

AV – 2949

Sixth Semester B. Arch. (CGS) Examination

BUILDING MATERIALS AND CONSTRUCTION – VI

Paper – 06 AR 02

(USC – 10048)

P. Pages : 2

Time : Four Hours]

[Max. Marks : 80

- Note :** (1) All questions carry equal marks.
(2) Answer **Four** questions.
(3) Question No. **One** is compulsory.
(4) Due credit will be given to neatness and adequate dimensions.
(5) Illustrate your answer wherever necessary with the help of neat sketches.
(6) Use pen of Blue/Black ink/refill only for writing the answer book.

1. A seven storied R.C.C. framed structure building has to be constructed on a loose soil, what type of foundation would you adopt ? Explain in detail the process of constructing out such foundation. 20
2. (a) What is "Pile" foundation and pile cap, under which circumstances is it used ? Show the detail of pile cap reinforcement with two group of piles ?
(b) What is meant by the term "Patent Glazing" ? Explain in detail the various types of patent glazing available in market. 20

OR

3. Design a mild steel truss roofing system for a work-shop shade having Width 18m and Length 40m. Draw to a suitable Scale key plan, Elevation detail, Sectional Elevation of M.S. truss and Fixing details at Ridge level, Fixing details between :— M.S. truss and column support and Fixing of strut with tie-beam. 20
4. (a) Distinguish between pre-cast building element and cast-in-situ construction.
(b) What is the purpose of under-pinning ? Explain with neat sketches the detail process of under pinning. 20

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OR

5. (a) What is shoring ? Mention the situation where shoring are needed. Explain any one of them in detail with neat sketch.
- (b) State the advantages of steel trusses and Draw the different types of steel trusses for different span. 20
6. Design and draw a North Light Roofing system for a factory measuring 24mX48m. Draw to a suitable scale the following :—
- (a) Key plan showing stanchion position and trusses.
- (b) Detail Sectional Elevation.
- (c) Connection between truss and stanchion.
- (d) Roofing and Gutter Fixing detail. 20

OR

7. Describe with neat sketches any **Three** of the following :—
- (1) End-bearing and Friction pile.
- (2) Rolled steel section as a structural component for structural steel construction.
- (3) Advantages and disadvantages of pre-cast pile.
- (4) Distinguish between prestressed concrete and Reinforced concrete.
- (5) Monitor Light roof truss and North Light roof truss.
- (6) Lantern's. 20

