

SIXTH SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—MARCH, 2014

TRANSPORTATION ENGINEERING

[Common to CE, EN and WR]

[Time : 3 hours

(Maximum marks : 100)

Marks

PART—A

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. List any four points showing the importance of roads.
2. State the classification of roads as per I.R.C.
3. What are the objectives of traffic signs ?
4. Define gauge and the classification of railways based on gauges.
5. State the classification of bridges as per I.R.C.

(5×2=10)

PART—B

II Answer *any five* of the following questions. Each question carries 6 marks.

1. Define camber and why the camber is necessary for road ?
2. State any four reasons why sub surface drainage is to be provided for roads.
3. Distinguish between Mandatory signs and prohibitory signs with examples.
4. State the principles of interlocking.
5. State the merits and demerits of concrete sleepers.
6. What are the facilities to be provided in a harbour ?
7. What are the advantages of water transportation ?

(5×6=30)

PART—C

(Answer one full question from each unit. Each question carries 15 marks.)

UNIT—I

- III (a) State the factors governing selection of alignment for a highway. 8
- (b) Explain the reconnaissance survey performed in locating the alignment of a road. 7

OR

- IV (a) Explain why super elevation is required in a curved path and advantages of providing super elevation. 8
- (b) Define gradient of a road and explain different types of gradient. 7

UNIT—II

- V (a) Explain the advantages and disadvantages of Water Bound Meccadam road. 7
 (b) What are the objectives of traffic engineering ? 8

OR

- VI (a) Explain with neat sketch types of traffic intersections or junctions. 8
 (b) Explain the construction procedure of W.B.M road starting clearly the Sequence of operation involved. 7

UNIT—III

- VII (a) Compare railways and roads. 7
 (b) Explain the maintenance of a railway track. 8

OR

- VIII (a) Discuss the requirements of ideal permanent way. 7
 (b) What are the functions of marshalling yards ? Draw a neat sketch of marshalling yard and name the parts. 8

UNIT—IV

- IX (a) Explain the factors to be considered for selection of a site for a bridge. 8
 (b) List the factors to be considered while selecting the site for air port. 7

OR

- X (a) Explain with sketch show the component parts of the bridge. 8
 (b) Explain the classification of harbour and give one example for each. 7
