4.2 WOODWORK (444)

4.2.1 Woodwork Paper 1 (444/1)

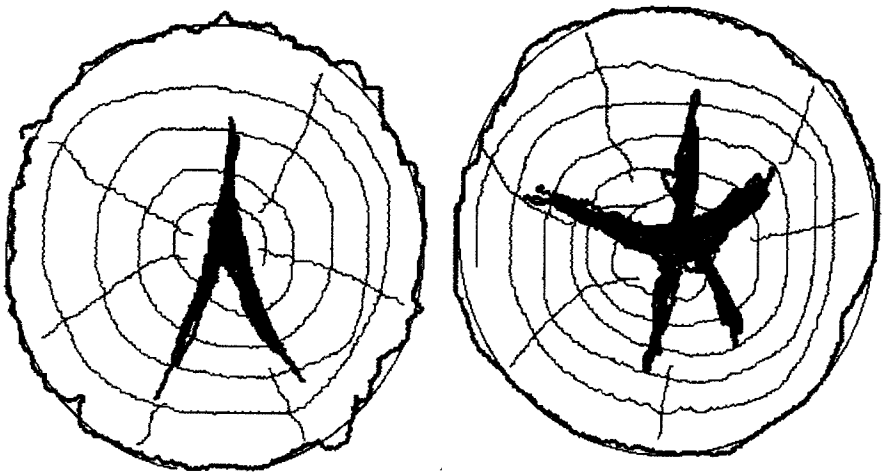
SECTION A (40 marks)

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

1. (a) List **four** safety requirements in relation to floor layout in a wood workshop. (2 marks)

(b) State **four** performance requirements of a door. (4 marks)

2. (a) Name the type of timber defects shown in **Figure 1 (a) and (b).** (2 marks)



(a) **(b)**

Figure 1

(b) Explain the term decay as used in timber. (2 marks)

3. (a) Sketch and label a mitre square. (3 marks)

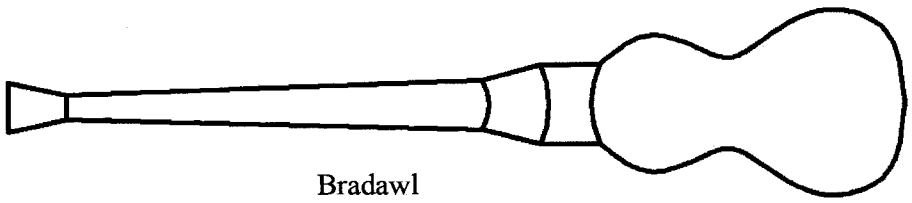
(b) State **two** factors which determine the position of a pit latrine on a site. (2 marks)

4. (a) List **two** types of hand saws (1 mark)

(b) Sketch and label a tenon saw. (4 marks)

5. State **four** safety precautions to observe when planing wood. (4 marks)

6. (a) **Figure 2** shows a bradawl.



Bradawl

Figure 2

State **two** uses of the bradawl. (1 mark)

(b) **Figure 3** shows a gimlet.

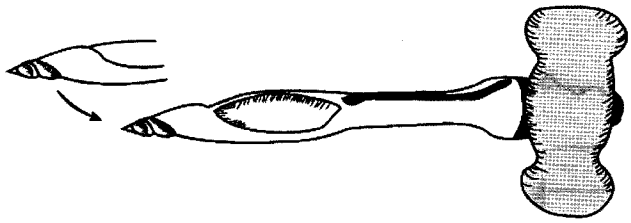


Figure 3

State its advantages over a brace. (1 mark)

7. (a) State **two** uses of each of the following planes: (2 marks)

(i) Plough plane.

(ii) Rebate plane.

(b) **Figure 4** shows two pieces of timber joined together with a nail.

