

3.18 BUILDING CONSTRUCTION (446)

3.18.1 Building Construction Paper 1 (446/1)

SECTION A (40 marks)

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

1. (a) Name **four** tools that are required for setting out. (2 marks)
(b) Name **two** types of shallow foundations. (2 marks)
2. (a) State **two** functions of fine aggregates in a concrete mix. (1 mark)
(b) Sketch and label a pictorial view of a club hammer. (3 marks)
3. (a) State **four** desirable properties of concrete. (2 marks)
(b) Name **four** materials used for damp proofing buildings. (2 marks)
4. (a) (i) State **two** functions of a toe board in scaffolding. (2 marks)
(ii) Name **two** types of scaffolds. (2 marks)
(b) Give **two** reasons for providing a gate on a construction site. (2 marks)
5. (a) State **two** uses of window sills. (2 marks)
(b) Name the parts of the roof labelled **W, X, Y** and **Z** in **Figure 1**. (2 marks)

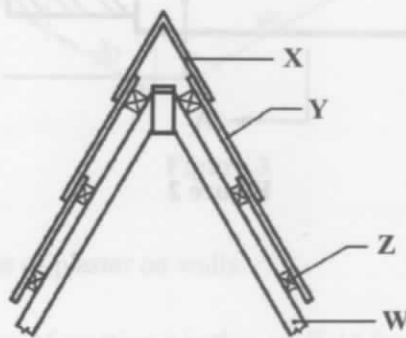


Figure 1

6. (a) Explain the term 'hoarding' as used on construction sites. (2 marks)
(b) Sketch the cross-sectional symbols for the following: (2 marks)
(i) Concrete wall;

12. Figure 2 shows the plan of a section of a window opening.
- (ii) Wall plate;
 - (iii) Timber wall skirting;
 - (iv) Brick wall.
7. (a) Name **four** safety wear required when fixing iron sheets on a roof. (2 marks)
- (b) Describe the following roof members: (2 marks)
- (i) Tie beam;
 - (ii) Purlin.
8. State **two** functions of each of the following openings in buildings: (4 marks)
- (a) Windows;
 - (b) External doors.
9. State **four** functions of skirtings on a building. (2 marks)
10. **Figure 2** shows the plan of a section of a window opening. (2 marks)
- Sketch and label a cross-section through A.A. (4 marks)

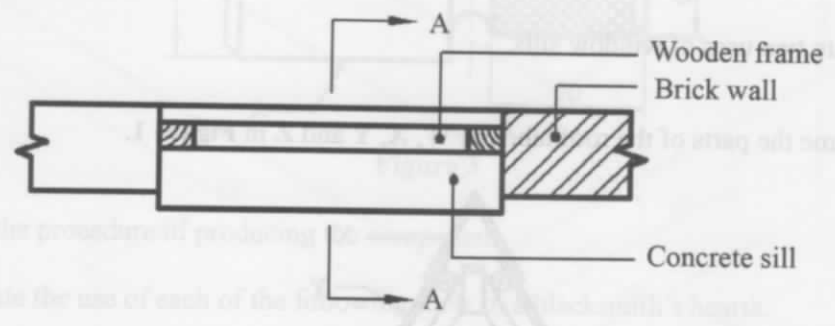


Figure 2

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 to spend not more than **25 minutes** on **question 11**.

- 11.** **Figure 3** shows a pictorial view of a shaped block. Draw the three views of the block **Full Size** in third angle orthographic projection. **(15 marks)**

