

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, APRIL - 2025**

TRANSPORTATION ENGINEERING

[Maximum marks: 75]

[Time: 3 Hours]

PART A

I. Answer all the following questions in one word or one sentence. Each question carries 1 mark

(9 x 1 = 9 Marks)

		Module outcome	Cognitive level
1	List various roads as per IRC classification.	M1.01	R
2	Define Obligatory points.	M1.02	U
3	List four component layers of Flexible pavement.	M2.02	R
4	Differentiate between Bitumen and Tar.	M2.03	U
5	Define Permanent way.	M3.02	R
6	List any two railway fastenings.	M3.02	R
7	Define the term Station Yard.	M3.03	R
8	Define the term turn out.	M3.04	R
9	List any four components of an airport.	M4.03	R

PART B

II. Answer any eight questions from the following. Each question carries 3 marks.

(8 x 3 = 24 Marks)

		Module outcome	Cognitive level
1	Discuss the role of transportation in the development of nation (Any three points)	M1.01	U
2	Describe Origin and Destination studies.	M1.03	U
3	Compare at-grade intersection and grade-separated intersections. Give one example each.	M1.04	U
4	Define Gradient and list out two types of gradients.	M2.01	R
5	List out any three ideal requirements of permanent way.	M3.02	R
6	Discuss about timber sleepers and steel sleepers.	M3.02	U
7	Write short note on (i) Super elevation (ii) cant deficiency.	M3.03	R
8	Define the term Scissors cross over with figure.	M3.04	U

9	Draw common cross-sectional shapes of tunnels.	M4.02	A
10	Define the term Harbour	M4.04	R

PART C

Answer all questions. Each question carries seven marks

(6 x 7 = 42 Marks)

		Module outcome	Cognitive level
III	Define at grade intersection. List any 4 at grade intersection with figure.	M1.04	A
	OR		
IV	List any four traffic survey methods. Discuss Traffic volume studies and spot speed study in detail.	M1.03	U
V	Discuss Stopping sight distance.	M2.01	U
	OR		
VI	Describe horizontal curve, three types of horizontal curves with figure.	M2.02	A
VII	Write briefly about surface drainage method in roads.	M2.01	U
	OR		
VIII	Explain crushing strength test of aggregate.	M2.03	U
IX	List any 7 requirements of an ideal railway track.	M3.01	U
	OR		
X	Discuss on types of rail joints.	M3.02	U
XI	Define the terms: (i) Approach road (II) Abutments (III) Wing walls (IV) Piers	M4.01	U
	OR		
XII	Define Tunnel. List any 5 needs for tunneling.	M4.02	U
XIII	List any 7 criterias affecting selection of site of airport.	M4.03	U
	OR		
XIV	Sketch the layout of a harbour and list any 6 components.	M4.04	A
