

## 4.2 WOODWORK (444)

### 4.2.1 Woodwork Paper 1 (444/1)

#### SECTION A (40 marks)

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

1. (a) List **four** functional requirements of a woodwork workshop. (2 marks)
- (b) State **three** causes of accidents relating to the use of hand tools in a woodwork workshop. (3 marks)
2. Explain the cause of each of the following classes of fire:
  - (a) Class A fire (2 marks)
  - (b) Class B fire (2 marks)
3. **Figure 1** shows a vernier calliper reading. (2 marks)

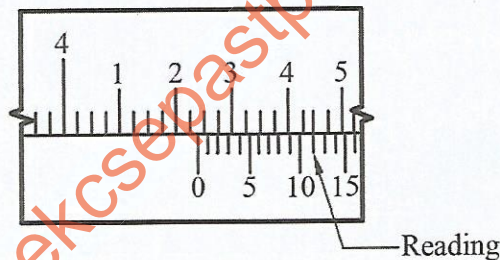
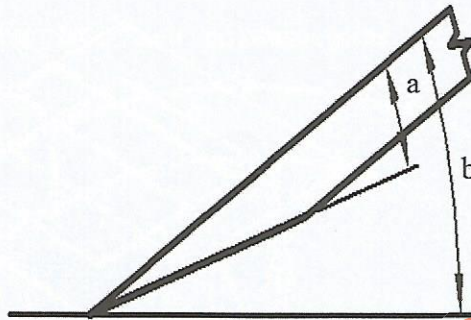


Figure 1

Determine the value of the reading.

4. State **four** practices that demonstrate the proper use of a cross-cut saw when cutting timber. (4 marks)
5. (a) State **two** functions of the knob on a bench plane. (2 marks)
- (b) Sketch the plan of the head to show the shape of the slots on the following types of screws:
  - (i) Philips recess (2 marks)
  - (ii) Allen recess (2 marks)

6. (a) Sketch and label a try square. (2 marks)
- (b) State **two** uses of a try square. (2 marks)
7. **Figure 2** shows the cutting edge of a chisel.



**Figure 2**

- (a) Name the angles labelled a and b. (1 mark)
- (b) Give the recommended value for each of the angles in 7(a). (2 marks)
8. Sketch each of the following types of treatment given to the edges of tables: (3 marks)
- (a) Chamfer
- (b) Ogee
9. State **four** characteristics of varnish applied on a dry wooden surface. (4 marks)
10. Print the phrase "Practice makes perfect" using the vertical capital letters of uniform 5 mm height and word spacing of 5 mm. (5 marks)

## SECTION B (60 Marks)

Answer question 11 on A3 paper and any other three questions from this section in the spaces provided. Candidates are advised not to spend more than 25 minutes on question 11.

