

**End Semester Examinations - 2015-16 Even Semester - May 2016**

**14CE1001 Basic Civil Engineering**

**Set A**

**Time : 3 hrs**  
**Total Marks: 100**

1. a. Explain the characteristics of the Cement Concrete? (10)  
b. List out the characteristics of the Brick?(10)

**OR**

2. a. List out the characteristic of the Cement?(10)  
b. Explain the characteristics of the good timber?(10)

3. a) Explain the classifications of surveying

- i. Based upon the instruments used (5)  
ii. Based upon the nature of the field survey (5)

- b) What are the types of foundations and define the bearing capacity of the soil?. (7+3)=10

**OR**

4. a) The following perpendicular offsets were taken out at 10 m intervals from a survey line to an irregular boundary line of 3.80 m, 4.90 m, 7.20 m, 5.6 m, 6.35 m, 7.40 m, 4.80 m, 5.30 m, 8.20 m. Calculate the area enclosed between the survey line and the irregular boundary line by using i) Trapezoidal Rule and ii) Simpson's Rule (15)

- b) Explain the principles of Surveying?(5)

5. a) Explain the major components of a building with a neat sketch?(10)  
b) Explain the types of bonds used in brick masonry with neat sketch(10)

**OR**

6. a) Compare the brick masonry and stone masonry? (10)  
b) Explain the classifications of the beams with sketch?  
i) According to the end support conditions (6)  
ii) According to the loading conditions (4)

7. Explain the components in detail with sketch of the cross section of Road and permanent way of the railway track? (10+10)

**OR**

8. A house property has the following specification and data.

Size of the plot : 20 m x 10 m

Market rate of land : Rs. 3000 per m<sup>2</sup>

Age of the building : 20 years

Plinth area Ground Floor : 180 m<sup>2</sup>

First Floor : 120 m<sup>2</sup>

Wall Area : 10 % of total plinth Area

Plinth Area rate is : Rs.12500 per m<sup>2</sup>

The life of the building : 100 years

Determine the plinth area of the building, carpet area of ground floor and first floor of the building, floor area ratio of the building and value of the building. (20)

9.

- a) List out the points for selection of a site for Dam? (5)
- b) List out the benefits of Irrigation ? (5)
- c) Draw the layout of Airport and name its components (5)
- d) Draw the layout of Harbor and name its components (5)

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**Wishing you All the Best**

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