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Reg. No. : ....   Name : ....

SECOND SEMESTER B.TECH. DEGREE EXAMINATION, MAY/JUNE 2016
Course Code : CE 100
BASICS OF CIVIL ENGINEERING

Max. Marks : 100   Duration : 3 Hours

PART – A

Answer **all** questions. **Each** question carries **3** marks.   **(10×3=30 Marks)**

1. Explain very briefly about the classification of buildings based on occupancy.

2. 'Orientation is an essential step while planning a building'. Comment.

3. What are the principles of surveying ?

4. List out the commercial forms of steel available.

5. What do you mean by bearing capacity of soil ?

6. Explain the following terms related to brick masonry: Course, Queen closer & Perpends.

7. Explain how to prepare a wall surface for painting.

8. Differentiate between elevators and escalators.

9. What are the purposes of air conditioning of a building ?

10. What are the precautions taken to achieve imperviousness of water tanks ?

PART – B

Answer **any 8** questions.   **(6×8=48 Marks)**
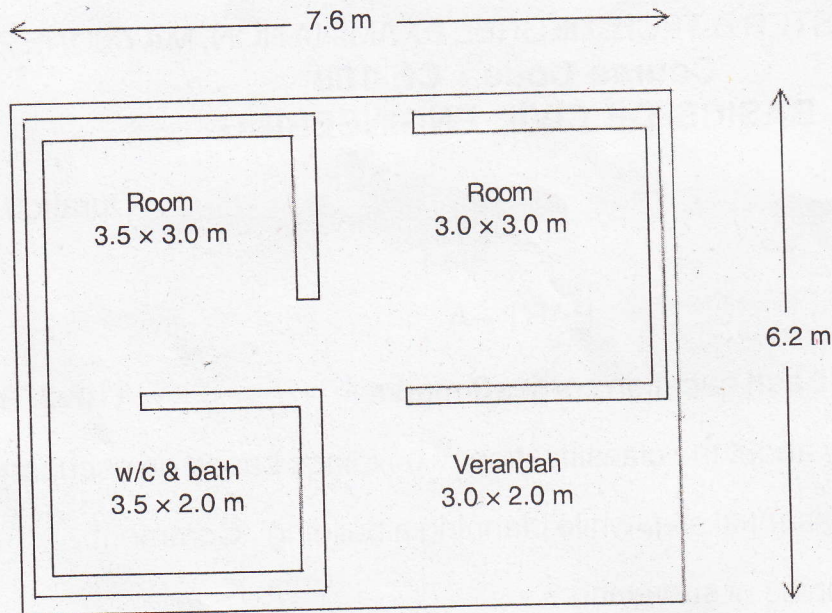
11. Write a short note on various components of a residential building and their functions.

12. Write a note on the importance of civil engineering on infrastructural development of India.

P.T.O.

13. Calculate plinth area, floor area and carpet area for the plan of a building given below: Wall thickness is 30 cm.

14. Explain the need and types of open space requirement for a building.

15. Explain the centre line method adopted for setting out of a building.

16. What is direct ranging and what are the instruments used for ranging ?

17. The following consecutive readings were taken with a dumpy level and a 4 m levelling staff on a continuously slopping ground at a common interval of 30 m:

    0.585 on A, 0.930, 1.955, 2.840, 3.645, 0.960, 1.035, 1.680, 2.535, 3.845, 0.950, 1.575, 3.015 on B. The elevation of A was 520.150. The instrument was shifted at 6th and 11th readings.

    A) Rule out a page of level book and enter the above readings.

    B) Find R.L of B.

    C) Determine the gradient of line AB.

18. What is the composition of ordinary cement ? Briefly explain grades of cement.

19. Explain the preparation of concrete.

20. What are the characteristics of a good brick ?

PART – C

Answer **any 2** full questions.

21. A) Define :
    i) Span
    ii) Ridge
    iii) Eaves
    iv) Batten
    v) Cleats.   **(1×5=5 Marks)**

    B) Describe the functions and various types of foundations.   **(6 Marks)**

22. A) Explain the method of applying plaster on a wall surface. **(5 Marks)**

    B) Explain the concept of intelligent building.   **(6 Marks)**

23. A) How is sound proofing done in a building ?   **(5 Marks)**

    B) List out the specification of the following :   **(6 Marks)**
    i) Towers
    ii) Chimneys
    iii) Water tanks.

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