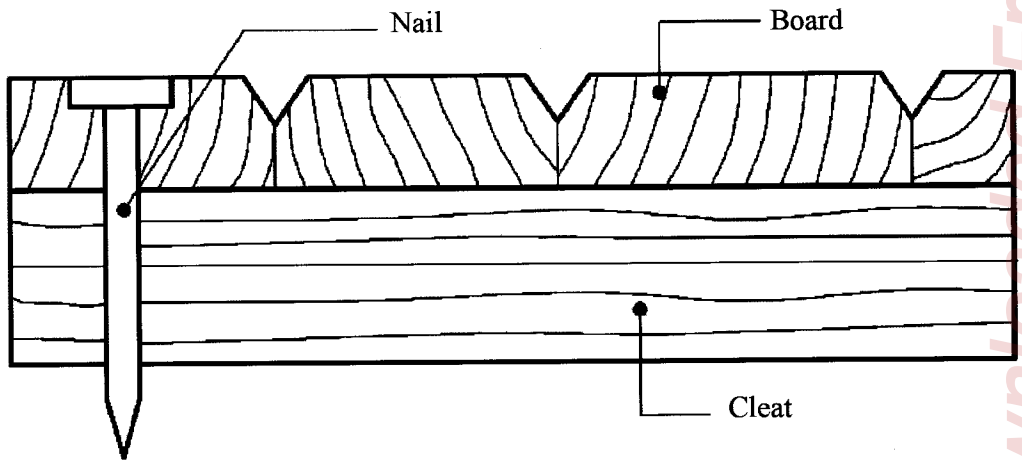


Figure 4

State **two** methods that may be used to avoid penetration of the nails past the cleat. (2 marks)

8. Give **two** examples in each of the following types of glue:

(a) Protein adhesives (2 marks)

(b) Synthetic resin adhesives (2 marks)

9. Use cross-sectional sketches to distinguish between the following edge finishes:

(a) Rounded corner. (1 mark)

(b) Rounded nosing. (1 mark)

10. **Figure 5** shows an Isometric view of a briddle joint.

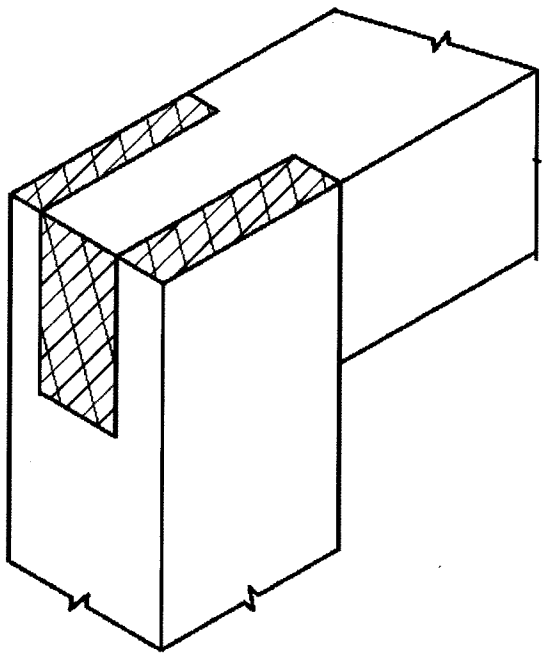


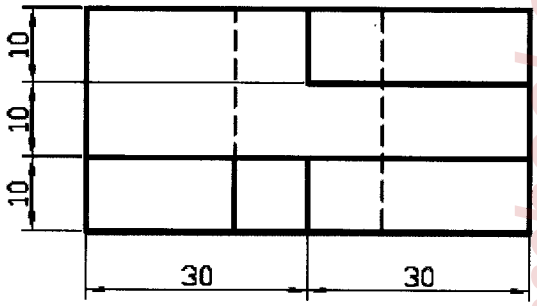
Figure 5

Sketch an exploded view of the joint. (4 marks)

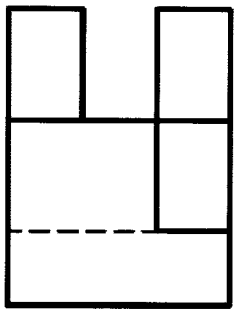
SECTION B (60 marks)

*Answer question **11** on the **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.***

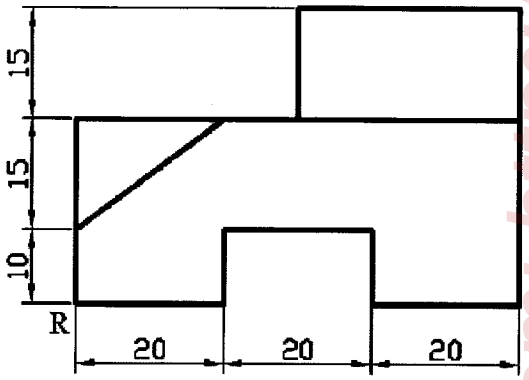
11. **Figure 6** shows three views of a shaped block drawn in third angle projection.



