

**29.18 BUILDING CONSTRUCTION (446)**

**29.18.1 Building Construction Paper 1 (446/1)**



**MANYAM FRANCHISE**  
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**SECTION A (40 marks)**

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

- 1 (a) State **two** services required in a construction site. (1 mark)
- (b) Name **four** factors that may influence the type of building to be constructed in a particular region. (2 marks)
- 2 (a) Using a labelled sketch, show the treatment of the trench sides to a shallow excavation without timbering. (2 marks)
- (b) Give **two** reasons for placing hardcore in a building. (2 marks)
- 3 Give **two** advantages and **two** disadvantages of fixing a door frame in position after finishing the wall construction. (4 marks)
- 4 (a) List **four** factors that influence the choice of pipe for installing water in a domestic house. (2 marks)
- (b) Explain **two** reasons for planting flowers around a building. (2 marks)
- 5 (a) Explain **two** core areas covered by the Factory Act as applied in the construction industry. (2 marks)
- (b) State **two** factors that determine the strength of mortar. (2 marks)
- 6 (a) State the functions of each of the following components of a metal scaffold:  
(i) double coupler;  
(ii) swivel coupler. (2 marks)
- (b) Figure 1 shows an outline plan of a building.

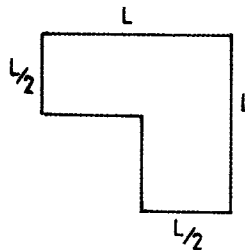


FIGURE 1

With the aid of sketches, show three ways of checking squareness using diagonals.

(3 marks)

- 7 (a) Figure 2 shows the elevation of a stepped foundation at the change of ground level.

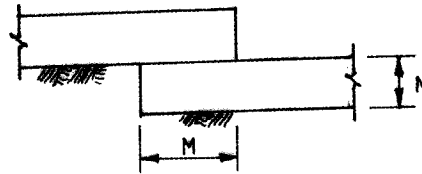


FIGURE 2

State the building code requirements for the maximum dimensions allowed for the lengths marked **M** and **N**. (1 mark)

- (b) State **four** activities that are carried out to even out a trench bottom. (2 marks)
- 8 (a) Give the reason for establishing a datum peg on a construction site. (1 mark)
- (b) List **four** positions on an external wall that may require damp proofing. (2 marks)
- (c) State **two** functions of a wall plate. (2 marks)
- 9 (a) List **four** types of floor finishes. (2 marks)
- (b) Sketch and label a kingpost truss for a span of 6m. (3 marks)

- 10 Figure 3 shows a circle of radius 10mm and a point P, 50mm from the centre of the circle.

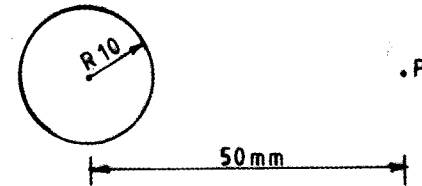


FIGURE 3

Draw the circle and construct a tangent from point P. (3 marks)

**SECTION B (60 marks)**

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

- 11** Figure 4 shows a pictorial view of a block.

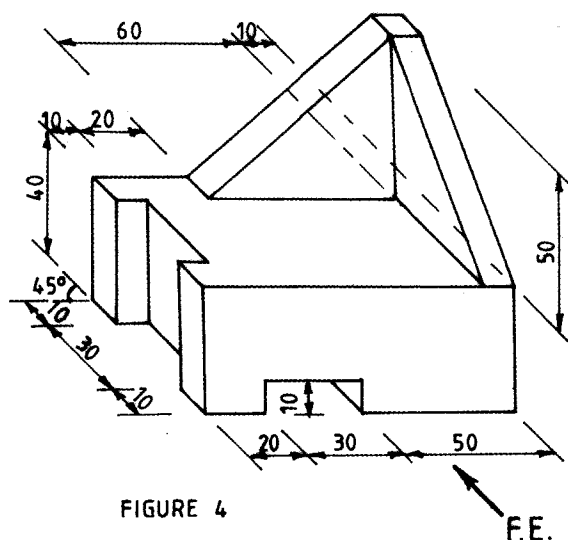


FIGURE 4

Draw full size the three views of the block in 1<sup>st</sup> angle projection. Insert **two** major dimensions in each view. (15 marks)

- 12** (a) State **three** factors that govern the pipe layout of a drainage system. (3 marks)  
 (b) Using a labelled sketch, describe a combined drainage system. (12 marks)
- 13** (a) State **five** causes of failure in foundations. (5 marks)  
 (b) Outline the procedure for laying a concrete ground floor. (10 marks)
- 14** (a) State **four** functions of plasters. (4 marks)  
 (b) Outline the procedure for erecting a dependent timber scaffold against a masonry wall. (5 marks)  
 (c) Explain **three** ways of preventing dampness penetration into the walls of a building. (6 marks)

- 15 (a) Outline the procedure of marking out and erecting a one course foundation wall on a strip foundation at the corner of a building. (7 marks)
- (b) Figure 5 shows the plan of a one brick thick wall with a pier and a T junction built in English bond.

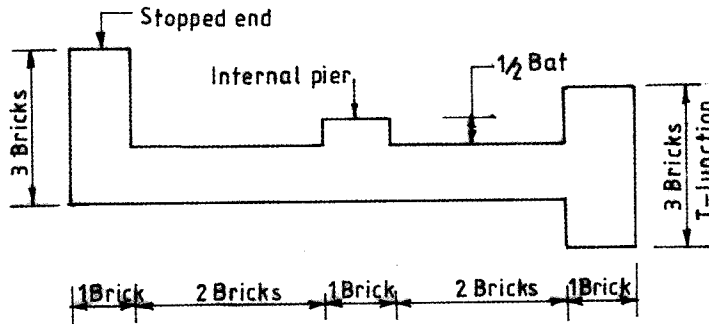


FIGURE 5

Sketch plans of alternate courses of the wall showing the bonding details.

(8 marks)