

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PLAN - SEMESTER-III EXAMINATION – WINTER 2015

Subject Code: 1035506**Date: 04/12/2015****Subject Name: Traffic and Transportation Planning-I****Time: 10:30am to 12:30pm****Total Marks: 50****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** (1) Which type of signages warn the driver about potentially hazardous traffic conditions ahead? **06**
- (a) Cautionary signs (b) Informatory signs
(c) Prohibitory signs (d) None of the Above
- (2) Enoscope is used for which type of survey?
- (a) Speed-delay survey (b) Road inventory survey
(c) Accident survey (d) None of the Above
- (3) Which Level of Service indicates approaching 'unstable flow conditions' in urban arterial roads?
- (a) C (b) B
(c) F (d) D
- (4) Which of the following is known as a 'Grade separated' pedestrian crossing?
- (a) Pedestrian subway (b) Raised / Table top pedestrian crossing
(c) Zebra crossing (d) None of the Above
- (5) It is a percentage of parking bays actually occupied by parked vehicles as compared to theoretical number available. What is the term?
- (a) Parking volume (b) Parking load
(c) Parking index (d) Parking turn-over
- (6) In road hierarchy, the streets developed for collecting and distributing the traffic to and from local streets and also for providing access to arterial streets?
- (a) Collector streets (b) Local streets
(c) Sub-Arterial streets (d) None of the Above
- (b)** Explain following terms: (Any Two) **04**
- (1) Load Factor
(2) Vehicle Occupancy surveys
(3) Traffic calming
(4) Parking Volume
- Q.2 (a)** Explain importance, function and types of road transport. **05**
- (b)** Explain capacity of Uninterrupted flow conditions. **05**

OR

(b) Explain Passenger Car Unit (PCU) and how it is used in traffic studies/ planning? 05

Q.3 (a) What are Mass Rapid transport systems and its types of rail based systems. 06

(b) Explain Sight distance, stopping and overtaking sight distance. 04

OR

Q.3 (a) Explain the Level of Service (LoS) on urban arterial roads. 06

(b) Explain the need for Origin-Destination survey and how it is useful in transport planning. 04

Q.4 (a) Explain the Speed Flow curve shown below. 06

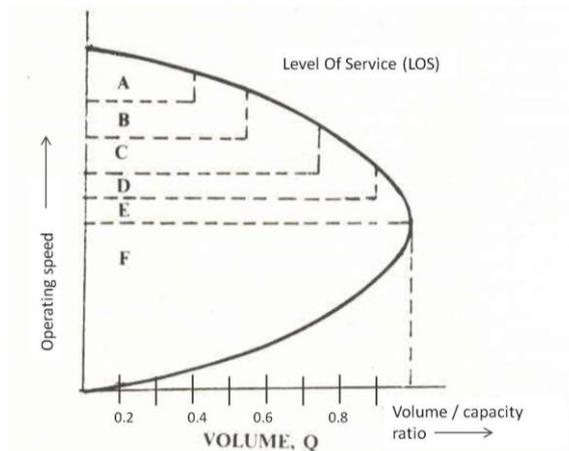


Figure: Speed – volume curve showing levels of service

(b) Mr. Hudson travels a distance of 30 km from his office to home. He leaves at 6:00 pm from his office and on his way, he stops for 30 minutes to buy daily needs for home. He reaches home at 7:00 pm. Calculate the running speed and journey speed of this trip? 04

OR

Q.4 (a) Explain road hierarchy and its types in detail. 06

(b) How is Level of Service (LoS) measured? 04

Q.5 (a) Explain Grade separated facilities for pedestrians. 05

(b) Explain principles of designing intersections/ junctions. 05

OR

Q.5 (a) Explain 'One way streets' type of Traffic Management measures and its advantages. 06

(b) Explain Prohibitory signs type of road traffic signages. 04
