

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 **two** levels of qualifications of Technical Personnel in the woodwork industry. (2 marks)
- (b) State **four** factors that determine the appearance of grains in timber. (2 marks)
- 2 Sketch and label a wing divider. (4 marks)
- 3 With the aid of sketches differentiate between chamfering and rounding as used in shaping. (4 marks)
- 4 Describe the following terms as used in timber: (4 marks)
 - (a) texture;
 - (b) figure.
- 5 (a) State **two** functions of a jointer. (2 marks)
- (b) Column 1 of table 1 shows fire extinguishing agents for different classes of fire.

EXTINGUISHING AGENTS	CLASS OF FIRE
Water and sand	
Chemicals and foam	

Table 1

Fill column 2 with the appropriate class of fire. (2 marks)

- 6 (a) State **four** characteristics of lacquers. (2 marks)
- (b) Classify the following types of pencils as either soft, medium or hard: 4H, 3B, B, HB, 2B, 2H. (3 marks)

SOFT	MEDIUM	HARD

- 7 Sketch a cross-sectional view of each of the following widening joints.
 - (a) Rebated tongue and groove joint; (2 marks)

(b) Splayed butt joint. (2 marks)

8 State **three** precautions to be observed to ensure that there is no damage to a saw blade when in use. (3 marks)

9 Sketch the following types of bits and state the function of each.

(a) flat bit; (2 marks)

(b) countersink bit. (2 marks)

10 **Figure 1** shows a polygon ABCDE.

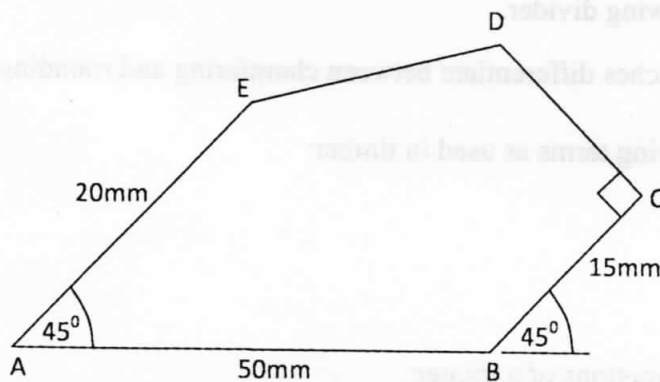


Figure 1

Enlarge the figure such that AB is 80 mm long.

(4 marks)

ESTIMATING AGENTS	CLASS OF RATE
Water and sand	
Chairs and fans	

HARD	MEDIUM	SOFT

SECTION B (60 marks)

Answer question **11** on A₃ paper provided and any other **three** questions from this section in the spaces provided after question 15. Candidates are advised **not to spend more than 25 minutes on question 11.**

11 Figure 2 shows a shaped block.

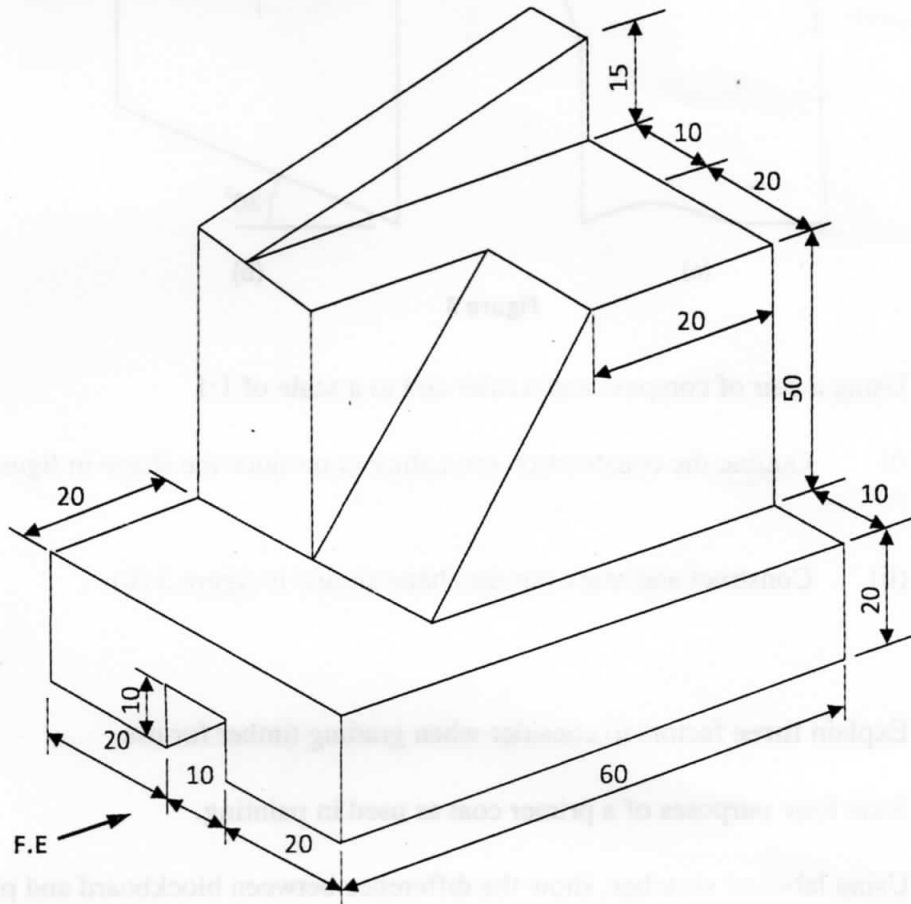


Figure 2

In first angle orthographic projection, draw the three views of the block to a scale of 1:1. Insert any six dimensions. (15 marks)

12 (a) State **three** precautions to be observed when using a steel tape measure. (3 marks)

(b) **Figure 3** (a) shows a surface of an irregular wooden block.

