



29.15 WOODWORK (444)

29.15.1 Woodwork Paper 1 (444/1)

SECTION A : (40 marks)

*Answer ALL questions in this section.*

- 1 (a) Name two tasks that can be performed using each of the following tools:
- (i) backsaw; (2 marks)
  - (ii) handsaw. (2 marks)
- (b) List four tools used for wood carving. (2 marks)
- 2 (a) Briefly describe how trees manufacture their food. (3 marks)
- (b) Using a labelled sketch, give the meaning of the term "saw kerf." (3 marks)
- 3 (a) With the aid of sketches, differentiate between a mortice chisel and a bevel-edge chisel. (3 marks)
- (b) Name any four measuring tools that may be used in a workshop. (2 marks)
- 4 (a) Differentiate between a cutting gauge and a marking gauge. (2 marks)
- (b) State four threats a "jua kali" woodworker faces in the workplace due to technological advancements. (2 marks)
- 5 With the aid of sketches, show the difference between a wire nail and a panel pin nail. (3 marks)
- 6 Sketch each of the following joints and state the classification under which each joint falls:
- (a) wedged scarf joint; (2 marks)
  - (b) tongue and groove. (2 marks)
- 7 (a) State four types of surface finishes that would be used to protect a wood surface against water penetration. (2 marks)
- (b) Sketch a pictorial view of a bench hook. (2 marks)
- 8 Name four types of wood fillers. (2 marks)
- 9 With the aid of sketches, describe two methods of planning the end grain of a given work piece. (4 marks)

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Figure 1 shows a rectangle ABCD.

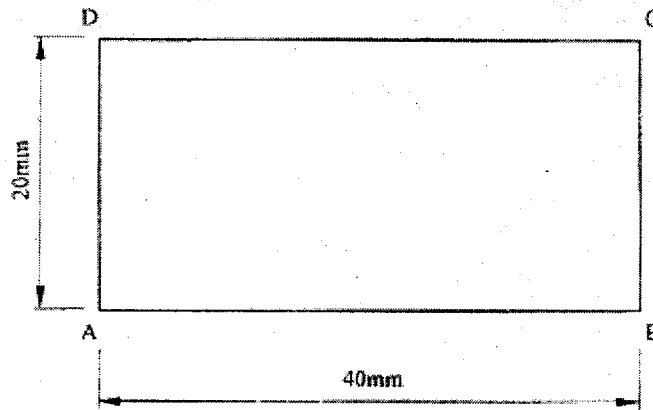


Figure 1

Copy the rectangle hence convert the rectangle into a square of equal area. (4 marks)

**SECTION B (60 marks)**

Answer question 11 and any other three questions from this section. Candidates are advised to spend not more than 25 minutes on question 11.

