SC - 806

Total No. of Pages : 2

Seat No.	

B.Tech. (All Branches) (Part - I) (Semester - I & II) (CBCS)
Examination, December - 2019
BASIC CIVIL ENGINEERING
Sub. Code: 71813

Day and Date : Thursday, 05 - 12 - 2019 **Total Marks : 70**
Time : 2.30 p.m. to 5.00 p.m.

Instructions :
1) **Attempt any three questions from each section.**
2) **Figures to the right indicate full marks.**
3) **Make suitable assumptions wherever necessary and mention it clearly.**
4) **Use of non-programmable calculator is allowed.**

SECTION - I

Q1) a) "Civil Engineering is very much relevant to other branches of engineering". Explain this statement. **[6]**

b) Explain Grouping, Privacy and Ventilation as a building planning principles. **[6]**

Q2) a) Explain substructure and superstructure as components of building with the help of neat sketch. **[6]**

b) What is foundation? What are its various types? **[5]**

Q3) a) Write a note on defects of timber and seasoning of timber. **[6]**

b) What are the various grades of concrete? Write note on R.M.C. **[5]**

Q4) Attempt any three of the following. **[12]**

a) Explain any two branches of civil engineering.

b) What is bearing capacity of soil? Give its significance.

c) Write a note on various types of loads considered in design of building.

d) Differentiate between load bearing and framed structure.

P.T.O.

SECTION - II

Q5) a) Differentiate between Prismatic & Surveyor's compass. **[3]**

b) The following bearings were taken with a compass in a place where local attraction was suspected. **[8]**

Line	PQ	QR	RS	SP
F.B.	124-30	68-15	310-30	200-15
B.B.	304-30	246-0	135-15	17-45

At what stations do you expect local attraction? Find out the corrected bearings of the lines & also calculate the included angles.

Q6) a) Define the terms: **[4]**

i) Line of collimation
ii) Bench Mark
iii) Contour
iv) Level surface

b) The following staff readings were taken successively with a level, the instrument being shifted after third & fifth readings. **[8]**

1.015, 0.935, 0.625, 2.120, 1.855, 1.705, 0.925, 2.360 m.

Enter the above readings in a page of a level book & find the R.L. of points if the first reading was taken with a staff held on a bench mark of 400.000 m. Use rise & fall method. Apply checks.

Q7) a) Write a note on gravity dam with the help of neat sketch. **[5]**

b) Draw a cross section of rigid pavement & explain the different component parts. **[6]**

Q8) Attempt any three from the following. **[12]**

a) State & explain principles of surveying.
b) Draw a neat sketch of broad gauge railway track & explain its components.
c) A survey line AB was measured by 20m chain & its length was observed to be 2222 m. The chain was 66 mm to long initially, 200 mm too long at 1200 m & was 190 mm too short at B. Find correct length of line AB.
d) Write a short note on EDM.

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