

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014****Subject code: 1721303****Date: 20-06-2014****Subject Name: Regional and Mass Transportation System Planning****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.
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2. Make suitable assumptions wherever necessary.
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- Q.1** (a) Enlist the different regional planning theories, explain in detail central place theory & nodal point theory. **07**
- (b) Explain in detail location theory for rural spatial structure. **07**
- Q.2** (a) Describe policies and objectives of 2nd 20 year road plan (Mumbai plan) **07**
- (b) What is the role of models in regional analysis ? explain accuracy and precision **07**
- OR**
- (b) Define the terms:- (i) link efficiency (ii) sustainability (iii) homogeneity (iii) accessibility (iv) terminals (v) nodes (vi) migration (vii) delineation. **07**
- Q.3** (a) Describe in detail giving example saturation and utility based rural road development program. **07**
- (b) What are the factors affecting shopping trip generation rates in metropolitan area? Describe goods and services of shopping centre. **07**
- OR**
- Q.3** (a) Explain entropy and opportunity model for spatial interaction. **07**
- (b) The area of certain district in India is 13600sq.km. and there are 12 towns as per 1981 census. Determine lengths of primary,secondary and tertiary system of Roads as per 3rd road plan. **07**
- Q.4** (a) What are the different methods of population forecast? Explain in detail any one. **07**
- (b) Explain in detail Hansen's accessibility model and density saturation gradient model. **07**
- OR**
- Q.4** (a) Explain the three methods of determining vehicular growth rate, draw the flow-diagram of effect of growth of vehicles on network performance. **07**
- (b) Discuss multi regional cohort survival model. What are its limitations? **07**
- Q.5** (a) Draw the sketch of rectangular and rectangular with superimposed diagonal street pattern. **07**
- (b) Describe the different program for rural road development. **07**
- OR**
- Q.5** (a) Describe the procedure for conducting goods movement analysis, also explain OSI and TRAIL layer model. **07**
- (b) What are the problems faced by goods traffic? Also suggest its solutions. **07**
