

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-VI EXAMINATION – WINTER 2025****Subject Code:3150611****Date:02-12-2025****Subject Name: Transportation Engineering****Time: 10:30 AM TO 01:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Draw the typical cross-section of a highway showing all the components of it.	03
	(b) Compare the roadway and railway transportation.	04
	(c) What are the various tests to be carried out on Bitumen? Explain Ductility Test.	07
Q.2	(a) Explain in brief: DGCA	03
	(b) Explain PIEV theory.	04
	(c) Derive an expression for calculating the stopping sight distance on a roadway.	07
OR		
	(c) Describe various factors controlling the highway alignment.	07
Q.3	(a) Write the objectives of highway maintenance works.	03
	(b) Explain construction steps for WBM.	04
	(c) Explain various types of failures in Cement concrete pavements in details.	07
OR		
Q.3	(a) Write Short note on: Street Lighting.	03
	(b) Distinguish between flexible pavement and rigid pavement.	04
	(c) Explain various methods of On-street Parking.	07
Q.4	(a) Give functions of points and crossings	03
	(b) Explain the 'coning of wheels' with neat sketch.	04
	(c) Write a note on "Junction and terminal"	07
OR		
Q.4	(a) Define: Railway gauge with a sketch and enlist various gauges prevalent on Indian Railways.	03
	(b) Enlist different types of traffic surveys. What is the significance of Delay studies?	04
	(c) Write in detail the reason of failure and suggestion for improvement of following distresses in pavement (i) Potholes, (ii) Eigator cracking.	07
Q.5	(a) Explain the wind rose diagram concept for runway orientation.	03
	(b) Explain the terms: (1) Jetty (2) Dolphin (3) Dredging (4) Wharf	04
	(c) Describe main components of terminal building with sketch and what facilities are provided in the terminal building.	07
OR		
Q.5	(a) Explain various factors determining selection of Breakwater.	03
	(b) Distinguish between harbor and Port.	04
	(c) Write short note on Site selection for an airport.	07
