

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI(NEW) EXAMINATION – WINTER 2022****Subject Code:3160608****Date:20-12-2022****Subject Name:Urban Transportation Planning****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.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

- Q.1** (a) Define: Mobility, Accessibility, Through Trip **03**
 (b) Draw a flow chart and explain various steps involved in transportation. **04**
 (c) Discuss the levels of urban transportation planning with neat sketch. **07**

- Q.2** (a) Briefly explain urban class group. **03**
 (b) What is zoning? Discuss the points to be kept in mind while doing zoning. **04**
 (c) What are the applications of O-D survey data? Enlist different methods of conducting O.D survey and explain any one in detail stating its advantages and disadvantages. **07**

OR

- (c) Discuss the various growth factor methods with their advantages and Disadvantages. **07**

- Q.3** (a) Explain the terms: Screen line checks and Cordon line checks. **03**
 (b) Explain role of transportation at national, regional and urban level. **04**
 (c) Define Trip. Explain the various factors governing the rate of trip generation and Trip attraction. **07**

OR

- Q.3** (a) Write a short note on Travel demand forecasting. **03**
 (b) What is urbanization? Discuss merits and demerits of urbanization. **04**
 (c) Briefly explain urban mass rapid transit system with their advantages and disadvantages. **07**

- Q.4** (a) Write short note on All or nothing assignment method. **03**
 (b) What is BRTS? Write advantages and disadvantages of it. **04**
 (c) The following data shows average household size and total trips made per day for a particular zone of study area. Develop the trip production equation and check its validity. **07**

Average household size	2	3	4	5	6
Total Trips made per day	4	6	7	8	10

OR

- Q.4** (a) Write short note on Diversion curve method. **03**
 (b) What is sampling? Discuss various type of samplings **04**

- (c) The distribution of present trips among the zones A, B and C are given in O-D matrix below. The future trips generated (T_i) are also given in the last column. Distribute the future trips among the zones using uniform growth factor method. **07**

O \ D	A	B	C	T_i
A	60	100	200	360
B	100	20	300	1260
C	200	300	20	3120

- Q.5** (a) Define urban area and rural area. **03**
 (b) Write a short note on Urban Goods Movement. **04**
 (c) Explain basic road patterns in the urban area with the help of sketches. **07**

OR

- Q.5** (a) Enlist and explain the objectives of Transportation planning. **03**
 (b) Describe corridor identification and screen line identification. **04**
 (c) What do you mean by Para-transit? Explain the various types of Para-transit. **07**
