

K-121

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Seat No.	
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**S.E. (Civil/Envi.) (Part-I) (Semester- III) (Revised)**

**Examination, 2013**

**BUILDING CONSTRUCTION**

**Sub. Code : 42657**

**Day and Date : Monday, 10-06-2013**

**Total Marks : 100**

**Time : 1.30 p.m. to 5.30 p.m.**

- Instructions :**
- 1) **Que. No.3 is Compulsory.**
  - 2) **Solve any two of the rest four questions from section I.**
  - 3) **Solve second section on a full imperial sheet.**
  - 4) **Assume suitable data/scale if necessary and mention it.**

**SECTION-I**

- Q1) a)** What are the requirements of good building stone? List the different types of stones giving their suitability in construction works. [8]
- b)** What are the essential constituents of good brick earth? How is the quality of brick affected by the excess of one or other of the constituents? [8]
- Q2) a)** What is meant by Rapid Hardening Cement? What are the conditions under which it is used? [8]
- b)** What are the characteristics of good timber? What are the common uses of timber in building industry? [8]
- Q3)** Draw to a suitable scale, plan and elevation of a rectangular combined footing of size 1.3m x 2.4m with two columns of size 0.25m x 0.25m symmetrically on both the sides. The depth or thickness of footing is 0.30m and the depth of foundation is 1m below ground level. (Do not show reinforcement details). [18]
- Q4) a)** What is the significance of bonding in brickwork? Explain by sketches the difference between English bond and double Flemish bond. [8]
- b)** Classify various types of stone masonry. Draw typical sketches to illustrate the same. [8]

**P.T.O.**

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[16]

**Q5)** Write notes on the following (Any 4).

- i) Types of mortar
- ii) Curing of Concrete
- iii) Damp Prevention
- iv) Building Components
- v) Fine and Coarse Aggregates
- vi) Formwork

**SECTION-II**

**Q6)** Draw to a scale of 1:10, a sectional plan, Sectional side view and Elevation of a bathroom door, having clear opening 750mm x 2100mm. [25]

**Data:**

Teak Wood frame	125mm x 65mm
Shutter	1 No
Style	125mm x 35mm
Top Rail	125mm x 35mm
Bottom Rail	125mm x 35mm
Lock Rail	150mm x 35mm
Freeze Rail	125mm x 35mm

Shutter consists of two panels of 12mm thick waterproof plywood and one glass panel of 3mm thick.

**Q7)** Design and draw plan and sectional elevation of RCC dog legged stair for the following data : [25]

Storey height	: 3m
Stair width	: 0.90m
Staircase size	: 2m x 4.5m (internal).

Show railing details. (Do not show reinforcement details).

Write design steps along side of the staircase drawing.

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