mark)
 - With the aid of sketches, show two types of partitions indicating the parts. (7.5 marks)
 - Why is it necessary to know the type of cladding material before putting up your studs? (2 marks)
 - Give the advantages of screws over nails. (2 marks)
 - The ability of nails to hold timber (pieces) together depends upon certain factors. Give three of these factors. (1.5 marks)

6) Figure 3 represents a vertical section of a stud partition.

Figure 3



- Give the correct names to the letters indicated in figure above. (6 marks)
- State two (02) advantages of using wood as a face or covering material in partitions. (2 marks)
- Illustrate with neat sketches, six parts of a lintel formwork. (6 marks)

7) The sketch in figure 3 below represents a roof truss to be constructed on one of the school hall of a Government technical college.

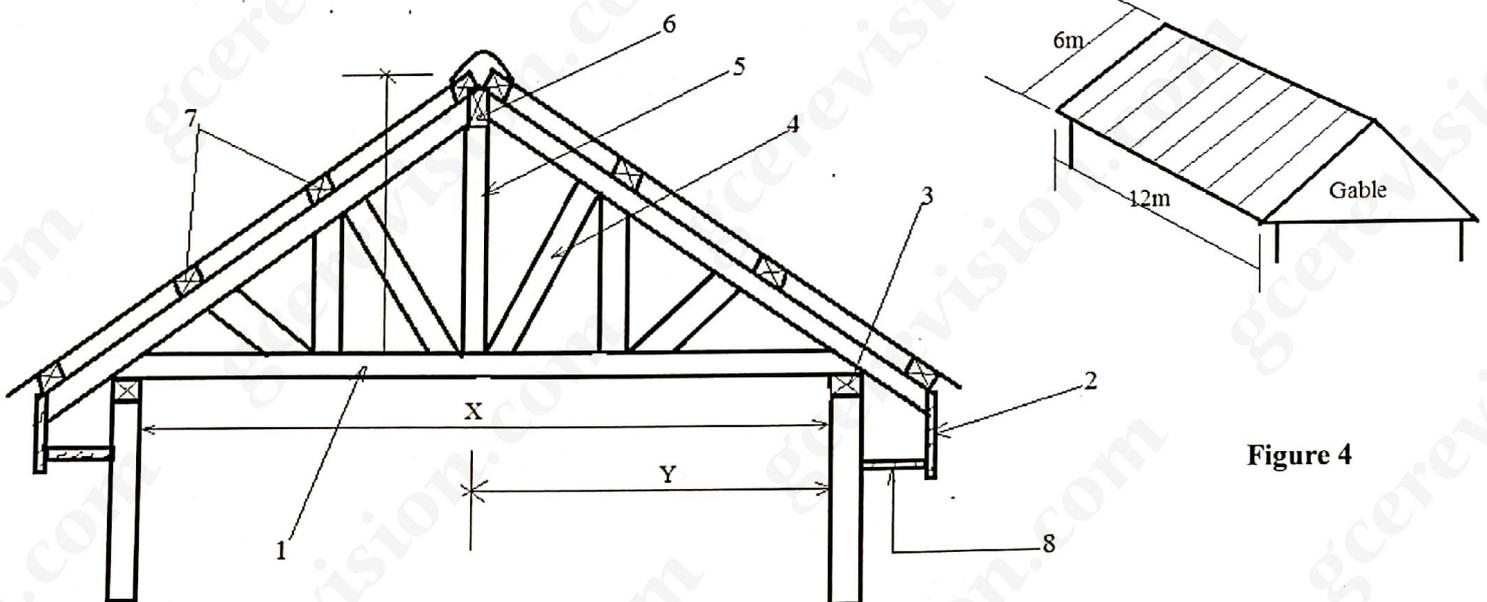


Figure 4

- a) Give the name of the roof truss (1 mark)
- b) Identify the parts indicated on the sketch (4 marks)
- c) Identify the names to the various distances (X, Y and Z) indicated on the truss. (3 marks)

Given that the length of the roof is 12 m and the length of the slope is 6 m. considering that the lap on the roofing sheet is 15cm.

- d) Calculate the number of roofing sheets needed for the roof if a sheet of zinc measures 2m x 1m (6 marks)
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