

Roll No. _____

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2E3208**2E3208**

B.Tech. II-Sem. (Main/Back) Examination, May/June - 2025
2FY3-09 Basic Civil Engineering

Time : 3 Hours**Maximum Marks : 70****Instructions to Candidates:**

Attempt All Ten questions from Part A, Five questions out of seven questions from Part B and Three questions out of five questions from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205).

PART - A**(Answer should be given up to 25 words only)****All questions are compulsory.****(10×2=20)**

1. How geodetic survey is differed from plane survey?
2. What are the two basic principles of surveying?
3. Explain "Plinth Area" and "Carpet Area".
4. Discuss the difference between "Plan" and "Map".
5. What do you understand by "Building Line" and "Control Line"?
6. What are the causes and effects of air and noise pollution?
7. Draw the traffic symbols for "No U-Turn" and "No Overtaking".
8. What are the basic components of a building?
9. Write one unique advantage of road transport compared to the other modes of transportation.
10. What are the various instruments used in chain surveying?

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PART - B**(Analytical / Problem Solving Questions)****Attempt any Five questions.****(5×4=20)**

1. What is the principle of compass surveying? Tabulate the differences between Prismatic Compass and Surveyor Compass.

2. What are the objectives of building bye laws? What is the advantage of set-back?
3. What is the difference between a shallow foundation and a deep foundation and when would each type be used?
4. The measured distance from 'A' to 'B' is 320m. The steel tape used has a standard length at 20°C with a coefficient of thermal expansion of 0.000065/°F. The corrected distance between 'A' to 'B' is 320.103m. Find the temperature during measurement.
5. Explain the carbon, nitrogen, and phosphorus cycles. How do these chemical cycles contribute to maintaining ecosystem stability?
6. Discuss the relevance of civil engineering in the infrastructure development of the country.
7. Convert the following reduced bearings (RB): (a) N 42° 30' E; (b) S 32° 40' E; (c) S 50° 30' W; (d) N 62° 50' W; (e) S 48° 45' W to whole circle bearings (WCB).

PART - C

(Descriptive / Analytical / Problem Solving / Design Questions)

Attempt any Three questions.

(3×10=30)

1. What are the general causes of road accidents? What are the important traffic rules to follow for ensuring safety while driving?
2. What is the difference between self-reading staff and target staff? Write detail note on EDM distance measurement methods.
3. What is the difference between Magnetic Bearing and True Bearing? The bearing of line AB is 196° and that of line CB is 256°45'. Find the included angle ABC.
4. What are the different scopes of civil engineering? Write detailed note on the role of a civil engineer in society.
5. The following consecutive readings were taken with a dumpy level -

Points	P	I ₁	I ₂	Q
B.S (m)	2.365	0.685	1.745	
F.S. (m)		1.235	3.570	2.340

RL of "P" is 100m find RL of "I₁", "I₂", and "Q" using the Rise and Fall method.