

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 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. State the need of Road transportation.
2. Explain the importance of road drainage system.
3. Explain the term coning of wheels.
4. Distinguish between a bridge and a culvert.
5. Differentiate between Runway and Apron.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain the classifications of roads as per I R C.
2. Explain different types of surveys connected with new road construction.
3. Explain the term super elevation.
4. Sketch different types of rail joints and explain briefly.
5. Write any six functions of ballast.
6. Describe in detail well foundation for bridge construction.
7. What are the points to be kept in mind while fixing the site for a bridge.

(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 traffic islands. 7  
(b) Briefly explain different types of road signals. 8

OR

- IV (a) Explain the recommendations of jaykar committee report. 7  
(b) Explain the trumpet junction with a neat sketch. 8

UNIT — II

- V (a) Explain different types of curves used in road alignments. 7  
(b) What are the advantages and disadvantages of concrete roads ? 8

OR

- VI (a) Sketch a typical cross section of a road in embankment and mention salient features. 7  
(b) Explain widening of roads at and its advantages. 8

UNIT — III

- VII (a) Sketch the cross section of double line railway track in embankment. 7  
(b) Draw a sketch of left hand turn out and mark the features. 8

OR

- VIII (a) Explain the importance of railways and classifications of railways based on gauge. 7  
(b) Explain track laying operation by various methods. 8

UNIT — IV

- IX (a) Draw the common cross sections used for tunnels. 7  
(b) Briefly explain the different types of runway layouts with sketches. 8

OR

- X (a) What are the objects of lining in the tunnels ? 7  
(b) Draw the typical layout of an artificial harbor and explain the component parts. 8