B.Arch. Eighth Semester (Architecture Engineering) (CGS)

10066 : Advanced Construction - II : 08 AR 02

P. Pages : 2 | AU - 3081

Time : Four Hours | Max. Marks : 80

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Notes :
1. Question No. **one** is compulsory.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.
4. Retain the construction lines.
5. Illustrate your answer necessary with the help of neat sketches.
6. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) Explain the difference between R.C.C. frame structures and portal frame structures? **5**

b) Design and draw the ferrow cement techniques applied for the construction of building components? **15**

2. a) Explain with sketches the laminated timber portal frames. **5**

b) Design and draw a structural roofing system for a multipurpose hall having dimensions 18m x 24m by steel portal frames. Assume suitable height for a multipurpose hall. Draw the following to a suitable scale. **15**

i) Key plan and elevation.

ii) Detailed sectional elevation.

iii) Purlin fixing details.

iv) Ridge detail.

v) Any 5 isometric view.

OR

3. a) Explain with sketches the importance of temporary structures and its purpose? **5**

b) Design and draw a temporary structure for a exhibition space having dimensions 20m x 60m by using composite materials. **15**
Draw the following to a suitable scale.

a) Key plan showing temporary frame.

b) Detailed section showing purlin fixing.

c) Details of frame fixing details on ground floor.

d) Details of temporary modules.

e) Joinery details.

4. Explain and draw to a suitable scale of the following.

   a) Geodesic shell structures. 10

   b) Hyperbolic paraboloid shell structures. 10

OR

5. a) Explain with sketches the chronological development of shell structures with span and thickness ratio? 10

   b) Explain and draw to a suitable scale the Gitter Kuppel shell structures. 10

6. a) Explain with sketches the concept and importance of prestressed concrete? 5

   b) Explain with diagram any two methods of prestressing? 15

OR

7. Explain with sketches the plan and sections of differem elevator's? 20

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