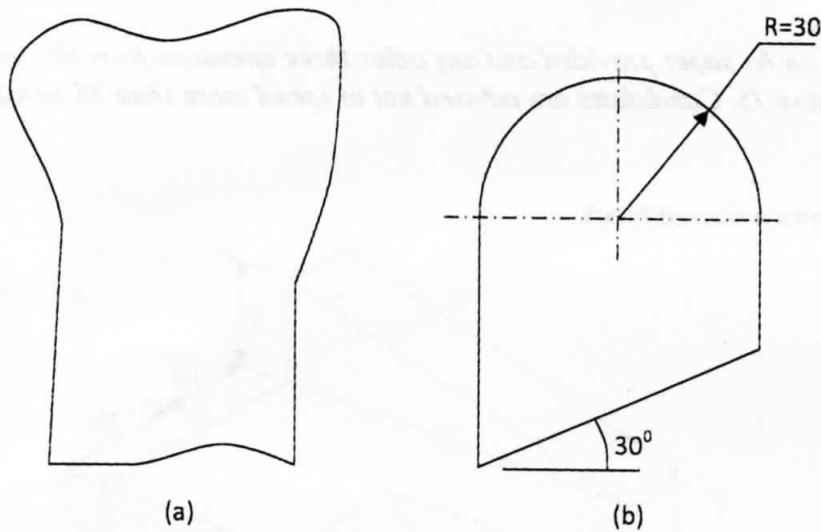


Figure 3

Using a pair of compass and a ruler and to a scale of 1:1

- (i) Outline the construction procedure to produce the shape in figure 3 (b). (7 marks)
- (ii) Construct and mark out the shape shown in figure 3 (b). (5 marks)

- 13 (a) Explain **three** factors to consider when grading timber for use. (5 marks)
- (b) State **four** purposes of a primer coat as used in painting. (4 marks)
- (c) Using labelled sketches, show the difference between blockboard and plywood. (6 marks)
- 14 (a) State **six** benefits of starting a small scale business in rural areas. (6 marks)

- (b) **Figure 4** shows pictorial views of wall mounted shelf. All members are 22 mm thick softwood.

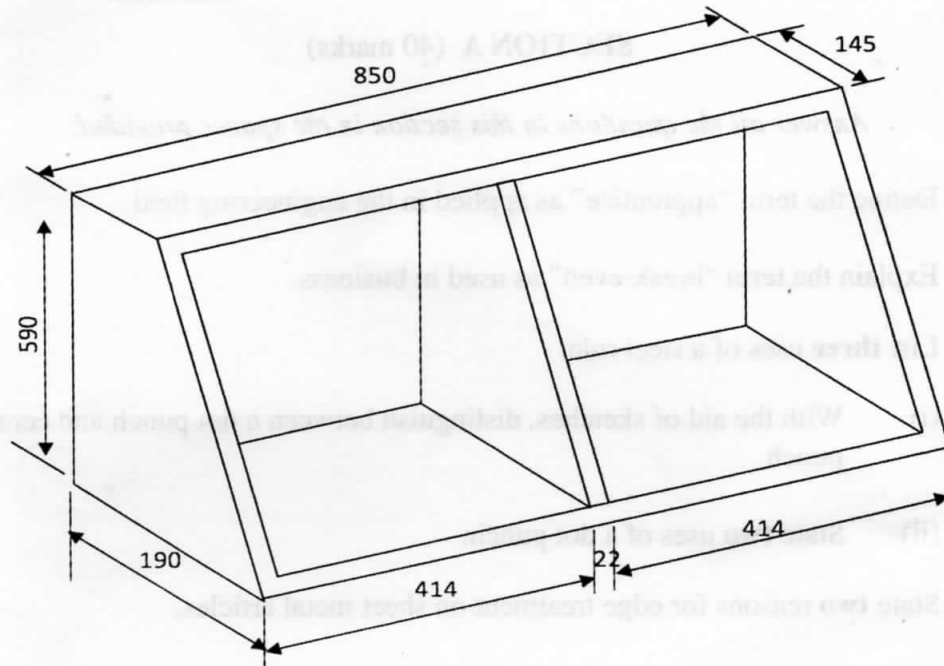


Figure 4

- Prepare a cutting list for purchasing the timber required for the shelf. (9 marks)
- 15 (a) With the aid of labelled sketches, describe the ripping and cross cutting operations on a piece of timber. (8 marks)
- (b) State **two** advantages and **two** disadvantages of quarter sawing method of timber conversion. (4 marks)
- (c) List **three** precautions to be observed to prevent splitting the work piece when making a hole using a chisel. (3 marks)