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Total number of printed pages – 2

B. Tech  
PCCE 4203

**Third Semester Examination – 2010**  
**BUILDING MATERIALS AND BUILDING CONSTRUCTION**

**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 is the compressive strength of first class brick ?
  - (b) What do you mean by *bull nose brick* ?
  - (c) Classify the rocks as per geological classification.
  - (d) Name four different types of useful Indian Stones.
  - (e) State the chemical constituents of cement.
  - (f) Define *workability* of concrete.
  - (g) State the names of different types of shallow foundation.
  - (h) Classify various types of joints in stone masonry.
  - (i) State various types of wooden stairs.
  - (j) State various types of binders used for plastering.
2. (a) What are the various methods adopted for manufacture of bricks ? Explain kiln burning process. 7
- (b) State the qualities of a good brick. 3

3. Describe the dry process of manufacture of cement. Draw a figure and show various stages of manufacture. 10
4. Describe the various factors which influence the workability of concrete. Explain the procedure for 'slump test'. 10
5. What are the characteristics of good building stones ? Explain any suitable method adopted for quarrying of stones. 10
6. What do you mean by spread foundations? State and explain various types of spread foundations with separate figure for each one. 10
7. (a) Describe the causes of failure of brick masonry. 5  
(b) Distinguish between rubble stone masonry and ashlar stone masonry. 5
8. Write short notes on the followings : (any four) 2.5×4
- (a) Cavity walls
  - (b) Damp proof course
  - (c) Types of stairs
  - (d) Concrete flooring
  - (e) Defects in plastering.