11. Figure 3 shows a machine drawn in isometric projection.

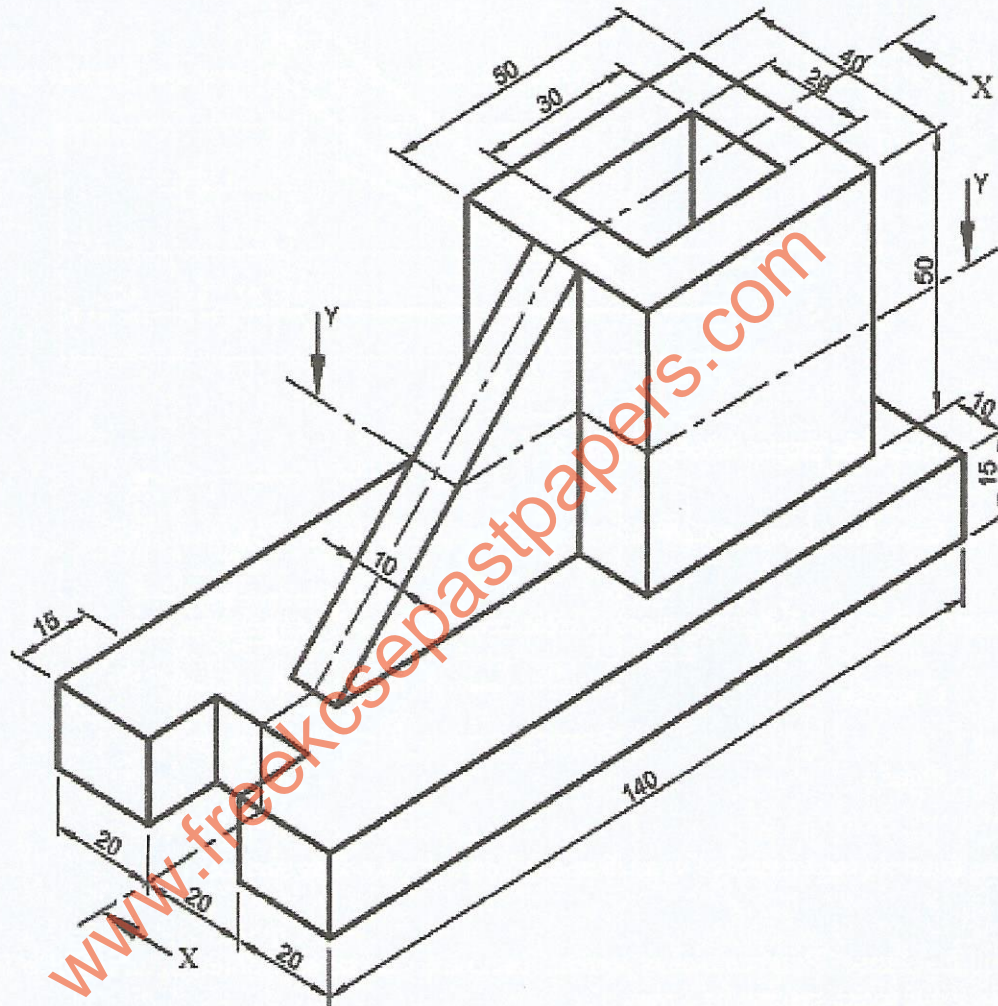
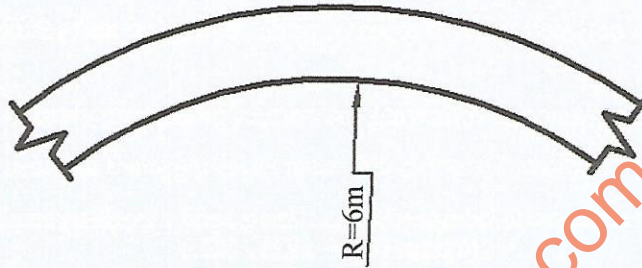


Figure 3

Draw the following views of the component **Full Size** in first angle projection: (15 marks)

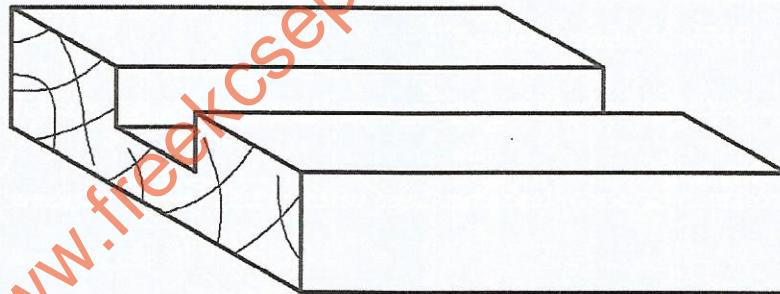
- Sectional front elevation along the cutting plane X-X.
- Sectional plan along the cutting plane Y-Y.

12. (a) State **four** factors to consider when choosing a finish for a wooden item. (4 marks)
- (b) Outline the procedure of measuring, marking and fitting a mortise lock on a kitchen cabinet door. (11 marks)
13. (a) State **three** advantages of plain sawn timber over quarter sawn timber. (3 marks)
- (b) **Figure 4** shows the plan of a curved timber piece.



With the aid of a sketch, outline the procedure of kerf bending to produce the curved piece. (12 marks)

14. (a) State **two** functions of the cap iron in a jack plane. (2 marks)
- (b) **Figure 5** shows a wooden block with a groove 12 mm wide and 20 mm deep.



Outline the procedure of marking and cutting the groove using a rebate plane. (7 marks)

- (c) Explain **two** methods of testing a planed timber face for straightness and flatness. (6 marks)
15. (a) State **two** uses of a nail punch. (2 marks)
- (b) Outline the procedure of sharpening a chisel using an oilstone. (5 marks)
- (c) Describe the following natural adhesives, giving one characteristic of each:
- (i) Animal glue (3 marks)
  - (ii) Case-in (3 marks)
  - (iii) Blood glue (2 marks)