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Total number of printed pages – 2

B. Tech
PCCE 4203

Third Semester Back Examination – 2014
BUILDING MATERIALS AND BUILDING CONSTRUCTION

BRANCH : CIVIL

QUESTION CODE : L 315

Full Marks – 70

Time : 3 Hours

*Answer Question No. 1 which is compulsory and any five from the rest.
The figures in the right-hand margin indicate marks.*

1. Answer the following questions : 2 × 10
- (a) What are artificial stones ?
 - (b) What are varieties of fire bricks and explain anyone in brief ?
 - (c) Name four different types of useful Indian Stones.
 - (d) What do you mean by water cement ratio ?
 - (e) How are bricks classified ? How do they differ in compressive strength ?
 - (f) What is frog ? What are its functions in bricks ?
 - (g) What do you mean by safe bearing capacity of soil ?
 - (h) What is curing of concrete ?
 - (i) Where are the asphalt flooring used ?
 - (j) What do you mean by special repair of building ?
2. (a) What are the different bonds used in a brick masonry ? Explain about English bond 1 brick, 1 1/2 brick and 2 brick thick wall masonry using neat sketches. 5
- (b) Explain the varieties of finishes obtained by dressing of stones. 5
3. (a) What are the causes and effects of dampness in buildings ? What are the materials and methods used for prevention of dampness ? 5
- (b) Why stairs are necessary in buildings ? What are the different types of stairs used in buildings ? 5

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4. Describe the dry process of manufacture of cement. Draw a figure and show various stages of manufacture. 10
5. (a) What are the precautions to be taken while making the use of mortar ? 5
(b) Describe the construction of a cavity wall. What precautions do you observe in its construction ? 5
6. (a) What are the causes of cracks in a building ? Describe the preventive measures. 5
(b) Discuss the suitability of various materials used in plastering. What are the various defects in plastering? How will you rectify them ? 5
7. (a) Explain the requirements of good foundation. What is bearing capacity and explain any one method to find the bearing capacity of soil ? 5
(b) Explain the different types of shallow foundations in detail. 5
8. Write short notes on : 2×5
(a) Reinforced brickwork
(b) Metal stairs
(c) Terrazzo flooring
(d) Segregation and bleeding of concrete
(e) Mix design.

