

Code No: RT21014

R13**SET - 1**

II B. Tech I Semester Supplementary Examinations, June - 2015
BUILDING MATERIALS AND CONSTRUCTION
(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answer **ALL** the question in **Part-A**
3. Answer any **THREE** Questions from **Part-B**

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**PART -A**

- 1 a) What are the qualities of good building stones? Discuss them
- b) Discuss the general principles in Brick Masonry Construction?
- c) Write short notes on Poor lime
- d) Discuss the advantages of flat roof over sloped roof.
- e) What do you understand by the term Damp proof course?
- f) Discuss about particle shape and texture?

**PART -B**

- 2 a) Give the list of explosives used in blasting and explain their composition
- b) Define natural bed of a stone and discuss its importance
- 3 Compare stone Masonry with brick masonry with neat sketches
- 4 List out the constituents of limestone. Explain the importance of each
- 5 a) Define a neat roof and mention its advantages & disadvantages over pitched roofs.
- b) Explain king post truss along with a neat sketch
- 6 a) How do you select the materials and sizes of forms for construction work?
- b) What is pointing? How is it carried out? What are its different types?
- 7 a) Explain how the fineness modulus of coarse and fine aggregate is determined
- b) Explain grading of aggregates based on fineness modulus.

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**R13****SET - 2**

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PART -A

- 1 a) Write about the uses of building stones.
- b) What are the types of masonry
- c) What is meant by M20 grade concrete?
- d) What is a lintel. Explain
- e) Write the procedure of white washing
- f) Define specific gravity

PART -B

- 2 Compare Pan Tiles and Pot Tiles with neat sketches.
- 3 a) Explain the qualities of a good timber
b) Explain defects due to seasoning
- 4 a) Write about various laboratory tests for cement
b) What are various types of cement?
- 5 a) Discuss various modes of failures of an arch. What are the remedies
b) Enumerate, with the help of sketches, various types of arches based on its shape.
- 6 a) What are "breathing" and "non-breathing" types of paints?
b) What are the considerations in application of these paints to the ceiling under the wet areas and wall surfaces?
- 7 a) Classify the aggregates? Explain any one
b) Explain how do you determine moisture content of aggregate

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R13**SET - 3**

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**PART -A**

- 1    a) What do you mean by stone quarrying?
- b) Write about English bond
- c) What is Portland cement
- d) What are the types of floors
- e) What is meant by distempering
- f) Define bulk density

**PART -B**

- 2        Describe briefly the clarification of tar and the specifications of bitumen as a building material
- 3    a) What are the advantages of wood based products?
- b) What is seasoning of timber
- 4        How the tensile strength of cement is determined in laboratory?
- 5    a) Define the following terms; pitch, Hip, Eaves, Cleat and Template.
- b) Explain with sketches, various basic forms of pitched roofs
- 6    a) Mention the important guidelines for the use of plastic emulsion paints.
- b) Give a brief description of the process of painting on different surfaces
- 7        Discuss in detail the method of combining aggregates to obtain specific grading

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(Civil Engineering)

Time: 3 hours

Max. Marks: 70

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2. Answer **ALL** the question in **Part-A**  
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PART -A

- 1 a) What are the properties of building stones
- b) What is aluminum. Discuss
- c) How the initial and final setting time are determined
- d) Write about the concrete floors
- e) What is form work
- f) What is called grading of aggregate

PART -B

- 2 Give the sketches of various finishing surfaces of stones
- 3 a) What are bond stones and for what type of stone masonry it is used?
b) If stones of enough strength are not available for bond stones, what alternative would you adopt
- 4 Explain briefly various methods of manufacture of lime
- 5 a) How are stone stairs constructed and supported
b) How are the treads and risers proportioned?
- 6 a) Give the various specifications for cement plaster and describe how it is carried out on brick masonry
b) Explain methods of curing lime plaster and cement plaster.
- 7 a) Briefly explain how the specific gravity of aggregates is carried out.
b) Write about sieve analysis.