11 Figure 2 shows an isometric view of a candle stand.

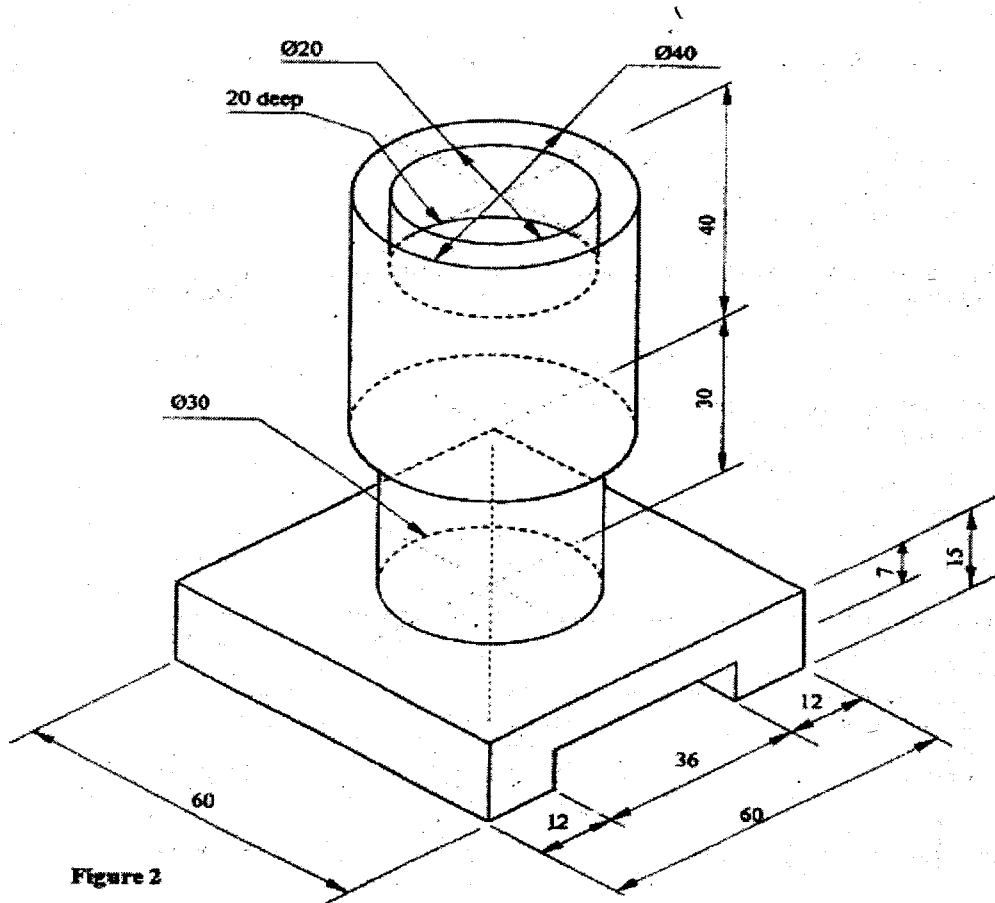
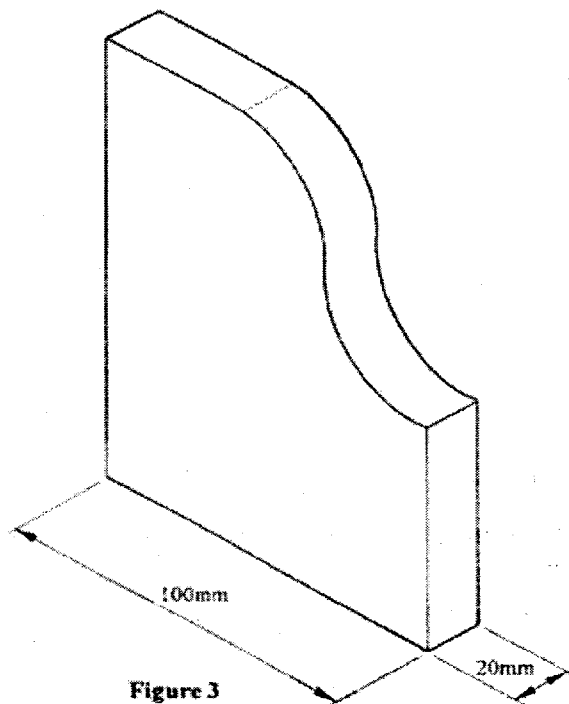


Figure 2

Draw full size, in 1<sup>st</sup> angle projection, the three orthographic views of the stand. (15 marks)

- 12 (a) State five factors to consider for good housekeeping in the workshop. (5 marks)
- (b) Describe the procedure of planing the face edge of a piece of timber measuring 1000mm x 100mm x 50mm to be flat and straight. (6 marks)
- (c) Figure 3 shows a shaped wooden block.



- Outline the procedure of forming the curved shape to expose the end grains. (4 marks)
- 13 (a) Outline the procedure of making a keyhole. (4 marks)
- (b) Explain four preventive measures to be observed to prevent damage of chisels, stating one reason in each case. (8 marks)
- (c) Outline the procedure of driving a 150mm nail into a piece of timber. (3 marks)
- 14 (a) Classify the following defects as either natural or seasoning defects, stating their causes:
- (i) upset
  - (ii) ring share
  - (iii) spring
  - (iv) checks
- (6 marks)
- (b) With the aid of sketches, explain the difference between lamin board and blockboard. (5 marks)
- (c) A piece of wood measures 1800 x 150 x 150mm and has a density of 721kg/m<sup>3</sup>. After oven drying, its final mass was 20kg. Calculate its percentage moisture content. (4 marks)
- 15 (a) State three reasons for staining timber. (3 marks)
- (b) Outline the procedure of measuring stock. (6 marks)
- (c) Use labelled sketches to show two flush finishing of screws. (6 marks)