

EE

Total No. of Pages: 4

Roll No. _____

2E3208

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B. Tech. II - Sem. (Main / Back) Exam. - 2026
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)

1. NIL
2. NIL

PART - A

[10×2=20]

(Answer should be given up to 25 words only)

All questions are compulsory

- Q.1 What are the two basic principles of surveying?
- Q.2 Draw the traffic symbols for "Side road left" and "Narrow road".
- Q.3 What is header bond in brick masonry? Also, state the nominal size and actual size of a modular brick.
- Q.4 Write one unique advantage of road transport compared to the other modes of transportation.
- Q.5 What is floor area ratio formula?

- Q.6 What is diagonal scale?
- Q.7 What is DPC in a building?
- Q.8 Write any five roles of Civil Engineering in Society.
- Q.9 What do you understand with Global Warming & Climate Change?
- Q.10 What is the basic concept of R.C.C.?

[5×4=20]

PART - B

(Analytical/Problem solving questions)

Attempt any five questions

- Q.1 What are the impacts of infrastructural development on the economy of a country?
- Q.2 Tabulate the differences between "Surveyor Compass" and "Prismatic Compass". Convert the following reduced bearings (RB): (a) N 32° 30' E; (b) S 42° 40' E; (c) S 60° 30' W; (d) N 72° 50' W; (e) S 45° 45' W to Whole Circle Bearings (WCB).
- Q.3 What are the basic components of a building? What are the factors to be considered during the selection of a building site?
- Q.4 Discuss in detail different modes of transportation with their merits and demerits. <https://www.rtuonline.com>
- Q.5 What are the various instruments used in chain surveying? Explain the principle of levelling. What is differential levelling?
- Q.6 What do you understand by built-up area and super built-up area? Write detail note on building byelaws.
- Q.7 Discuss the importance of biodiversity and the basics of species classification. Explain how environmental acts and regulations help in biodiversity conservation with suitable examples.

PART – C**(Descriptive/Analytical/Problem Solving/Design Questions)****Attempt any three questions**

- Q.1 Explain methods of solid waste management, including classification, collection, recycling and disposal techniques such as sanitary landfills and energy recovery. Also discuss rainwater harvesting and strategies for water conservation and reuse.
- Q.2 What is the difference between self-reading staff and target staff? Write detail note on EDM distance measurement methods.
- Q.3 What is the difference between Magnetic Bearing and True Bearing? The bearing of line AB is 195° and that of line CB is $255^\circ 45'$. Find the included angle ABC.
- Q.4 What are the general causes of road accidents? What are the important traffic rules to follow to ensure safety while driving?
- Q.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 Rise and Fall method.
