

No: 114CK

**R13**

**WAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B.Tech II Year II Semester Examinations, May - 2016**

**BUILDING MATERIALS, CONSTRUCTION AND PLANNING**

(Common to CE, CEE)

**Time: 3 Hours**

**Max. Marks: 75**

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit.

Each question carries 10 marks and may have a, b, c as sub questions.

**PART- A**

**(25 Marks)**

- 1.a) List out the qualities of a good building stone. [2]
- b) Differentiate between Natural and artificial seasonings. [3]
- c) What are the ingredients of Portland cement? [2]
- d) Define mineral admixtures and give its uses. [3]
- e) List out types of floors. [2]
- f) Describe the importance of fire protection in any type of building. [3]
- g) Distinguish between plastering and pointing. [2]
- h) Define scaffolding and its uses. [3]
- i) Give the classification of buildings as per National Building code. [2]
- j) What do you understand by principles of planning of a building? [3]

**PART-B**

**(50 Marks)**

- 2.a) What are the constituents of good brick earth? Explain about the functions of its ingredients.

- b) List out the methods of quarrying and explain any one method. [5+5]

**OR**

- 3.a) Explain about the defects in timber with neat sketches.

- b) Describe the advantages and uses of Aluminum. [5+5]

- 4.a) List out the laboratory tests on cement and explain any one test.

- b) Explain about the dry process of manufacture of cement with flow diagram. [5+5]

**OR**

- 5.a) Describe the field tests on cement.

- b) List out the chemical admixtures and its uses.

- c) Briefly explain about hydration of cement. [3+3+4]

- 6.a) List out types of roofs and explain any one type with a neat sketch.

- b) Enumerate types of foundations.

- c) List out types of arches. [4+3+3]

**OR**

- 7.a) What do you mean by air-conditioning? Explain about any one method.

- b) Describe about the ideal requirements of acoustic design. [5+5]

List out types of bonds in brick masonry and explain any one bond with a neat sketch.

- b) Explain about the properties and advantages of Aluminum Composite Panel (ACP). [5+5]

**OR**

9.a) Differentiate between brick masonry and stone masonry.

- b) Define shoring. Explain about any one method of shoring. [5+5]

10.a) Write short notes on:

i) Building bye-laws for off-sets

ii) Bye-laws for open area in building.

- b) Explain about the merits and demerits of building bye-laws. [5+5]

**OR**

11.a) How do you achieve roominess and flexibility in a building? Explain with examples.

- b) Explain with suitable examples the significance of 'aspect' in planning a residential building and prepare a typical aspect diagram for the area where the direction of prevailing breeze is from North-West. [5+5]

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