

# CBCS SCHEME

15CT832

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**Eighth Semester B.E. Degree Examination, Aug./Sept.2020**

## **Urban Transport Planning**

Time: 3 hrs.

Max. Marks: 80

- Note: i) For Regular Students: Answer any FIVE full questions irrespective of modules.  
ii) For Arrear Students : Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. With a flow diagram, explain system approach to transport planning. (08 Marks)  
b. Explain how the various stages are planned in the transportation process. (08 Marks)
- 2 a. What are the different types of surveys carried out during transport planning process? (08 Marks)  
b. Indicate the various inventories of transport facility. (08 Marks)

### Module-2

- 3 a. Indicate the importance of trip generation, trip distribution, modal split and route assignment with their definitions. (08 Marks)  
b. Explain various factors that govern trip generation and attraction rates. (08 Marks)
- 4 a. What are the assumptions made in category analysis techniques? (06 Marks)  
b. Develop a trip production equation and calculate all the relevant statistics to check the validity of the equation using following data:

Average household size	2	3	4	5	6
Average total trips made by each of households	5	7	8	10	10

(10 Marks)

### Module-3

- 5 a. Define trip distribution. Briefly discuss the various methods available for working out the trip distribution. (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 are tabulated.

Zone	Trips Produced	Trips Attracted
A	2000	3000
B	3000	4000
C	4000	2000

It is known that trips between two zones are inversely proportional to the second power of travel time between zones which is uniformly 20 minutes. If the trip interchange between zones B and C is known to be 600, calculate the trip interchange between zones A and B, A and C, B and A, C and B.

(10 Marks)

- 6 a. List various growth factor methods of trip distribution. Explain any two in brief. (08 Marks)  
b. Write short notes on:  
(i) Gravity model  
(ii) Tanner model (08 Marks)

**Module-4**

- 7 a. What is the purpose of Trip Assignment? Mention the different techniques of trip assignment available. (08 Marks)  
b. Sketch the Minimum Path Tree method commonly employed in assignment studies. (08 Marks)
- 8 a. Define Modal split. Briefly explain factors affecting modal split. (08 Marks)  
b. Sketch the use of Lowry land use transport modal for urban structure analysis. (08 Marks)

**Module-5**

- 9 a. Write briefly about the difficulties in transport planning for small and medium cities. (08 Marks)  
b. Explain in brief about quick response techniques. (08 Marks)
- 10 Briefly write a recent case study about difficulties in transport planning. (16 Marks)

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