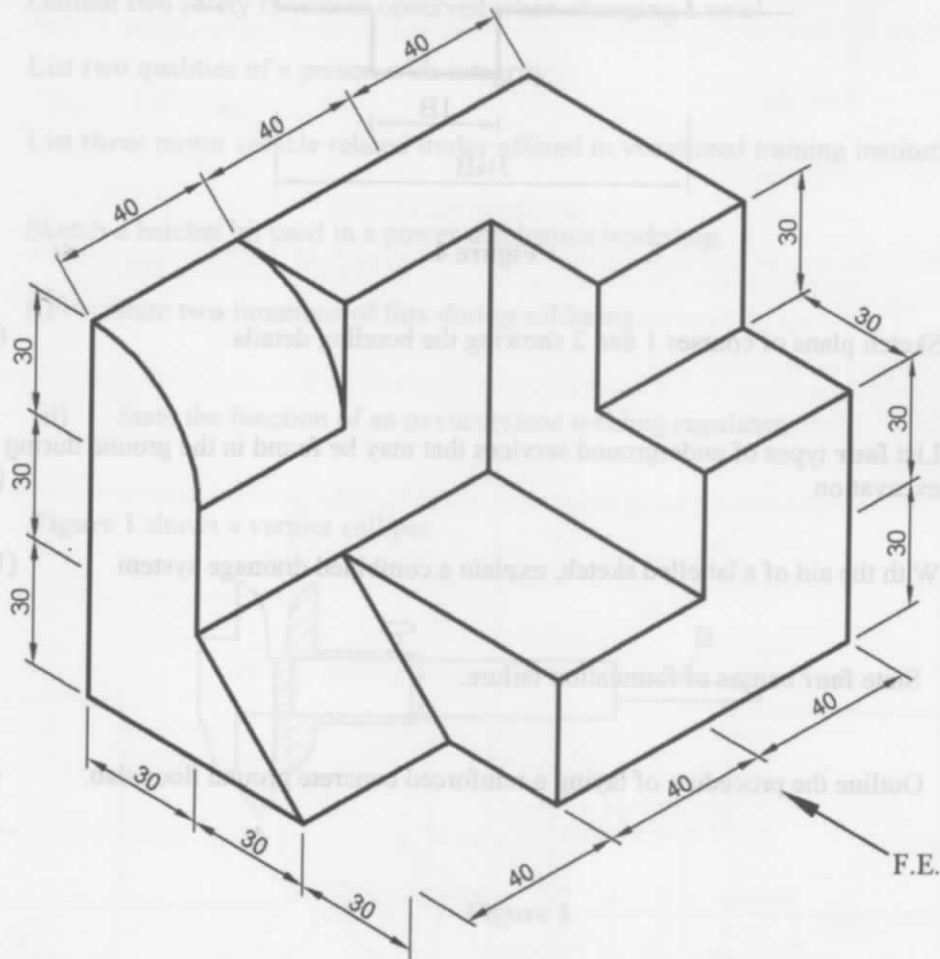


Figure 3

- 12.**
- (a) State **three** functions of plaster on walls. **(3 marks)**
 - (b) Outline the procedure of erecting a putlog scaffold for wall construction. **(6 marks)**
 - (c) Use sketches to show **three** methods of preventing damp penetration through a ground floor slab. **(6 marks)**

13. (a) Outline the procedure of laying the first corner block on the ground floor slab. (7 marks)

(b) Figure 4 shows a plan of a one brick thick wall in flemish bond with an attached pier.

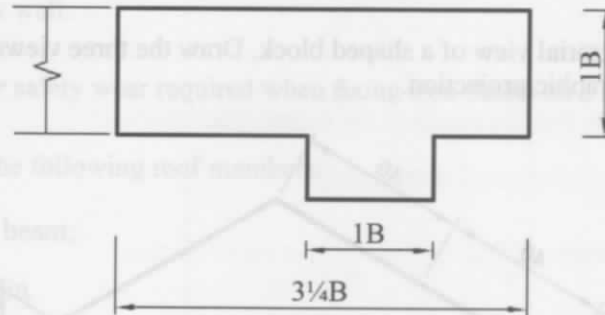


Figure 4

Sketch plans of courses 1 and 2 showing the bonding details. (8 marks)

14. (a) List **four** types of underground services that may be found in the ground during site excavation. (4 marks)

(b) With the aid of a labelled sketch, explain a combined drainage system. (11 marks)

15. (a) State **four** causes of foundation failure. (4 marks)

(b) Outline the procedure of laying a reinforced concrete ground floor slab. (11 marks)