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Total number of printed pages – 2

B. Tech
PCCE 4203

Third Semester Examination – 2013

BUILDING MATERIALS AND BUILDING CONSTRUCTION

BRANCH : CIVIL

QUESTION CODE : C-478

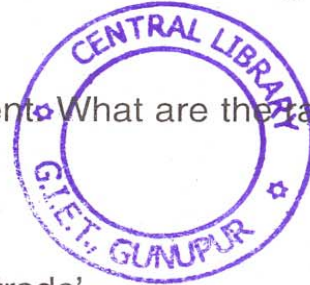
Full Marks – 70

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) Name a few essential component materials for manufacturing a good brick.
 - (b) Name few Indian stones.
 - (c) Write the chemical composition of cement. What are the raw materials used in production of cement ?
 - (d) Name a few admixtures used in concrete.
 - (e) Differentiate between 'baluster' and 'balustrade'.
 - (f) What do you mean by DPC ? Where is it provided ?
 - (g) Give a list of various types of floors.
 - (h) Name a few materials used in damp-proofing.
 - (i) Differentiate between shallow and deep foundations.
 - (j) What do you mean by 'corbel', 'cornice' and 'coping' ?
2. (a) What are various tests performed on a brick to estimate its quality for use in construction works ? 5
- (b) Discuss various tests on cement with their utility. What is mortar ? 5



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3. (a) What do you mean by workability of concrete ? Discuss the factors affecting workability. 5
- (b) What do you mean by grade of concrete ? What is 'Mix Design' ? How do you design a concrete mix ? Explain in brief. 5
4. (a) Discuss the following types of stair with neat sketches : 5
- (i) Dog-legged stair
- (ii) Open newel stair
- (b) Discuss the purpose and method of construction of cavity walls. 5
5. (a) Discuss various types of foundations used in construction of civil engineering structures with neat sketches. 5
- (b) Discuss various types of brick and stone masonry with neat sketches. 5
6. (a) Discuss the factors affecting choice of a flooring material. Also discuss, in brief, the materials used for flooring with their advantages and disadvantages. 5
- (b) What is sand pile ? With neat sketches show different component parts of
- (i) a under-reamed pile foundation and
- (ii) a pier foundation. 5
7. (a) Discuss various causes of cracks in building ? How do you carry put repair works for major cracks in buildings ? 5
- (b) What are various defects on plastering works ? What are various remedial measures ? Discuss in brief. 5
8. Explain the following in brief : 5×2
- (a) Bleeding
- (b) Ashlar masonry
- (c) Terrazo
- (d) Jack arch floor
- (e) OPC.

