

SIXTH SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—OCTOBER, 2013

TRANSPORTATION ENGINEERING

(Common to CE, EN and WR)

[Time : 3 hours

(Maximum marks : 100)

PART—A

(Maximum marks : 10)

Marks

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

1. What is camber in highways ?
2. Distinguish between spoil banks and borrow pits.
3. Define gauge of a railway track.
4. What is meant by adzing of sleepers ?
5. Differentiate between cut waters and ease waters.

(5×2=10)

PART—B

(Maximum marks : 30)

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

1. Explain the parts of a road structure with a neat sketch.
2. Define Transition curve and what are the objects of providing it on road.
3. Define the terms :
(i) Prime coat (ii) Tack coat (iii) Seal coat
4. Explain different types of rail joints with the aid of sketches.
5. List the different types of sleepers and the functions of sleepers.
6. Define the terms :
(i) Afflux (ii) Abutment Pier (iii) Economical span
7. What are the factors to be considered for the selection of an airport site ?

(5×6=30)

PART—C

(Maximum marks : 60)

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

UNIT—I

- III (a) Explain the surveys to be conducted for a road construction. 8
 (b) Draw the typical cross-section of a road in embankment showing all the details. 7

OR

- IV (a) Explain the classification of roads as per IRC giving standard width of each. 8
 (b) Explain different types of curves used in roads with sketches. 7

UNIT—II

- V (a) Describe the construction of a W.B.M road. 8
 (b) Draw the cross-section of a hill road partly in embankment and partly in cutting showing all the details. 7

OR

- VI (a) Explain the method of construction of Bituminous Concrete road. 8
 (b) Draw a neat diagram of a Clover leaf interchange indicating the direction of traffic. 7

UNIT—III

- VII (a) Explain the types of rail sections and make a comparison between them. 8
 (b) Draw a neat sketch of a left hand turn out showing different parts. 7

OR

- VIII (a) What are the advantages of railway to a country? 7
 (b) What are the objectives of signalling and list the classifications of signalling in Railway? 8

UNIT—IV

- IX (a) What are the factors to be considered in the selection of site for a bridge? 8
 (b) Draw the cross-section of a tunnel for a single lane broad gauge track, marking all parts. 7

OR

- X (a) Describe with sketches the different types of abutments for bridges. 8
 (b) What is a harbour? Draw the layout of an artificial harbour and mark the parts. 7