

**TRAFFIC ENGINEERING AND TRANSPORTATION PLANNING
(CIVL 4242)**

Time Allotted : 3 hrs

Full Marks : 70

Figures out of the right margin indicate full marks.

*Candidates are required to answer Group A and
any 5 (five) from Group B to E, taking at least one from each group.*

Candidates are required to give answer in their own words as far as practicable.

**Group – A
(Multiple Choice Type Questions)**

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) Weaving length is the distance
 - (a) Equal to half the perimeter of central rotary
 - (b) Between the channelizing islands
 - (c) Equal to the total width of the adjoining radial roads
 - (d) Equal to diameter of the central rotary.
 - (ii) Variable costs include
 - (a) Maintenance and repair
 - (b) Fuel, fuel taxes and oil
 - (c) Paid parking and tolls
 - (d) All of these.
 - (iii) Stop line comes under
 - (a) Longitudinal Marking
 - (b) Object marking
 - (c) Transverse markings
 - (d) None of these.
 - (iv) When the speed of the traffic flow become zero, then
 - (a) Traffic density attains maximum value where as traffic volume becomes zero
 - (b) Traffic density and traffic volume both attains respective maximum values
 - (c) Traffic density and traffic volume both become zero
 - (d) Traffic density becomes zero where as traffic volume attains maximum value.
 - (v) Which one is not a public transport mode?
 - (a) Metro rail transit system
 - (b) Bus rapid transit system
 - (c) Car
 - (d) Light rail transit system.
 - (vi) The first stage of four-stage travel demand model is
 - (a) Trip assignment
 - (b) Trip distribution
 - (c) Trip generation
 - (d) Modal split.
 - (vii) Yellow boards are used for
 - (a) Speeding up
 - (b) Parking
 - (c) Emergency stop
 - (d) Slow down.

- (viii) Which one is the more appropriate statement among the followings?
(a) Land use affects transportation
(b) Transportation affects land use
(c) Both land use and transportation affect each other
(d) Both land use and transportation do not affect each other.
- (ix) Which movement is useful for planning a bypass?
(a) Internal to internal (b) External to internal
(c) External to external (d) Internal to external.
- (x) Traffic assignment step is also known as
(a) Mode choice (b) Route choice
(c) Trip distribution (d) None of these.

Group – B

2. (a) What are the advantages and limitations of traffic rotary?
(b) Explain with proper diagrams the relationships between speed, density and volume in a traffic stream flow.

6 + 6 = 12

3. (a) What do you mean by grade separated intersections? What are the advantages of grade separated intersections?
(b) Write a short note on the different vehicular characteristics that are taken into consideration in traffic engineering.

(3 + 3) + 6 = 12

Group – C

4. (a) Write short notes on (i) Traffic volume study, (ii) Off Street Parking, and (iii) Origin and Destination study.
(b) What are the ill effects of parking? What are the main causes of accidents on roadways?

6 + (3 + 3) = 12

5. (a) What are the advantages and disadvantages of traffic signals?
(b) Write short notes on (i) Warning sign and (ii) Informatory sign.

6 + 6 = 12

Group – D

6. (a) Explain the interrelation between land use and transportation with proper diagram.
(b) Write short note on system approach to transportation planning.

- (c) What are the basic movements needed to be considered in transportation survey? Discuss about the home interview survey.

4 + 3 + (2 + 3) = 12

7. (a) Write a brief note on the selection of land use transportation models.
(b) Explain the need for the economic evaluation of transportation process.

6 + 6 = 12

Group – E

8. (a) What are the disadvantages of aggregated travel demand analysis over disaggregated method?
(b) Discuss about the purpose of traffic assignment.

6 + 6 = 12

9. (a) Write short note on urban activity forecast.
(b) Explain the need for continuing study in transportation plan.

6 + 6 = 12

Department & Section	Submission Link
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