Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY M. E. - SEMESTER – I • EXAMINATION – WINTER • 2014

Subject code: 2711306 Date: 12-01-2015 Subject Name: Rail Transportation System Planning and Design Time: 02:30 pm - 05:00 pm **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. Q.1 What are the factors affecting selection of gauge? Explain briefly 07 (a) What are the measures should be taken up to achieve the higher speed in rail 07 (b) transportation? **Q.2** Enlist the various types of sleepers. Explain their merits and demerits. 07 (a) Write a short note on a) Bearing Plate 07 (b) b) Fish Plate OR **(b)** List out the critical track defects that cause train derailment. **07 Q.3** Describe the various principles for fixation of rates and fares in railway. Explain (a) 07 any two principles. Explain ó Class rates, Exceptional rates, Commodity rates **07** (b) OR Q.3 (a) Enlist the various models for demand analysis for passengers. Explain any one. 07 Compare fixed capital expense and circulating capital expense. 07 (b) **Q.4** (a) Explain - Project interdependencies? **07** Write a short note on õReconnaissance Surveyö 07 (b) OR What do you understand by õTechno Economic Surveyö 0.4 **07** (a) Briefly explain about the Anti Collision Device. **07 (b)** Explain the planning process for Railway Transportation System. 07 Q.5 (a) **(b)** Explain- Strategic Planning, Tactical Planning, Operational Planning 07 Which types of traffic data should be collected in Traffic Survey for Railway **Q.5** 07 (a) System? Enlist the gauges used in India. What is the necessity of conversion of gauge? 07 (b)

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