

Government College of Engineering, Aurangabad
(An autonomous Institute of Government of Maharashtra)

F.E. (All) (Old) Examination

End Semester Examination Nov/December 2016

CE –145 BASICS OF CIVIL ENGINEERING

Time: Three Hours

5 DEC 2016

Max. Marks: 60

Verify the course code and check whether you have got the correct question paper
N.B:

- 1. All questions are compulsory*
- 2. All questions carry equal marks*
- 3. Assume suitable data if necessary and state it clearly*
- 4. Use of non-programmable calculator is allowed*

Q1. Attempt any two

- a) Draw a typical plan of residential building with requirements of 2 bed rooms, a hall, staircase and a kitchen. The plot area is 250 Sqm. Show the internal dimensions of the rooms.
- b) Write the requirements of good cement and good Building Stone.
- c) Which points are to be considered while planning the building? Explain any two principles of planning.

Q2. Attempt all

- a) What is the role of base line and offset in geographical measurement?
- b) The following consecutive readings were taken with the dumpy level on a sloping ground:

0.795, 1.675, 2.875, 3.000, 0.750, 1.695, 2.580

The first reading was taken on the staff held on the bench mark of R.L.200.00m. Calculate the Reduced levels of the all points. What is the level difference between the first and the last point?

- c) Find angle ABC if WCB of line AB is 77° and WCB of line BC is 145° .

Q3 Attempt any two

- a) What are the functions of Camber and Superelevation?
- b) Draw a sketch of Machine foundation and combined footing. Explain any one.
- c) What is the difference between load bearing structure and framed structure? In case of low bearing capacity soil, which structure you will prefer?

Q4. Attempt any Two

- a) What are the causes of earthquake? What are the P waves and S waves?
- b) What precautions will you suggest in earthquake prone area?
- c) Define magnitude and intensity related with earthquake.

Q5. Attempt any Two

- a) What do you mean by area treatment in watershed management? What are the different structures under, drainage line treatment?
- b) What is necessity of Dams? How the dams can be classified?
- c) Draw typical sketch of Earthen Dam. What is the function of under drainage gallery?