Registration No.: | | | | | | | | | | |

Total Number of Pages: 02 **Course: B.Tech**
Sub_Code: RBC1B002

1st Semester Back Examination: 2025-26
SUBJECT: Basic Civil Engineering
BRANCH(S): CIVIL, CSE, CSEDS, CST, EEE, ELECTRICAL, MECH
Time: 3 Hours
Max Marks: 100
Q.Code: U692

Answer Question No.1 (Part-I) which is compulsory, any eight from Part-II, and any two from Part-III.
The figures in the right-hand margin indicate marks.

Part-I

Q1 **Answer the following questions:** **(2 x 10)**

a) Define magnetic bearing of a line.
b) Write uses of prismatic compass.
c) Name two Broad disciplines of Civil Engineering.
d) Define the term "workability of concrete".
e) Name two different types surface irrigation.
f) Write the ingredients of cement mortar.
g) Prepare a list of the different modes of transportation.
h) State the function of foundation in a structure.
i) Name two tests of cement generally conducted in laboratory.
j) Define soil.

Part-II

Q2 **Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)** **(6 x 8)**

a) Distinguish between shallow and deep foundations.
b) Write various applications of Total Station.
c) Distinguish between direct and indirect ranging.
d) Enumerate the qualities of a good brick.
e) Write short note on Compaction of concrete.
f) Explain the terms: siphons, weirs, dams.
g) Describe about the types of steels used in civil engineering works.
h) Write short note on traffic engineering.
i) Differentiate between railway engineering and airport engineering.
j) Write advantages of Stone masonry over brick masonry.
k) Write short note on Prestressed concrete.
l) Provide the list of instruments required chain survey and also mention their uses.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

Q3 In a closed traverse, the following bearings were observed, with a compass. Calculate the corrected magnetic bearings using method of local attraction. **(16)**

Line	Fore bearings	Back bearing
AB	46° 30′	226° 30′
BC	118° 30′	300° 15′
CD	210° 00′	28° 00′
DE	271° 15′	93° 15°
EA	313° 45′	132° 00′

Q4 Summarize in details about the different aspects of design of highway engineering. **(16)**

Q5 Provide a detailed classification soil as per Indian standard. **(16)**

Q6 Describe in detail about the various types of cement used in construction industry. **(16)**