Plan



End Elevation



Front Elevation

To a scale of **2:1**, draw the block in isometric projection taking R as the lowest point. (15 marks)

12. (a) List **four** types of widening joints. (2 marks)

(b) Outline the procedure of making a glued rebated butt joint. (8 marks)

(c) Sketch to show the plain method of timber conversion and state **three** advantages of this method. (5 marks)

13. (a) Outline the procedure of preparing a log in readiness for cutting veneers. (7 marks)

(b) **Figure 7** shows an elliptical table top.

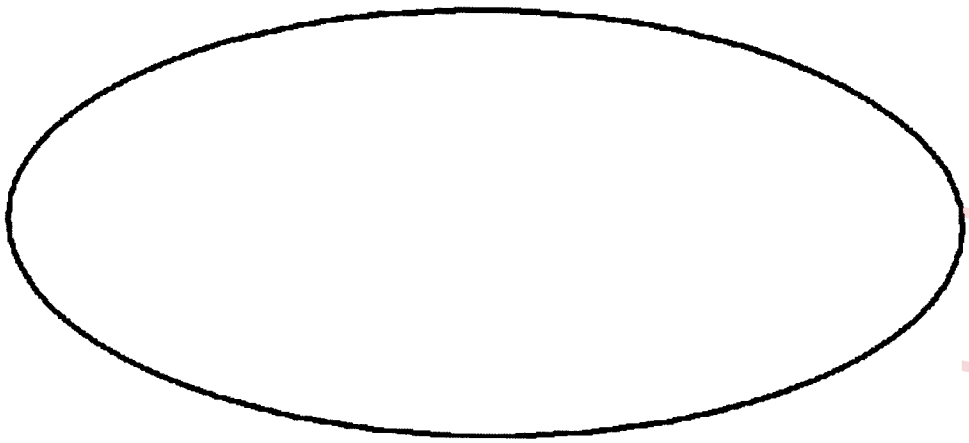


Figure 7

Using the trammel method, outline the procedure of marking out the top on a rectangular board. (5 marks)

(c) State **three** methods of protecting the sides of a trench excavation from collapsing. (3 marks)

14. (a) Name **three** types of bench planes, and give **one** use of each. (6 marks)

(b) **Figure 8** shows two methods of sawing timber.

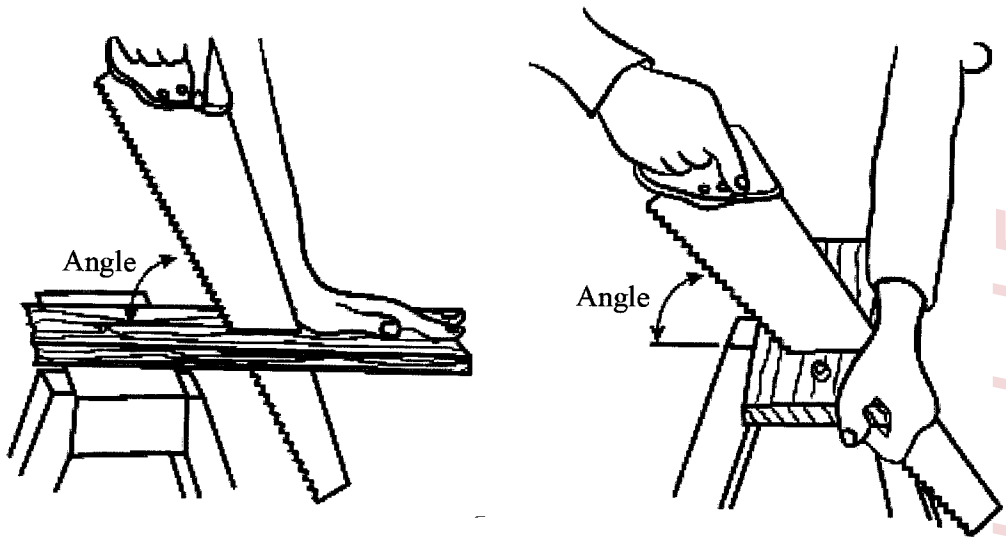


Figure 8

Name each method and describe the procedure stating the suitable angle of cut. (9 marks)

15. (a) With the aid of sketches explain the following methods of reconditioning plane blades. (5 marks)

(i) Sharpening

(ii) Grinding

(b) (i) State **four** reasons for staining wood surfaces. (4 marks)

(ii) Outline the procedure of staining a piece of timber. (4 marks)

(c) State **four** ways in which waste wood can be utilised (2 marks)