15CV751

USN

Seventh Semester B.E. Degree Examination, June/July 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. Explain the system approach to transport planning using a flow chart.   **(10 Marks)**
   b. Explain the various urban transport problems.   **(06 Marks)**

OR

2 a. Explain the features of BRTS.   **(07 Marks)**
   b. Explain briefly the travel demand.   **(05 Marks)**
   c. Write the types of transit system and explain any two.   **(04 Marks)**

Module-2

3 a. Explain zoning and study area.   **(10 Marks)**
   b. Mention the difficult types of sampling techniques.   **(06 Marks)**

OR

4 a. Write a note on :
      i)   Road side interviews
      ii) Commercial vehicle surveys
      iii) Home interview surveys.   **(12 Marks)**
   b. Explain the inter relationship between income population and employment. **(04 Marks)**

Module-3

5 a. Explain in detail the various factors governing trip generation.   **(08 Marks)**
   b. What is multiple linear regression analysis and mention the assumptions made. **(08 Marks)**

OR

6 a. What is trip distribution and mention the methods of trip distribution. **(04 Marks)**
   b. Explain category analysis and mention the assumptions made.   **(04 Marks)**
   c. Let the trip rate of zone is explained by the house hold size done from field survey. If was found that the household sizes are 1, 2, 3, 4, the trip rates of the corresponding house hold is shown in the table below :

Household Size	1	2	3	4
	2	3	4	5
trips /day	3	5	7	8
	3	4	4	5
ΣY	8	12	15	18

                                                                             (08 Marks)

Module-4

7 a. Briefly explain intervening opportunities model and competing opportunity model.

(06 Marks)

b. The total number of trips produced in and attracted to the three zones X, Y, Z of a survey area in the design year are tabulated as follows :

Zone	Trips produced	Trips attracted
X	2500	3800
Y	5800	5500
Z	4500	5500

It is known that the trip between two zones are inversely propositional to the second power of travel time between the zones, which is uniformly 20 minutes, of the trip interchange between zones Y and Z know to be 1000, calculate the trip interchange between X and Y, X and Z and Z and Y.

(10 Marks)

OR

8 a. What are the factors affecting modal split? (08 Marks)

b. Explain in detail the opportunity model relating to synthetic method. (08 Marks)

Module-5

9 a. Define trip assignment and explain the various application of the trip assignment. (10 Marks)

b. Mention the different assignment techniques. (06 Marks)

OR

10 a. Write a brief note on diversion curves. (10 Marks)

b. Explain in detail the features of Lowry model. (06 Marks)

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