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GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- II(New course) • EXAMINATION (Remedial) - WINTER- 2015 Subject Code: 2721316 Date: 14/12/2015 **Subject Name: Basics of Transportation Engineering** Time: 2:30 pm to 5:00 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** (a) Discuss about various modes of transportation with their suitability. 07 Explain speed-volume-density relationship with the help of sketches. 07 **(b) Q.2** State the purpose of O-D study. Enlist various methods to conduct O-D **07** (a) survey and discuss Road side interview method. Discuss merits and demerits of Mass Rapid Transit System in urban area. **(b)** 07 OR Discuss various points to be considered in planning of an airport. **(b) 07**

Explain expansion joints in C.C roads. Q.3 07 (a) Write short note on signs used on highways. **(b)** 07 What are the guidelines for selecting rotary type of intersection? Also state Q.3 (a) 07 the advantage and disadvantage of rotary type of intersection. (b) What is PCU? Explain the various factors affecting PCU. 07 **Q.4** Define: (1) Inter zonal trip (2) Through trip (3) Trip generation (4) Trip (a) 07 distribution (5)Modal split (6) Desire line (7) Cordon line. State measures to prevent accidents. (b) 07 OR Explain ESWL (Equivalent single wheel load) in detail. **Q.4** 07 (a) **(b)** Explain briefly the terminal facilities to be planned at railway station and at 07 airport. 07 **Q.5** Write the silent points of the failures in the flexible pavements. (a) Briefly explain the different steps for economic evaluation of transportation **07 (b)** project. OR Explain briefly the Marshall stability test procedure for bituminous mix **Q.5** (a) 07 design. What are important features of flexible pavement design by CBR method as 07 (b) per IRC: 37-2001?
