

Roll No .....

**AR-412 (GS)**  
**B.Arch. VII Semester**  
Examination, November 2019  
**Grading System (GS)**  
**Advanced Building Construction - VI**

*Time : Three Hours*

*Maximum Marks : 50*

- Note:** i) Attempt any five questions.  
ii) All questions carry equal marks.  
iii) Draw neat sketches wherever is required.
1. Explain the importance of load bearing capacity of soil. Explain the foundation required for water clogging region.
  2. Explain and draw to a suitable scale the type of combine foundations you will suggest for a ten storey building having dimensions 20 m × 30 m in black cotton soil. Draw the sectional plan, sectional Elevation and view to a suitable scale.
  3. Explain with sketches origin and causes for earthquakes. Explain what type of foundation is suitable for earthquake prone regions. Explain with sketches retrofitting of earthquake affected structures.

4. Design and draw to suitable scale a covered parking lot for 20 cars with folded plate roof above. Assume suitable data as required.
5. What are the main principles to be considered in designing the space frame structure for factory measuring 30m × 150m? Space frame is proposed for shorter span. Indicate by sketches the details of various components used in space frame. Also assume width of space frame.
6. Write short notes and make sketches on the following (Any two):
  - a) North Light Truss
  - b) Industrial Glazing
  - c) Airport Roofs
  - d) Pile Foundation
7. What are long span structures? Explain in detail with two case studies.
8. Design and draw to suitable scale temporary structure (Pandal) for Annual gathering of college the capacity of Pandal is for 800 persons. Assume suitable data. Draw key plan, sectional elevation and necessary joinery details.

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