

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2018

TRANSPORTATION ENGINEERING

[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. How are roads classified as per I R C.
2. Differentiate between camber and gradient.
3. What do you understand by the term gauge.
4. Explain the term afflux.
5. Write short notes on interlocking of signal.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Briefly explain 'E' s in traffic management.
2. Explain cross section of road with the help of a neat sketch.
3. State the importance of drainage in roads.
4. State the importance of Railways.
5. Explain different types of sleepers.
6. Explain different types of wing walls used for bridges.
7. What are the advantages of tunnels compared to alternate routes ?

(5×6 = 30)

## PART — C

(Maximum marks : 60)

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

## UNIT — I

- III (a) Explain different types of sight distances. 7  
 (b) Explain clover leaf junction with a neat sketch. 8

OR

- IV (a) Explain islands at road junctions (any four in detail). 7  
 (b) Explain the different types of road marking markings. 8

## UNIT — II

- V (a) Explain different types of gradients. 7  
 (b) Describe the construction of W B M road. 8

OR

- VI (a) List the essential requirements of road drainage system. 7  
 (b) Sketch a typical cross section of a road partly in embankment and partly in cutting and mention salient features. 8

## UNIT — III

- VII (a) Explain different types of station yards. 7  
 (b) Sketch the cross section of a permanent way (single line in cutting). 8

OR

- VIII (a) Sketch the cross section of a double line rail way track in cutting. 7  
 (b) Explain in detail how a diamond crossing is provided with a neat sketch. 8

## UNIT — IV

- IX (a) Explain different types of bridges. (based on Super structure) 7  
 (b) What are the components included in the 'terminal area' ? 8

OR

- X (a) Explain different types of bridges based on alignments. 7  
 (b) What are the factors considered for selection of the site for air port ?  
 Explain any 3 in detail. 8