

# 19301

**21718**

**4 Hours / 100 Marks**

Seat No.

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

**Marks**

- 1. Attempt any FIVE of the following:** **20**
- a) Differentiate between true ceiling and false ceiling.
- b) State various waterproofing agents.
- c) Explain Role of steel in R.C.C. structures.
- d) Describe manufacturing process of cement tiles.
- e) Enlist different materials used in roofing with their standard sizes.
- f) State different terms used in pitched roof with sketch.
- g) Sketch types of staircase according to basic requirement and layout.

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- 2. Attempt any TWO of the following:** **16**
- a) Draw king post roof truss with neat labelled sketch also detailing of components. Scale 1:10
  - b) Enlist different types of ceiling finishes. State their sizes, availability and uses.
  - c) Explain following terms:
    - (i) Retardants
    - (ii) Safe bearing capacity
    - (iii) Hardeners
    - (iv) Piles (if required draw sketches)
- 3. Attempt any TWO of the following:** **16**
- a) Enlist different market forms of steel with properties and uses. Explain with neat sketches.
  - b) Sketch :
    - (i) Double joist timber floor
    - (ii) Triple joist timber floor
  - c) Draw queen post roof truss, explaining all essential members. (Scale 1:10)
- 4. Attempt any TWO of the following:** **16**
- a) What are the functional requirement for foundation?
  - b) Explain different types of flooring with their size, availability and uses.
  - c) Draw sketches of grillage and raft foundation with neat and labelled drawing.

- 5. Attempt any TWO of the following:** **16**
- a) Draw constructional details for timber stair case with labelled sketch. Scale 1:10
  - b) Explain following roofing material with their applications and uses Asbestos sheets, GI sheets, Proflex sheets, CCGI sheets.
  - c) Classify pitched or sloped roof, flat roof, shell roof, domes with suitable sketches.
- 6. Attempt any TWO of the following:** **16**
- a) Sketch R.C.C. staircase with details of balustrades and handrails. Scale 1:10.
  - b) Explain:
    - (i) Gypsum plaster board
    - (ii) Fibre board
    - (iii) Glass wool tiles
    - (iv) Asbestos tilesWith properties, availability, sizes uses.
  - c) Describe following with characteristics availability and uses:
    - (i) Water repellent
    - (ii) Synthetic Resins
    - (iii) Accelerators
    - (iv) Fly Ash - concept only
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