

ROLL NO :

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Total number of pages:[1]

Total number of questions: [6]

**B. ARCH. - 1<sup>st</sup> Sem.**  
**Structure System-I**  
**Subject Code : ARC-105**  
**Paper ID :**

Time allowed: 3 Hrs

Max Marks: [40]

**Important Instructions:**

- The paper consists of three parts A, B and C. A total of four questions are to be attempted from all the parts and one question from each part is compulsory.
- Each question carries 10 marks.

**PART-A**

- Q 1. a) Explain the different conditions which are required by a structure for its stability.  
b) Write a short note on Arch and Vault.

Or

- Q 2. a) What do you mean by Geodesic Dome and explain the features of a Geodesic dome.  
b) Explain the various applications of cellular system used in buildings.

**PART-B**

- Q 3. a) What is a beam. Discuss the various classifications of beams.  
b) Explain different types of slabs in detail.

Or

- Q 4. a) Explain the different characteristics of vector active structures.  
b) Differentiate between plane truss and space truss.

**PART-C**

- Q 5. a) Explain in detail that how do the cables support vertical loads.  
b) How would you classify arches on the basis of various criterias.

Or

- Q 6. a) Explain the types of Pneumatic Structures in detail.  
b) Write a short note on Folded plates.