

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (CE) (Sem.-5)
TRANSPORTATION ENGG-I
Subject Code : CE-311
Paper ID : [A0617]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY.
2. Attempt any FOUR questions from SECTION-B.
3. Attempt any TWO questions from SECTION-C.

SECTION-A (10 × 2 = 20 Marks)

1. Write short notes on :

- (a) Give the classification of various road patterns.
- (b) What are obligatory points?
- (c) Differentiate between space mean speed and time mean speed.
- (d) What are the requirements of a good subgrade?
- (e) Why pavement evaluation is done?
- (f) List the various road user characteristics.
- (g) Explain, why joints are provided in concrete pavements?
- (h) What are Summit curver?
- (i) Why signs are provided on Roads?
- (j) Why on street, kerbs are provided?

SECTION-B (4 × 5 = 20 Marks)

2. Derive an expression for overtaking sight distance on a two way divided highway.

[A-12] 1668

3. Calculate the absolute minimum and ruling minimum radius on horizontal curve for a design speed of 80 km/h.
4. Explain the Mecedam's method of Road construction.
5. Discuss the desirable properties of bitumen and aggregates in road construction.
6. Write short note on maintenance of hill roads.

SECTION-C (2 × 10 = 20 Marks)

7. Explain the stepwise procedure for the construction of cement concrete roads.
8. Draw the cross-sections of two lane two way highway in embankment and cutting.
9. Explain the various types of surveys carried out in a highway project execution.

[A-12] 1668