

4.4 BUILDING CONSTRUCTION (446)

4.4.1 Building Construction Paper 1 (446/1)

SECTION A (40 marks)

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

1. (a) State **two** reasons for undertaking building construction as a course. (2 marks)
- (b) List **three** hindrances one may encounter when starting a construction business. (3 marks)
2. (a) State **two** ways of storing tins of oil paints on a construction site. (2 marks)
- (b) Give **two** reasons for the type of storage in 2(a). (2 marks)
3. (a) State **four** positions that require damp proofing in a domestic building. (2 marks)
- (b) Name **four** types of rigid damp proofing materials (2 marks)
4. (a) State **two** advantages and **two** disadvantages of using a site square for setting out. (2 marks)
- (b) Give **four** methods of curing vertical in-situ cast concrete units. (2 marks)
5. Sketch a strip foundation and mark the following on it: (5 marks)
 - (a) the position of the dpc showing the mandatory dimensions
 - (b) the mandatory Kenya Building Code requirements and show the dimensions of each if the foundation wall thickness is 150mm

6. **Figure 1** shows parts of an arch opening.

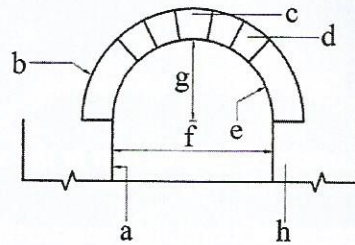


Figure 1

- Name the parts labelled a, b, c, d, e, f, g and h. (4 marks)
7. State **three** regulations governing the erection of standards in scaffolding works. (3 marks)
8. (a) Sketch and label an angular valley tile. (3 marks)
 (b) Explain the term “binders” as used in roof work. (2 marks)
9. List **three** qualities of a good sanitary appliance. (3 marks)
10. Sketch the following wall joint finishes: (3 marks)
 (a) Weather pointing
 (b) Tuck pointing

SECTION B (60 marks)

Answer question 11 on the A3 paper provided 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 2 shows three views of a hollow wooden block drawn in third angle projection. Draw the block **Full Size** in isometric projection. (15 marks)

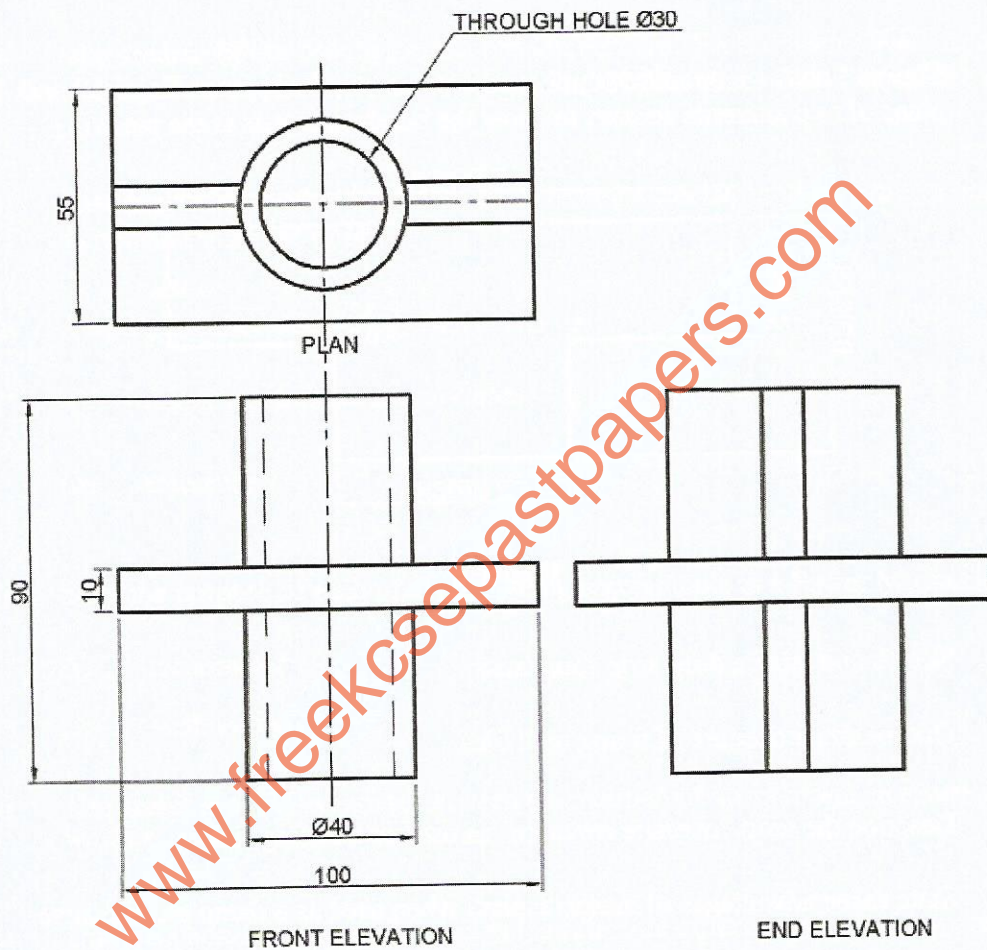


Figure 2

12. (a) Explain **four** methods of controlling termites on a construction site without using chemicals. (8 marks)
- (b) Using sketches, explain the difference between hollow blocks and cellular blocks. (7 marks)

13. (a) State **five** safety precautions to be taken when using hand tools to dig excavations in trenches. (5 marks)
- (b) Explain **three** properties of coarse aggregates used in construction. (6 marks)
- (c) Use a labelled sectional elevation sketch to show the bonding details at the end of a reinforcement bar in a concrete lintel. (4 marks)

14. (a) **Figure 3** shows a one brick thick wall with an attached pier in English bond. Sketch the plans of two alternate courses to show the bonding details at the pier. (6 marks)

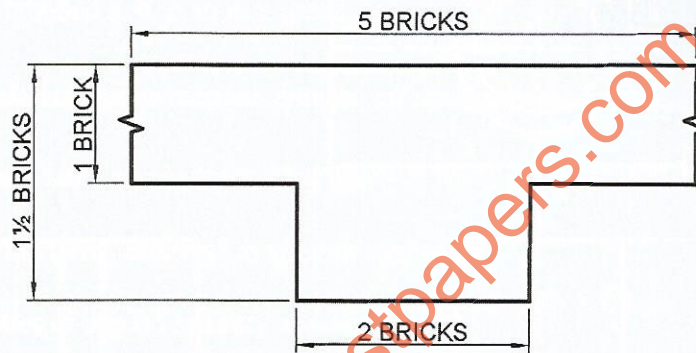


Figure 3

- (b) Sketch and label a deep strip foundation. (4 marks)
- (c) Outline the procedure of fixing wall tiles. (5 marks)
15. (a) Describe the term “oversite concrete” as used in building works. (3 marks)
- (b) State **three** advantages of mastic asphalt when used as a damp proof course. (3 marks)
- (c) Use a labelled isometric sketch to show a honey comb sleeper wall up to the wall plate. (9 marks)