

# 17308

**21314**

**3 Hours / 100 Marks**

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data, if necessary.
- (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

1. a) Attempt any **SIX** of the following: 12
- i) Define foundation.
  - ii) Enlist any four tools and plants used for stone masonry.
  - iii) State the functions of arch.
  - iv) Define the term 'Newel Post' with reference to stairs.
  - v) Enlist any four types of stairs.
  - vi) Write any two objects of pointing.
  - vii) What are the various types of crack ?
  - viii) Define 'Prestressed concrete'.

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b) Attempt any **TWO** of the following:

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- i) Differentiate between load bearing structure and framed structure.
- ii) Enlist any eight precautions which are required to be taken while marking layout on ground for a structure.
- iii) What are the various methods to dewater deep excavation ? Explain any one.

2. Attempt any **FOUR** of the following:

16

- a) Enlist various building components of superstructure. Explain any one.
- b) What are the general principles of earthquake resistant structures while planning ?
- c) Explain timbering and strutting for foundation trench.
- d) What are the requirements of good foundation ?
- e) Enlist any four precautions to be taken while constructing foundation in black cotton soil.
- f) Enlist any four terms used in stone masonry. Explain any one.

3. Attempt any **FOUR** of the following:

16

- a) Which type of stone masonry will you suggest for pitching of earthen dam ? Why ?
- b) Enlist various types of doors. Explain any one.
- c) Give the reasons to justify the following statements.
  - i) Normally the bottom and lock rails are made wider than top rails.
  - ii) In ledged and braced doors, the braces are made to incline upwards from the hanging edge.

- d) Sketch neatly large view of stair to show details of the following:
  - i) Nosing
  - ii) Baluster
  - iii) Waist
  - iv) Tread
- e) State any four types of floors. Explain any one.
- f) Differentiate between pitched roof and flat roof.

**4. Attempt any FOUR of the following:**

**16**

- a) Give the reasons for the following:
  - i) The wooden floor is provided in the auditoriums.
  - ii) For multi-storeyed building, a flat roof is the only choice.
- b) Describe the procedure for carrying out the plaster in cement mortar in two coats.
- c) Enlist any four types of pointing. Explain any one.
- d) Which type of paint is suitable for exposed rough surface ?  
Why ?
- e) What are the requirements of a good formwork ?
- f) Describe the procedure for water proofing of sanitary block after construction.

- 5. Attempt any FOUR of the following: 16**
- a) How will you prevent subterranean termites ?
  - b) What are the various methods of prestressing the concrete ? Explain any one.
  - c) State any four types of shallow foundation. Explain any one.
  - d) What are the advantages and disadvantages of ready-mix-concrete ?
  - e) Explain meaning and application of 'Tremix concreting'.
  - f) Explain the applications of Roller compacted concrete and High impact resisting concrete.
- 6. Attempt any TWO of the following: 16**
- a) Explain under-reamed piles with respect to meaning, sketch, advantages and disadvantages.
  - b) Explain any four types of bonds in brickwork with neat sketch.
  - c) Explain prefabricated construction with respect to meaning, types, advantages and disadvantages.
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