

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2020****Subject Code:3150611****Date:29/01/2021****Subject Name:Transportation Engineering****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

MARKS

Q.1	(a) What are the different modes of transportation? Write the importance of it in context to socio-economic development.	03
	(b) Draw the detail cross section of highway, showing all the components of it. Explain the use of Camber	04
	(c) Define sight distance. Derive an expression for calculation of stopping sight distance on a highway.	07
Q.2	(a) Differentiate between Flexible and Rigid Pavement	03
	(b) Write the objective and classification of highway maintenance works	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.3	(a) What are the advantages of common rail gauge throughout the nation?	03
	(b) Draw the cross section of permanent way showing all components of it. Write the importance of rail.	04
	(c) Write a note on “Coning of wheel”	07
Q.4	(a) Define Creep in rail. Write the theory behind it	03
	(b) Draw the diagram of the “Points & Crossing” showing all components of it in detail	04
	(c) Write a note on “Junction and terminal”	07
Q.5	(a) What are the different traffic control devices? Explain in detail about the warning sign.	03
	(b) Enlist the different types of parking? Explain at list one advantage of each type of parking.	04
	(c) Draw the typical diagram of harbour showing all components. Write down the importance of Jetty, turning basin and Breakwater.	07
Q.6	(a) Define: (i) Running Speed (ii) Spot Speed (iii) Volume	03
	(b) Enlist different types of traffic surveys. What is the significance of Delay studies?	04
	(c) What are the different points to be taken care while selecting the site for airport?	07
Q.7	(a) Enlist the different components of Airport. Explain the importance of Taxiway.	03
	(b) Where and why super elevation is required?	04
	(c) Enlist the test on aggregates. Explain any one in detail.	07

Q.8	(a)	Differentiate between Dry dock & Wet dock	03
	(b)	Explain in detail about where and why transition curve is required?	04
	(c)	Derive an expression for finding the extra widening required on horizontal curve	07
