B.Tech. SEM -I (Chemical/ Civil/ Electrical/ Mechanical/ Production/ Computer/ Info. Tech./ Electronics / Bio Medical / E & TC) 2014
Course (CBCS) : SUMMER - 2019

B.Tech sem-I
All Branch.

SUBJECT: FUNDAMENTALS OF CIVIL ENGINEERING

Day: Monday
Date: 13/05/2019

S-2019-2527

Time: 10.00 AM TO 01.00 PM
Max Marks: 60

N.B. :

1) All questions are **COMPULSORY.**
2) Use of non programmable **CALCULATOR** is allowed.
3) Figures to the right indicate **FULL** marks.
4) Assume suitable data, if necessary.

Q.1 **a)** Discuss the role of civil engineer in construction industry. (05)
b) Explain the scope of estimating and costing in civil engineering. (05)

OR

Q.1 **a)** What are the different types of structures explain composite structures. (05)
b) Give the application of steel and plywood in building construction. (05)

Q.2 **a)** Define fore bearing, back bearing, whole circle bearing and reduced bearing. (04)
b) Draw traverse and find out the included angles of a traverse PQRSP from following data:- (06)

Line	Fore Bearing	Back Bearing
PQ	$220^0\ 30^1$	$40^0\ 30^1$
QR	315^0	135^0
RS	$15^0\ 30^1$	$195^0\ 30^1$
SP	147^0	327^0

OR

Q.2 Following readings were taken with dumpy level and 4m leveling staff. Enter the readings in tabular form and find out R.I.S. of ground if R.L. of Bench mark is 50.00m the instrument was shifted after 3rd and 7th reading. 1.530, 1.810, 2.340, 2.650, 2.010, 1.835, 1.705, 0.955, 0.500. Apply arithmetical check. (10)

Q.3 **a)** Explain bye laws for setback distance for buildings. (04)
b) Explain roominess and grouping with neat sketch. (06)

OR

Q.3 **a)** Discuss circulation and flexibility as principles of planning. (05)
b) Give the bye laws for deciding height of building (05)

Q.4 **a)** What is bearing capacity? What are the applications of it? (05)
b) Explain differential settlement with neat sketch. (05)

OR

Q.4 **a)** Explain the causes of earthquake. (05)
b) What are the causes of foundation failure? (05)

Q.5 **a)** Draw a flowchart of sewage treatment plant and give the function of each unit. (07)
b) Explain furrow method? (03)

OR

Q.5 **a)** Draw a flow chart of water treatment plant? Give functions of each unit. (06)
b) Explain any two methods of irrigation. (04)

Q.6 **a)** What is camber? Explain different types of camber. (05)
b) Draw a neat diagram of bridge showing its components. (05)

OR

Q.6 **a)** Explain with figures port, jetty and breakwater. (06)
b) Draw a cross section of road in cutting showing all details. (04)

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