

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, NOVEMBER - 2024**

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	Shape of stop sign is	M1.04	R
2	The position or the layout of the centre line of the highway on the ground is called	M1.02	R
3	The length of road visible ahead to the driver at any instance is called	M2.01	R
4	Cement concrete overlay constructed on the top of the distressed bituminous pavement is called	M2.04	R
5	The broad gauge length used by the Indian Railway is	M3.01	R
6	The value of slope provided to the wheels of locomotive is	M3.03	R
7	Define hanger.	M4.03	U
8	Name any two types of bridge based on material.	M4.01	R
9	The part of an airport where aircraft lands or takes off is called	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	List the classification of roads as per IRC.	M1.01	R
2	Outline the significance of traffic volume studies.	M1.03	U
3	Differentiate between at grade intersection and grade separated intersection.	M1.04	U
4	Explain the term camber and its functions.	M2.01	U
5	Summarize the necessity of providing super elevation on curves.	M2.01	U
6	Define station yards. List the types of station yards.	M3.03	U

7	List any three requirements of an ideal permanent way.	M3.02	R
8	Summarize the necessity of tunnels.	M4.02	U
9	Define docks. List the types of docks.	M4.04	U
10	List the components of a bridge.	M4.01	R

PART C

Answer all questions. Each question carries seven marks.

(6 x 7 = 42 Marks)

		Module outcome	Cognitive level
III	Explain any three types of traffic islands.	M1.04	U
	OR		
IV	Draw the sketch of trumpet interchange and mark the direction of vehicle movement. Also, write the situations in which trumpet interchanges are justified.	M1.04	U
V	Explain the functions of different layers of road with neat sketches.	M2.02	U
	OR		
VI	Explain the construction procedure of a bituminous concrete road.	M2.04	U
VII	List the desirable properties of road aggregates. Explain any one test in detail to assess the property of aggregate.	M2.03	U
	OR		
VIII	Outline the merits and demerits of concrete roads.	M2.04	U
IX	Explain different types of rail joints with neat sketches.	M3.03	U
	OR		
X	Identify the component of permanent way which holds the rails to the correct gauge and alignment. Also, summarise its requirement.	M3.02	A
XI	Illustrate the cross section of a permanent way in embankment and mark the components. Also explain the functions of each components.	M3.02	U
	OR		
XII	Identify suitable mechanical installation that enable the train to move from main track to another track on the left hand side. Also explain its working with the aid of sketches.	M3.04	A
XIII	Explain any seven factors considered for the site selection of an airport.	M4.03	U
	OR		
XIV	Draw the typical layout of an artificial harbour and mark the components.	M4.04	U
