

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. www.FirstRanker.com 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

www.FirstRanker.com