

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2160608

Date: 10/05/2017

Subject Name: Urban Transportation system

Time: 10:30 AM to 01:00 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	Short Questions	14
	1 Explain in one sentence – Rural area. 2 Explain in one sentence – Urban area. 3 What is a Hamlet? 4 What is Grid – Iron growth pattern? 5 Which government body does population calculation in India? 6 What do you mean by sampling? 7 Explain urbanization. 8 What is benchmarking? 9 What is a freeway? 10 Name any one city in India, with rectangular or grid – iron street pattern. 11 What is TSM? Explain in one sentence. 12 What are the desire lines? 13 What is IRC? 14 What is noise?	
Q.2	(a) What is CBD? Explain in brief with neat figure. (b) In brief, define values, goals and objectives. (c) Discuss the urbanization scenario of country in brief. Explain the challenges in transportation thereafter.	03 04 07
OR		
	(c) Discriminate the organic growth pattern over grid – iron growth pattern. Use neat figures.	07
Q.3	(a) Only list out various transportation surveys. (b) Discuss the linkages between the transportation and economy. (c) What is an urban transportation system? Explain in detail with schematic chart.	03 04 07

OR

- Q.3 (a)** Discuss – Importance of decision making in transportation planning. **03**
- (b)** Explain origin and destination survey. **04**
- (c)** List major problems in transportation, and justify the acute need of effective mass transportation system thereafter. **07**
- Q.4 (a)** State the symbol and values for standard normal variable, for confidence levels 80 %, 90 %, 95 %, 98 % and 99 %. **03**
- (b)** In a transportation survey desired to obtain the speed with the average speed within 03 km / h, with the probability of 95 %, considering the standard deviation of speed as 10 km / h, determine the size of the sample. **04**
- (c)** What is landuse? Discuss the transportation as the function of the same. Use neat figures. **07**

OR

- Q.4 (a)** Explain in brief – Moore’s algorithm. **03**
- (b)** Explain in brief – License plate survey method. **04**
- (c)** Critically discuss why climate change and environment protection is a concern for a transportation planner. **07**
- Q.5 (a)** List out various traffic regulatory techniques, explain any one with neat figure. **03**
- (b)** Short note – Travel demand. **04**
- (c)** Refer the O – D matrix given below. The distribution of trips, for zones 01, 02 and 03 are given in the same. Also, the future trip generated are given in last column. **07**
- Distribute these trips, amongst the zones, using uniform growth factor method.

D	01	02	03	T _i
O				
01	70	100	220	400
02	100	30	320	1300
03	200	300	30	3200

OR

- Q.5 (a)** Explain in brief, with neat figure – Corridor. **03**
- (b)** Short note – Modal split. **04**
- (c)** Using neat figure, explain the transportation planning process. **07**
