

- b. Write the various reliable proportioning techniques in modular construction practices. Also discuss any one of them in detail.

7. Attempt any one part of the following : (1×10=10)

- a. With the help of their comparative advantages and disadvantages along with their uses; explain the conventional and cast-in-situ construction method. Also write about the role of Industrial Building System (IBS) in construction.
- b. How will you use the cross-laminated timber material as a low-impact building material? Also write its advantages and limitations. Also give an example of cross-laminated timber structure.



(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 2295021

Roll No.

B.TECH

Regular Theory Examination (Odd Sem-VII), 2016-17

PRECAST AND MODULAR CONSTRUCTION PRACTICES

Time : 3 Hours

Max. Marks : 100

Note : Attempt all Section. If require any missing data; then choose suitably.

SECTION - A

1. Attempt all question in breif. (10×2=20)

- Which mechanis in involved in the reinforced concrete?
- Write the advantages of prefabricated building components.
- What is rap trap bond.
- Write the design steps of precast pre cast components.
- Write difference between form work and scaffolding.
- Define lamination.
- What do you mean by productivity analysis?

- h) Write the grade of concrete of RCC.
- i) Write the reusability of form work.
- j) What are the reliable proportioning concepts?

SECTION - B

- 2. Attempt any three of the following : (3×10=30)**
- a. Explain the advantages of prefabricated building components. Also Discuss the cyclic behaviour of prestressed precast wall.
 - b. Write the essential steps to choose the quality joints in prefabricated structures. Also write the requirements of an ideal structural joints in prefabrication
 - c. Write the design procedure of formwork. Also write a short note on the reusability.
 - d. What is the role of the various reliable proportioning techniques in modular construction practices? Give the name of these techniques and discuss any one technique in detail.
 - e. Explain the concept of modular coordination with the help of modular planning grid. Also write about any two construction modules with the help of their neat sketches.

SECTION - C

- 3. Attempt any one part of the following : (1×10=10)**
- a. What are the various components of prefabricated

building? Discuss in detail. Also discuss the design details of precast column and draw its neat sketch.

- b. Enlist the systems of precast construction. Explain.

4. Attempt any one part of the following : (1×10=10)

- a. I. Explain strut and tie method for connections zones.
- II. What are the various advantages of using ready mix concrete over site mix concrete? Discuss in detail.
- b. Discuss the production procedure of ready mix concrete. Also discuss in brief the precautions have been taken during its production.

5. Attempt any one part of the following: (1×10=10)

- a. What are the basic issues for the implementation of Social Housing programs? Write short notes on Indira Avas Yojna and Manyvar Kanshi Ram Yojna.
- b. Adoption of pre-cast elements in partial fabrication is a cost effective and economical technique for low cost housing development; Comment on this. List any three types of pre -cast element systems with suitable sketch.

6. Attempt any one part of the following : (1×10=10)

- a. Where and how do the professionals use the 'Fibonacci series' in modular construction practices? Explain in detail.