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Sub Code: NCE 302/ ECE 302/ CE 304

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B. TECH.
(SEM III) THEORY EXAMINATION 2017-18
BUILDING MATERIALS & CONSTRUCTION

*Time: 3 Hours**Total Marks: 100***Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief. 2 x 10 = 20**

- a. What do you understand by Blown bitumen?
- b. What are the forces responsible for causing natural defects in timber?
- c. What are glass blocks?
- d. Write the principle of cold working.
- e. What are the constituents of a varnish?
- f. Differentiate between winder and flier.
- g. What do you mean by waffle slab?
- h. Draw the sketch of a paneled door with name of its parts.
- i. What are the requirements of a good plaster?
- j. The thermo setting plastic are used for making paints and varnishes. Why?

SECTION B**2. Attempt any three of the following: 10 x 3 = 30**

- a. What is the difference between paints and varnishes? Show the role of various ingredients of all the paints with the help of their different properties.
- b. List the various phases of manufacturing the brick. Describe briefly any two operations in detail?
- c. Describe stair case and also define its technical term with the help of diagram. What are the requirements of a good staircase?
- d. Write the criteria for fixing sizes of doors and windows. Describe various types of windows.
- e. Explain fire protection of building, its limitation and characteristics in detail.

SECTION C**3. Attempt any one part of the following: 10 x 1 = 10**

- (a) What do you mean by seasoning of timber? Also explain the all methods of seasoning of timber.
- (b) As a site engineer in which manner you will face the efflorescence problem in brick and the lime bursting problem in tiles? Also give the solution to avoid these problems.

4. Attempt any one part of the following: 10 x 1 = 10

- (a) Explain different features of planning of residential building. How does availability of land affect the planning of buildings?
- (b) What are its advantages of a cavity wall? Explain general features of a cavity wall with the help of neat sketches.

- 5. Attempt any *one* part of the following: **10 x 1 = 10****
- (a) Briefly describe the properties and uses of heat insulating materials.
 - (b) What are the constituents of glass? Give the functions of each of them. What factors should be considered while selecting glass for a building?
- 6. Attempt any *one* part of the following: **10 x 1 = 10****
- (a) What is the role of pitched roof in the construction work? With the help of their neat sketches classify any five types of pitched roof.
 - (b) Classify various types of lintels and discuss their relative use.
- 7. Attempt any *one* part of the following: **10 x 1 = 10****
- (a) Explain the principle and methods of building maintenance.
 - (b) What are the fibrous plaster boards? Describe the process of making fibrous plaster boards.