

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII (OLD) EXAMINATION – SUMMER 2019

Subject Code: 170604

Date: 10/05/2019

Subject Name: Urban Transportation System

Time: 02:30 PM TO 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.

MARKS

- Q.1** (a) What is urban transportation system? Discuss goals and objectives of transportation planning? **07**
 (b) Define: Desire line, interzonal & intrazonal trip, study area, cordonline, screenline, CBD. **07**
- Q.2** (a) List O-D Survey methods. Explain any one in detail? **07**
 (b) Prepare a Questionnaire for home interview survey to collect household socioeconomic & travel behaviour information. **07**

OR

- (b) Define zone. Discuss various factors to be considered for zone delineation? **07**
- Q.3** (a) Develop the future distribution of matrix using (i) uniform growth factor (ii) average growth factor method. Future trips for A,B,C,D Zones are 350, 400, 330, and 300 respectively. **07**

O/D	A	B	C	D
A	50	70	45	80
B	90	80	50	55
C	60	75	70	40
D	50	60	55	60

- (b) What are synthetic trip distribution models? Explain briefly gravity model? **07**
- OR
- Q.3** (a) Explain the factors governing trip generation and trip attraction rates? **07**
 (b) Write a note on linear regression analysis and its significance in travel demand forecasting? **07**
- Q.4** (a) Write a note on (i) All or nothing technique for trip assignment. **04**
 (ii) Category analysis for trip generation.
 (b) Give classification of urban roads and give comments about its accessibility and mobility? **10**

OR

- Q.4** (a) Define modal split? Describe methods of modal split with its merits and demerits? **04**
 (b) Explain with neat flow chart transportation planning process? **10**
- Q.5** (a) Classify urban structures with neat sketch? How are they likely to influence travel demand? **07**
 (b) Compare bus and rail transit system with characteristic and capacity? **07**

OR

- Q.5** (a) Explain why capacity restore assignment is superior to all or nothing assignment technique? **07**
 (b) Write a note on Paratransit system. **07**
