

**CE - 404****B.E. IV Semester**

Examination, December 2015

**Construction Materials And Techniques****Time : Three Hours****Maximum Marks : 70**

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.  
 ii) All parts of each question are to be attempted at one place.  
 iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.  
 iv) Except numericals, Derivation, Design and Drawing etc.

1. a) State with reasons, the kind of stone you would recommend for use in construction of -  
 i) Ornamental corner of a building  
 ii) External wall of a building situated on the seashore  
 b) Distinguish between 'dry-rot' and 'wet-rot'.  
 c) What are the characteristics of good brick earth?  
 d) What are the common defects in timber? Describe the various method employed in preserving timber and increasing its durability.  
 OR  
 Describe various flooring tiles and their characteristics.
2. a) What are the characteristics of fly ash bricks?  
 b) Explain stabilized mud blocks.  
 c) Write short note on use of industrial waste as building material.  
 d) Explain briefly the following plastics - Polyvinyl chloride, Silicones, Epoxy Resins.

OR

[2]

What is meant by damp-root construction and what are the materials used for the damp-roof construction?

3. a) What is the purpose of providing foundations?  
 b) Define SBC of soil.  
 c) What do you understand by timbering? Explain with the help of sketches various methods.  
 d) What do you understand by grillage foundation? Draw a neat sketch of steel grillage foundation for a steel stanchion. Explain method of construction.

OR

What are the problems of foundations on black cotton soils? What points should be kept in mind while designing foundation in such soils?

4. a) Show with the help of sketches various types of closer bricks.  
 b) What do you understand by a squint junction? Draw typical sketches showing squint junction in English bond.  
 c) How the sizes of doors and windows are fixed?  
 d) Define a cavity wall. What are its advantages. Explain, with the help of sketches, general features of a cavity wall.

OR

What is distemper? How is it prepared? Discuss various types of distempers.

5. a) Define Pitch, Hip, Eaves, Verge.  
 b) What is meant by anti-siphonage pipe? Explain its function.  
 c) What do you understand by reverberation? How do you determine reverberation time?  
 d) Explain with sketches various types of R.C.C. floors. Where do you use a flat slab floor?

OR

Explain various principles that should be kept in mind while designing a house drainage system.

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