Seat No.:	Enrolment No.
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Subject Code: 2741302

Subject Name: Transportation Facility Design

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER IV (NEW) - EXAMINATION - SUMMER - 2017

Date: 03/05/2017

Time:02:30PM-05:00 PM **Total Marks: 70** Instructions: 1. Attempt all questions. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. How the level of service of Transportation Terminal can be defined? 07 0.1Explain the key factors for the design of cycle track. 07 What is at-grade intersection? Enlist different type of it with sketches. **Q.2** 07 How does the Capacity of Signalised Intersection can be find out? Explain the 07 Importance of cycle time and factors affecting it. OR (b) How do you decide the capacity of Port? Explain the importance of the port in regional 07 planning. **Q.3** A fixed time 2-phase signal is to be provided at an intersection having a North-South and 07 an East-West road where only straight – ahead traffic is permitted. The design – hour flows from various arms and the saturation flows for these arms are given in the following table North South East West Design hour (q) 800 400 750 600 flow (PCU_s/hr) Saturation flow(s) (PCU_s/hr) 2400 2000 3000 3000 Calculate the optimum cycle time and green times for the minimum overall delay. The inter-green time should be the minimum necessary for efficient operation. The time lost per phase due to starting delays can be assumed to be 2 seconds. The value of the amber period is 2 second. 07 (b) Draw Rotary intersection showing various elements and state advantages of it. Q.3 (a) Explain the pedestrian walkway LOS in brief. 07 07 **(b)** What are the main factors affecting Landscaping? **Q.4** Draw the Diamond Interchange and Cloverleaf Interchange 07 Explain importance of accessibility and mobility component in design of transportation **(b) 07** facilities. **Q.4** Write a short note on: Landscaping and safety considerations for design of highway. 07 (b) What are the minimum facilities required for Goods Sheds and Parcel Offices for 07 Terminals. (a) State the different services required at shipping terminals. **Q.5** 07 **(b)** Write a note on Inland Transport 07 OR (a) What is Signal Co-ordination? Enlist different type of Co-ordinated signal. Q.5 07 **(b)** Write note on Under pass and Over pass. 07