USN | | | | | | | | | | | **15CV751**

Seventh Semester B.E. Degree Examination, Dec.2018/Jan.2019
Urban Transportation and Planning

Time: 3 hrs.   Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. What is urbanization? State the causes of urbanization. **(08 Marks)**
   b. Explain the problems in the urban transportation in the present scenario. **(08 Marks)**

OR

2 a. Explain the classification of transit system with example. **(08 Marks)**
   b. Write a note on the following :
   (i) BRTS
   (ii) Metro trains **(08 Marks)**

Module-2

3 a. Define external cordon line. What factors should be given due weightage in the selection of external cordon line. **(06 Marks)**
   b. What is zoning? Discuss the points to be kept in mind while doing zoning. **(10 Marks)**

OR

4 a. What are the methods of origin and destination study? Explain home interview method in detail. **(08 Marks)**
   b. What is sampling? Discuss various types of samplings. **(08 Marks)**

Module-3

5 a. Explain in detail the factors governing trip generation and attraction rates. **(06 Marks)**
   b. The following data shows average household size and total trips made per day for a particular zone of study area. Develop the trip production equation and also compute co-efficient of correlation. **(10 Marks)**

Average Household size	Total trips/day
2	4
3	6
4	7
5	8
6	10

OR

6 a. Enlist the different methods of trip distribution. Explain in detail average growth factor method. **(06 Marks)**

   b. Estimate the future trip distribution by Furness method (up-to two iteration) from the following data: **(10 Marks)**

O/D	1	2	3	4	Future trips
1	-	50	60	30	280
2	40	-	70	20	390
3	20	60	-	40	300
4	50	70	30	-	220
Future trips	200	500	340	150	

Module-4

7 a. Write a short note on opportunity models. **(06 Marks)**

   b. The total trips produced in and attracted to the three zones A, B and C of a survey area in the design year area tabulated as

Zone	Trips Produced	Trips attracted
A	2000	3500
B	3500	4800
C	4800	2000

It is known that the trips between two zones are inversely proportional to the second power of the travel time between zones, which is 25 minutes. If the trip interchange between zones B and C is 300. Calculate the trip interchange between zones A and B, A and C, B and A, C and B. **(10 Marks)**

OR

8 a. Define modal split and explain in brief the factors affecting modal split. **(10 Marks)**

   b. Draw the flow diagram for modal split carried out between trip generation and trip distribution. **(06 Marks)**

Module-5

9 a. List the various assignment techniques and explain any two methods. **(10 Marks)**

   b. Explain the application of the traffic assignment. **(06 Marks)**

OR

10 a. Discuss the points for the selection of land - use transport model. **(06 Marks)**

    b. Write a flow chart of fundamental structure of Lowry model and explain the principal components of the model. **(10 Marks)**

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