Combined First and Second Semester B.Tech. Degree
Examination, April 2014
(2013 Scheme)
13.106 : BASIC CIVIL ENGINEERING (ABEFHMNPSTU)

Time : 3 Hours Max. Marks : 100

PART – A

Answer all questions. Each question carries 4 marks.

1. Briefly explain the advantages of Total Station.
2. Differentiate between structural steel and reinforcement steel. Give examples.
3. Write short note on workability of concrete.
4. Explain the situation where combined footing is suggestive than isolated footing.
5. Mention the sources of air pollution. (5 x 4 = 20 Marks)

PART – B

Answer any full questions from each Module. Each question carries 20 marks.

Module – I

6. a) What are the uses of contour maps?

b) The following readings were taken with a dumpy level. The instrument was shifted after 3rd and 6th readings. Calculate the reduced levels of all stations. Assume the RL of the first station as + 100.00.

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<td>1.900</td>
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4

12

c) Mention the temporary adjustments of a level.

OR

P.T.O.
7. a) Explain the principles of surveying.
    b) Explain the procedure, field booking and reduction of levels in alignment of roadways in leveling work.

Module – II

8. a) What are the functions of a foundation?
    b) Explain the different types of shallow foundations with sketches.
    c) State the characteristics of English Bond.

OR

9. a) What are the desirable qualities of bricks used in brick masonry?
    b) Explain the requirements of good plaster and the types of mortar used in plastering.
    c) Mention the advantages and disadvantages of different types of paints.

Module – III

10. a) What are the desirable qualities of fine and coarse aggregates used for concrete?
    b) Explain the common types of steel used in construction.

OR

11. a) Enlist the ingredients of concrete. Explain the different tests on cement.
    b) What do you mean by proportioning of concrete? Explain the preparation of concrete.

Module – IV


OR

13. Write short notes on:
    i) Greenhouse effect
    ii) Ozone layer
    iii) Acid rain
    iv) Deforestation
Combined First and Second Semester B.Tech. Degree Examination, April 2014
(2013 Scheme)
13.106 : BUILDING TECHNOLOGY (C)

Time : 3 Hours  Max. Marks : 100

PART – A

Answer all questions. Each question carries 4 marks.

1. Discuss the geological classification of rocks
2. What are the qualities of good building bricks?
3. What are the methods for improving the bearing capacity of soils?
4. Distinguish between corbels and cornice.
5. What are the requirements of a good stairs?

PART – B

Answer one full question from each Module. Each question carries 20 marks.

Module – I

6. a) Briefly discuss the requirements of good building stones. Explain the principles of impact and abrasion tests for stone samples.
   
   b) What are the objectives of seasoning timber? Explain the method of natural seasoning and compare its advantages and disadvantages.

   OR

7. a) What are the different types of cements used in engineering construction? Mention their uses.
   
   b) Explain any one method of manufacture of lime for construction uses.

P.T.O.
Module – II

8. a) Briefly explain the guiding factors in the selection of site for a building.

b) Explain the types of pile foundations based on the method of load transfer.

OR

9. Explain the field procedure for conducting a plate load test. Indicate how the Safe Bearing Capacity of soil is estimated.

Module – III

10. a) Distinguish between Rubble and Ashlar masonry. Give the details of various types of rubble masonry.

b) Explain the salient features of English bond. Sketch the alternate courses of 1½ brickwork in English bond.

OR

11. How are arches classified? Briefly discuss the various types of arches with sketches.

Module – IV

12. a) What are the factors considered for the selection of flooring materials? Mention the characteristics of commonly used flooring materials.

b) What are the factors governing the location of doors in a room? Sketch and indicate the parts of a panelled door.

OR

13. a) With the help of sketches explain the common geometric layouts of stairs.

b) Explain the process of painting:

i) New wood work and

ii) Cement plastered surface.