

SE Civil - III

(c)

30-11-2023

19
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Duration: 3 Hours

Marks: 80

Note: (1) Q. No. 1 is compulsory.

(2) Attempt any 3 from the remaining.

1. It is proposed to develop a Hospital as a (G+1) RCC framed structure with the following requirements: (Floor-Floor Height = 3.9 m)

- i) Entrance lobby with inquiry counter [min. 3 m wide]
- ii) Consulting rooms [4 nos.] (15 m² each)
- iii) Pharmacy (30 m²)
- iv) Pathology lab (50 m²)
- v) Radiology lab (50 m²)
- vi) Emergency ward (50 m²)
- vii) Female & children's ward (100 m²)
- viii) Male ward (100 m²)
- ix) Hospital management's office (30 m²)
- x) Hospital staff room (40 m²)
- xi) Operation theatre (50 m²)
- xii) ICU (50 m²)
- xiii) Canteen (50 m²)

Provide sanitary units, staircases, openings, passages etc. as per bye-laws.

a) Draw Developed plan of Ground Floor (with walls).

b) Draw Single Line plan of First floor.

2. a) Draw the Front Elevation of the structure designed in Q.1.

b) Draw the Sectional Elevation of structure designed in Q.1.

3. a) Draw the foundation plan & Section of a footing, structure designed in Q.No.1.

b) Plan a Residential Bungalow (Ground Floor Structure) as RCC Framed Structure with the following:

- (i) Living-cum-Dining = 24 Sq.m
- (ii) Master's Bed Room (with A.T) = 22 Sq.m
- (iii) Dining = 14 Sq.m.
- (iv) Bed Room = 15 Sq.m
- (v) Guest Room = 16 Sq.m.

Provide Toilets, Passages etc. as per By-laws.

Assume Floor-Floor Height = 3.0 m.

Draw Ground Floor Single Line PLAN

4. Draw the One-Point Perspective of a clubhouse of size (12 x 8) m and height 3.6 m. It has a pitched roof of height 2.4 m.

Provide adequate door(s), windows (with chajja) and entrance steps. Assume suitable station point, height of observer etc. and clearly mention all assumptions. used (if any).

Draw Plan, Front Views & Perspective properly.

5. a) Explain sun-path diagram & Wind-Rose diagram

b) Enlist the principles of Architectural planning & explain properly

c) Write detailed notes on Computer aided drawing (CAD), with all features.

d) Enlist the types of Shallow foundations & explain combined footing in detail.

6. a) Explain the Principles of Town Planning.

b) Write notes on Master Plan & Regional Plan

c) Explain Redevelopment of buildings, with proper procedure

d) Write notes on Green Buildings Concept & Built Environment

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