

B.Arch. Eighth Semester (Architecture Engineering) (CGS)
10066 : Advanced Construction-II
08 AR 02

P. Pages : 2
Time : Four Hours



AV - 3200
Max. Marks : 80

- 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 with diagram the lamella frame structures? 5
b) Design and draw a structural roofing system for an industry having dimension 15 m x 21 m by concrete portal frames. Assume suitable height for an industry. Draw the following to a suitable scale : 15
 - i) Key plan & Elevation
 - ii) Detailed sectional elevation of concrete portal frames.
 - iii) Purlin fixing details
 - iv) Ridge detail
 - v) Any isometric view
2. a) Explain with sketches the chronological development of shell structures with span and thickness ratio ? 10
b) Explain with sketches the comparison of R.C.C. and steel space frame structures ? 10

OR

3. Explain and draw the following to a suitable scale :
 - a) Conoid and Barrel vault shells. 10
 - b) Schwedeler shells 10
4. a) Explain with diagram the use of modular techniques to construct temporary structures. 5

- b) Design and draw a temporary structure for a multipurpose hall having dimensions 15 m x 25 m by using composite materials. Draw the following to a suitable scale : **15**
- i) Key plan & Elevation
 - ii) Detailed elevation & section
 - iii) Details of modules used
 - iv) Joinery fixing details.

OR

5. a) Explain the importance of temporary structures and its purpose ? **5**
- b) What is prestressed concrete ? Explain any two methods of prestressed concrete ? **15**
6. a) Explain historical development of ferrocement techniques ? **5**
- b) Explain with sketches the ferrocement techniques are cost effective for the building components ? **15**

OR

- 7 a) Explain with sketches the plan and sections of escalator's ? **10**
- b) Explain with sketches the examples of prestressed concrete ? **10**
