

Government College of Engineering, Amravati
(An Autonomous Institute of Government of Maharashtra)

B. Tech. (Civil Engineering)

Winter – 2017

Course Code: CEU304

Course Name: Building Construction & Materials

Time: 2 hr. 30 Min.

Max. Marks: 60

Instructions to Candidate

- i) All questions are compulsory.
- ii) Figures should be drawn neatly with pencil only.
- iii) Figures to the right indicate full marks.

1. (a) Differentiate between 'Load bearing structures' and 'Framed structures'. State suitability of each. Also state their relative advantages and disadvantages. 06

(b) i. State the purposes of providing foundation. 02
ii. What is meant by spread footing? Draw neat sketches showing plan and section of spread footings for a load bearing wall and a R.C.C. column. 04

2 (a) i. Draw neat sketches showing plan and section of R. C. C. slab & beam floor and R.C.C. Flat slab floor, indicating their components. 03

ii. Explain briefly the construction procedure 03

Cont.

of R.C.C. Floors.

- (b) Explain briefly with the help of neat sketches the various industrial timber products. 06
- 3 (a) Explain the different types of door frames. Also explain the different methods of fixing them in the wall. 06
- OR
- (b) Explain with the help of neat sketches following types of door shutters and state suitability of each: 06
- Fully paneled door shutter
 - Sliding door shutter
 - Rolling door shutter
- (c) Draw a neat sketch showing elevation and sectional plan of a wooden casement window with partly glazed and partly louvered shutters, indicating the typical dimensions of its components. 06
- 4 (a) i. Draw the neat proportionate plans of six types of stair and state suitability of each. 03
- ii. Draw the neat proportionate line sketches of any six types of steel roof trusses and state the spans for which they are suitable. 03
- (b) Explain briefly the various field and laboratory tests conducted on bricks. 06
- OR
- Explain the various principles which should be observed during construction of brick masonry. 06

- 5 (a) i. State the period of removal of formwork for different R.C.C. components in a building. 02
- ii. What is meant by scaffolding? State its types. Explain any of them with neat sketch. 04
- (b) What is meant by Damp proofing? List the various methods of damp proofing. Explain briefly with the help of neat sketch membrane damp proofing method. 06
- (c) OR 06
- Explain the necessity of construction joints. Draw a neat sketch showing construction joint at foundation level for a framed structure.