

Roll No .....

**CE-404**

**B.E. IV Semester**

Examination, December 2016

**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) List out the characteristics of good building stone.  
b) Explain the seasoning of timber before its use as building material.  
c) Write the different tests conducted on bricks to assess their quality. Brief.  
d) Describe about the different types of flooring tiles.

OR

Describe the manufacturing process of clay bricks.

2. a) Explain about the fly ash and their sources of production in India.  
b) Give the details about materials used in D.P.C.  
c) Write down the characteristics of fly ash bricks.  
d) Describe about any building material made from industrial waste. Also explain about its environmental impact.

OR

Describe the recent advance materials used for flooring works in buildings.

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3. a) Define the term "Bearing capacity" of soil.  
b) Explain about the soil stabilization and its importance.  
c) Write the permissible settlement criteria for building foundation.  
d) Describe the different types of foundations used in building structures.

OR

Explain the causes of foundation failure in black cotton soil. Give the construction details of under-ream pile.

4. a) Explain about the "Brick cavity" wall.  
b) Differentiate between load bearing wall and non-load bearing wall.  
c) Discuss the rule of proportionality.  
d) Describe the different stairs used in buildings.

OR

Describe the different types of distempers used in wall paintings.

5. a) Define the term "Thermal insulation".  
b) List the different types of materials for sound insulation.  
c) Explain the techniques of repairs to cracked buildings.  
d) Describe the different techniques and materials used for low cost housing projects.

OR

Discuss the different types of roofs used in building construction.

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