

Department of Civil Engineering

College of Engineering Shivajinagar, Pune
(An Autonomous Institute of Government of Maharashtra)

End Semester

Subject: CE 202 Building Construction and material

Timing: 8 am to 11 am

Max Marks: 50

Date: 29 /11/2011

Class: SY BTech

Instructions:

1. All questions are compulsory
2. Figure to the right indicate the full marks
3. Assume suitable data wherever is necessary
4. Programmable calculator is not allowed

- Q. No.1 a) What is combined footing? Explain with neat sketch (05)
- b) The length of the brick is 0.19 m and width of the brick is 0.09 m. The average load on brick at which brick crushed is 6450 kg. Find compressive strength of the brick and make comment on result. (03)
- c) State briefly the condition under which the following foundation are used
(i) Grillage foundation
(ii) Raft foundation
(iii) Cantilever foundation
(iv) Pile foundation (02)
- Q. No.2 a) Explain in brief the following parts of Macrostructure of wood with neat sketch
(i) Pith
(ii) Heart wood
(iii) Sap wood
(iv) Cambium layer (05)
- b) Define the following term
(i) Lime (With chemical reaction) (1 ½)
(ii) Slaked lime (With chemical reaction) (1 ½)
- c) State True or False (With explanation only)
(i) The depth of shallow foundation is more than deep foundation (1)
(ii) In gypsum plaster retarders are added (1)
- Q. No.3 a) List out different types of floor finishes and explains in detail plastering (05)
- b) What is flooring and functional requirements of flooring material? (05)

Q. No.4 a) Draw and Explain (05)
i) Collar beam roof
ii) Couple close roof

b) Sketch the various types of welding joints. What are the advantages of welding over riveting? (05)

Q. No.5 a) Write short notes on the following (10)
(i) Brick Lintels
(ii) Rolling steel shutter door

OR

a) Differentiate between scaffolding and shoring (Four points only) (4)

b) State the use of following types of glass (4)
(i) Soda-lime glass
(ii) Potash lime glass
(iii) Potash lead glass
(iv) Common glass

c) The weight of the burn brick is 37.278 N. The brick is immersed in water for a period of 16 hours. After this period, this brick is wiped with a damp proof cloth and it is weighed again and found to be 44.145 N. Calculate percentage of absorption of brick. (2)