

SE - 840

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Seat No.	
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F.E. (Semester - I) (CBCS) Examination, December - 2018

BASIC CIVIL ENGINEERING

Sub. Code : 71813

Day and Date : Tuesday, 04 - 12 - 2018

Total Marks : 70

Time : 02.30 p.m. to 05.00 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)** Enlist and discuss the scope of various sub-branches of civil engineering. [6]
- b) Write a note on building bye laws for building line and control line with neat sketch. [6]
- Q2) Answer the following.**
- a) What is bearing capacity of soil? Explain plate load test. [6]
- b) What is deep foundation? Explain any one deep foundation with neat sketch. [5]
- Q3) a)** Differentiate between [5]
- i) PCC and RCC
 - ii) Load bearing and framed structure
- b) Explain in brief types of loads considered in the design of building. [5]
- Q4) Write Short notes on (Any Three) :** [12]
- a) Orientation of building.
 - b) Column foundation.
 - c) Elements of Super structure.
 - d) Seasoning of timber.

P.T.O.

SECTION - II

- Q5) a)** State & explain principles of surveying. [3]
b) The following fore & back bearings were observed in running a compass traverse. Draw the traverse, correct for local attraction, calculate included angles. [8]

Line	Fore bearing	Back bearing
AB	44 ° 30'	226 ° 30'
BC	124°30'	303° 15'
CD	181°0'	1° 0'
DA	289° 30'	108° 45'

- Q6) a)** State characteristics of contours & use of contour maps. [4]
b) The following staff readings were observed successively with a level. The instrument was shifted after third & fifth readings. 1.015, 0.935, 0.625, 2.120, 1.855, 1.705, 0.925, 2.360
 Enter the above readings in a page of level book & calculate RL of all points using rise & fall method. RL of first station is 400.000 m. Also apply usual checks. [8]
- Q7) a)** Draw a neat sketch of flexible pavement showing all component parts & explain. [4]
b) Explain component parts of earthen dam with neat sketch. [4]
c) Draw the neat sketch of broad gauge railway track showing various components. [3]
- Q8) Solve any three :** [12]
a) The distance measured between two points by a 20 m chain was 1340 m & when measured by a 30 m chain was 1345 m. If the 30 m chain was 0.2 m too short, find out whether the 20 m chain was of correct length or not. If not find the error in it.
b) Explain indirect ranging process with neat diagram.
c) Write short note on EDM.
d) Draw a flow diagram of water supply scheme & state functions of each unit.

