

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VII(OLD) • EXAMINATION – WINTER 2016

Subject Code: 170604**Date: 18/11/2016****Subject Name: Urban Transportation System (Department Elective-I)****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.

- Q.1** (a) What do you mean by Transportation Planning? Give objectives and goals of it. **07**
 (b) Explain in detail with flow diagram system approach to transportation planning. **07**

- Q.2** (a) What do you mean by zoning? Describe points to be considered while zoning. **07**
 (b) Describe urban transportation issues in detail with their remedial suggestions. **07**

OR

- (b) Give stages in transportation planning. Explain each of them in detail. **07**

- Q.3** (a) Give methods of O-D survey. Describe in detail one of the important method from them. **07**
 (b) Explain growth factor methods of trip distribution. Give limitation of them. **07**

OR

- Q.3** (a) What do you mean by traffic assignment? Give and explain methods of it. **07**
 (b) A trip matrix given below shows the present flows of trips between four zones A, B, C and D. The future trips attraction and generation for each zone are also given. Distribute the trips. Use Furness method. **07**

O \ D	A	B	C	D	Total present trips	Predicted outgoing trips
A	----	100	20	80	200	340
B	20	---	30	20	70	98
C	20	70	---	80	170	282
D	10	10	20	---	40	52
Total present trips	50	180	70	180		
Predicted incoming trips	70	288	90	324		772

- Q.4** (a) Explain modal split. Give factors affecting modal split. Give and explain various techniques of modal split. **07**
 (b) Calculate the vehicle capacity and passenger capacity for the BRT corridor having reliability 0.9. The buses are with 80 seat capacity and permissible stands are 40%. Headway = 05 Minutes. **07**

OR

- Q.4 (a)** Define the following term. **07**
- (1) Headway
 - (2) Capacity
 - (3) Frequency
 - (4) Reliability
 - (5) Vehicle capacity
 - (6) Load factor or utilization
 - (7) Passenger capacity
- (b)** Write short note on BRT and Metro. **07**
- Q.5 (a)** What do you mean by urban area? Write various trends of urbanization. **07**
Discuss urban class groups.
- (b)** Explain corridor identification and corridor screen line analysis. **07**
- OR**
- Q.5 (a)** Give and discuss various urban forms. **07**
- (b)** What are the types of urban structure? Explain each in detail. **07**
