USN

Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024
Urban Transportation and Planning

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Missing data, if any, may be suitably assumed.

Module-1

1 a. Write the composition between transmit system. **(10 Marks)**
   b. What is para-transit system? Write the factors influencing para – transit. **(10 Marks)**

OR

2 a. What is urbanization? Write the causes of urbanization. **(10 Marks)**
   b. Explain the urban transportation problems. **(10 Marks)**

Module-2

3 a. What are the points which consider for dividing area in to zones? **(10 Marks)**
   b. Explain the following : i) Selection of external cordon line for urban transport study factors
      ii) Study area. **(10 Marks)**

OR

4 a. Define sample. Explain the method of sampling. **(10 Marks)**
   b. Explain the following : i) Home interview survey
      ii) Road side interview survey. **(10 Marks)**

Module-3

5 a. Write the factors governing the trip generation and trip attraction. **(10 Marks)**
   b. Estimate the future trips by average factor method :

D \ O	1	2	3
1	60	100	200
2	100	20	300
3	200	300	20

The future trips generated in 1, 2, and 3 are 360, 1260 and 3120 respectively. **(10 Marks)**

OR

6 a. Estimate the future trip distribution by furness method [up to 3-iteration] form the following data. O-Origin D – Destination.

D \ O	1	2	3	4	Predicted future trips
1	10	20	15	18	140
2	21	16	17	14	150
3	30	21	25	27	200
4	10	9	16	13	100
Predicted future trips	150	120	180	160	

(10 Marks)

   b. List the different method of trip distribution. Explain details of average factor method.
(10 Marks)

Module-4

7   a. What is synthetic method? List the different types of method? And explain any two methods. **(10 Marks)**
    b. Explain the factors affecting the model split. **(10 Marks)**

OR

8   a. Explain post distribution model split and write the flow diagram for model split carried out after trip distribution. **(10 Marks)**
    b. Explain the methods in detail :
        i) Opportunity model
        ii) Tanner model. **(10 Marks)**

Module-5

9   a. Write the components of basic transport network. **(08 Marks)**
    b. List the various assignment techniques and explain any tow methods. **(12 Marks)**

OR

10 a. Explain the application of the traffic assignment. **(10 Marks)**
    b. Discuss the points for the selection of land use transport model. **(10 Marks)**

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