

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2023****Subject Code:3150611****Date:20-12-2023****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.

		<b>MARKS</b>
<b>Q.1</b>	(a) What are the recommendations of Jaykar committee? Explain which recommendations are accepted by government.	<b>03</b>
	(b) Distinguish between superelevation and camber in cross section in highway.	<b>04</b>
	(c) Explain how the length of summit curve is designed.	<b>07</b>
<b>Q.2</b>	(a) Discuss the various factors which are affecting a flexible pavement design.	<b>03</b>
	(b) Discuss various joints provided in cement concrete road, with the object of providing each joint.	<b>04</b>
	(c) Explain aggregate impact test with IRC guidelines.	<b>07</b>
	<b>OR</b>	
	(c) Explain flash and fire point test on bitumen.	<b>07</b>
<b>Q.3</b>	(a) Write a note on passenger car unit.	<b>03</b>
	(b) Explain O & D survey in detail.	<b>04</b>
	(c) Define gauge of railway track. Enumerate different gauges used in India.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Define traffic density and traffic volume	<b>03</b>
	(b) Write causes of accident. Also explain the condition and collision diagram.	<b>04</b>
	(c) Write a note on uniformity of Gauges.	<b>07</b>
<b>Q.4</b>	(a) Give the functions of railway sleepers.	<b>03</b>
	(b) Distinguish between port and harbour.	<b>04</b>
	(c) Write a note on classification of harbour.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) State the requirements of a good ballast materials.	<b>03</b>
	(b) Explain different types of buoys.	<b>04</b>
	(c) Write a note on break water.	<b>07</b>
<b>Q.5</b>	(a) Explain three controls of aircraft.	<b>03</b>
	(b) Compare holding apron with loading and unloading aprons.	<b>04</b>
	(c) Discuss the airport master planning process in detail.	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Compare runway with taxiway.	<b>03</b>
	(b) Give the classification of airport as per ICAO.	<b>04</b>
	(c) What is terminal building? What are the facilities provided in the terminal building?	<b>07</b>

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