

Eighth Semester B.E. Degree Examination, Dec.2019/Jan.2020 Urban Transport Planning

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART - A

- 1 a. Explain the concept of interdependence of land use and traffic. (08 Marks)
 - b. With the help of flow chart, explain the system approach to urban transport planning.

Briefly explain the scope of urban transport planning. (06 Marks)

- 2 a. List and explain the various stages of transport planning. (10 Marks)
 - b. Write a flow chart showing different stages in transport planning process. (10 Marks)
- 3 a. Define zone. Mention the different factors to be considered in dividing the whole area into zones.

 (10 Marks)
 - b. List and briefly explain the various types of inventory of transport facilities. (10 Marks)
- 4 a. The table below gives the data for vehicle trips/day, income for one of the study area. Develop the trip generation equations between income and vehicle trips per day. (10 Marks)

Income (lakhs/year)	5	10 15	20	25	30
Trips per day	5	6 8	4	4	6

b. What is category analysis? What are the assumptions made in category analysis? What are its advantages? (10 Marks)

PART - B

5 a. Three zones A, B and C are shown in sketch Fig.Q5(a) with trip interchanges between A and B = 20, between B and C = 30 and between C and A = 40. These are non-directional interchanges. Growth factors of 2.5, 3 and 1.5 are forecasts for the zones A, B and C respectively. Using the Fratar method, compute the zonal inter-changes in the forecast year.

Present to present $Et_{aj} = 60$ Present $Et_{aj} = 60$ For $Et_{aj} = 60$ Present $Et_{aj} = 70$

Fig.Q5(a)

b. List the various synthetic models and explain briefly the gravity model with its advantages.
(10 Marks)



6 a. Explain the various factors affecting the modal split analysis.

(10 Marks)

- b. With neat flow chart, explain:
 - i) Pre distribution
 - ii) Post distribution modal split.

(10 Marks)

- 7 a. What is the purpose of trip assignment? Explain the various factors affecting the trip assignment. (10 Marks)
 - b. Explain the use of various diversion curves used in trip assignment technique. (10 Marks)
- 8 a. Discuss the various difficulties in transport planning for small and medium cities. (10 Marks)
 - b. Discuss role of quick response techniques in transportation planning in Indian cities.

(10 Marks)