

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**

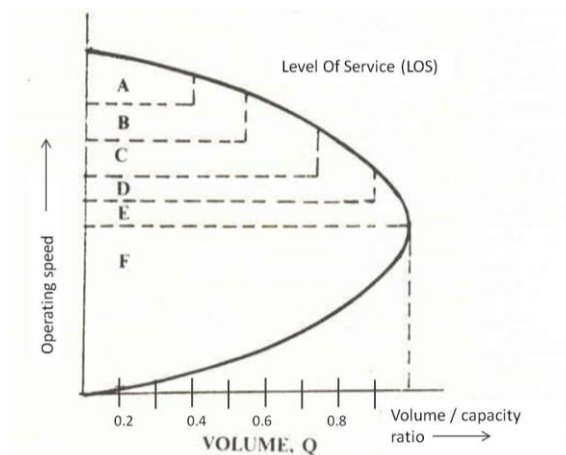


Figure: Speed – volume curve showing levels of service

- (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**
