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Total Number of Pages : 02

B.Plan
15BPLN403

4th Semester Back Examination 2018-19
TRAFFIC AND TRANSPORTATION PLANNING-II
BRANCH : B.Plan
Max Marks : 100
Time : 3 Hours
Q.CODE : F476

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part- I

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- a) What are the factors governing Trip generation and attraction rate?
- b) Explain briefly the "Growth factor method" through which Trip distribution can be evaluated?
- c) Mention the benefits of individual indepth interview and interactive group survey during data collection stage?
- d) What are the different stages adopted for transportation planning?
- e) Discuss the different modes and operating characteristics of transport system?
- f) What standards and designs to be considered for selecting street lighting types?
- g) Differentiate between Express way and Free way?
- h) What are the constitutes of fixed costs in transportation?
- i) Discuss the Grid type and Centripetal urban structure of road network system?
- j) State the principle and assumption of user equilibrium assignment?

Part- II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- a) What are the different traffic surveys and sampling techniques followed for interpretation of data in planning system?
- b) What are the planning techniques used for estimating direct and indirect user cost benefits?
- c) Analyze the trip generation rates in residential community? Mention the advantages and disadvantages of pre distribution modal split?
- d) Discuss the transportation management system for travel demand management (TDM) and traffic management?
- e) Explain the pricing and funding of transport service system?
- f) The total trips produced in and attracted to the tree zones A,B & C of a survey area in the design year are tabulated as :

Zone	Trip produced	Trip attracted
A	2000	3000
B	3000	4000
C	4000	2000

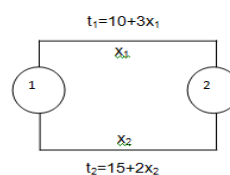
It is known that the trips between the two zones are inversely proportional to the second power of the travel time between zones, which is uniformly 20 mins. If the trip interchange between zones B & C is known to be 600, Calculate the trip interchange between zones A and B, A and C, B and A, C and B?

- g) Let the no. of trips from “i” to “j” is 5000 & 2 modes are available having trips characteristics are given below. Compute the trips modes bus and bus fare collected from the mode if the fare of the bus is reduced to Rs.6/-. Then find the mode collected?

	t_{ij}^v	t_{ij}^w	t_{ij}^t	f_{ij}	ϕ_i
Car	20	-	18	4	-
Bus	30	5	3	9	-
a_i	0.03	0.04	0.06	0.1	0.1

- h) Two link are connecting junction 1 & 2 having flow x_1 & x_2 respectively. The link cost function for 1st route is $t_1=10+3x_1$ & link cost function for 2nd route is $t_2=15+2x_2$. Find out the flow in two routes by “user equilibrium model”

Total no. of flow from zone 1 to 2 is 15.



- i) Write about detrimental effects of traffic on the environment? What measures and standards to be taken to counteract Traffic noise?
- j) What are the requirements of a good road pricing system?
- k) State the review of state level transport policy in relevance to spatial and economic planning?
- l) What planning engineering and management criteria ensue road and junction improvements?

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

- Q3 Discuss the different types of road intersections along with their parameters? Draw a neat sketch of a rotary intersection and do mention the advantages and disadvantages of it? (16)
- Q4 Examine the importance of accessibility in regional transport planning? What are the roles of road, rail, air & water transport system? (16)
- Q5 What are the factors affecting road safety and explain the various planning norms and design guidelines followed to cater target groups with help of suitable sketches? (16)
- Q6 Describe the various stages of transport planning process? How does it help in forecasting and analyzing future condition plan of a City? (16)