Code No: **R204101D** **R20** **Set No. 1**

IV B.Tech I Semester Regular Examinations, January – 2024

URBAN TRANSPORTATION PLANNING

(Civil Engineering)

Time: 3 hours **Max. Marks: 70**

Answer any FIVE Questions
ONE Question from Each unit
All Questions Carry Equal Marks

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UNIT - I

1 a) Define system approach. Explain with flow diagram system approach to transport planning. [7]

b) Explain how the land use and travel demand are related in the urban transportation planning. [7]

(OR)

2 a) In detail discuss the short-term and long-term planning process of urban transportation. [7]

b) Illustrate Sequential and Simultaneous Approaches with suitable examples. [7]

UNIT - II

3 a) Write short notes on home interview surveys and road side interview surveys [7]

b) Describe the detailed procedure of collection of data related to the transportation from the field [7]

(OR)

4 a) Explain in detail the commercial vehicle surveys [4]

b) Explain the importance of organization of surveys and their analysis in effective urban transport planning. [10]

UNIT - III

5 Define the term trip distribution along with various factors influencing the same. In detail explain the average factor method along with its merits and demerits. [14]

(OR)

6 a) Explain the terms trip generation and trip distribution along with suitable examples. [7]

b) List out the types of zonal models. Explain any three of them with suitable examples. [7]

UNIT - IV

7 a) Explain about All (or) Nothing Assignment and Equilibrium assignment. [5]

b) Explain with suitable examples, the various factors affecting on the model split. [9]

(OR)

8 a) Explain in detail the mode choice analysis and its behaviour. [7]

b) Illustrate various probabilistic models used in the traffic analysis. [7]

UNIT - V

9 a) Explain the pivot point analysis with suitable examples. [7]

b) Exemplify the master plans used for corridor identification. [7]

(OR)

10 a) Illustrate with an example the environmental and energy analysis [7]

b) Explain the process of plan preparation and its evaluation. [7]

Code No: **R204101D** **R20** **Set No. 2**

IV B.Tech I Semester Regular Examinations, January – 2024

URBAN TRANSPORTATION PLANNING

(Civil Engineering)

Time: 3 hours **Max. Marks: 70**

Answer any FIVE Questions
ONE Question from Each unit
All Questions Carry Equal Marks
*****

UNIT - I

1	a)	Explain in detail the Supply and Demand – Systems Approach.	[7]
	b)	Write down the assumptions made in travel demand estimation and explain the methods to estimate the same.	[7]
		(OR)	
2	a)	Explain the transportation planning process with more emphasis on long-term planning process.	[7]
	b)	Explicate in detail the Aggregate and Disaggregate Techniques used in transportation planning.	[7]

UNIT - II

3	a)	Describe the detailed procedure of collection of data related to the transportation from the field.	[7]
	b)	Explain in detail about vehicle owner shop.	[7]
		(OR)	
4	a)	Explain in detail about Home Interview Survey with suitable example.	[7]
	b)	Elucidate various sampling techniques used in urban transportation data collection with suitable examples.	[7]

UNIT - III

5	a)	What is trip generation? Describe in details about the trip characteristics	[7]
	b)	Explain the gravity models with suitable examples.	[7]
		(OR)	
6	a)	What do you mean by trip distribution? Explain various factors influencing the same.	[7]
	b)	What is an opportunity model? Explain types of opportunity models.	[7]

UNIT - IV

7		Explain with neat sketches the ‘all-or-nothing assignment technique and capacity restraint technique’. What are the limitations of each technique?	[14]
		(OR)	
8	a)	Explain mode split curves and diversion curves with suitable examples.	[7]
	b)	Write short note on route properties and its importance in the urban transportation planning?	[7]

UNIT - V

9	a)	What do you mean by a corridor in transportation planning? Explain various factors influence in deciding the same.	[7]
	b)	How an Environmental Analysis will be done for Transportation system?	[7]
		(OR)	
10		Demonstrate the impacts of new development on the urban transportation planning with a case study example.	[14]

Code No: **R204101D** **R20** **Set No. 3**

IV B.Tech I Semester Regular Examinations, January – 2024

URBAN TRANSPORTATION PLANNING

(Civil Engineering)

Time: 3 hours **Max. Marks: 70**

Answer any FIVE Questions
ONE Question from Each unit
All Questions Carry Equal Marks
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UNIT - I

1	a)	Compare Long term Vs short term planning in urban transportation planning?	[7]
	b)	Write short note on overall planning process in Urban transportation planning process?	[7]
		(OR)	
2	a)	Write short note on travel attributes?	[7]
	b)	Elucidate the relationship between land use and travel demand with suitable examples.	[7]

UNIT - II

3	a)	Write short note on different types and sources of data in urban transportation planning system.	[7]
	b)	Write short notes on home interview surveys and commercial vehicle surveys.	[7]
		(OR)	
4	a)	Write short note on sampling techniques and accuracy checks?	[7]
	b)	Explain about use of secondary sources in urban transportation planning system?	[7]

UNIT - III

5	a)	Write short note on trip attraction model with suitable example.	[7]
	b)	Explain the personal trip generation models.	[7]
		(OR)	
6	a)	Discuss about Time Function Iteration Models.	[7]
	b)	Discuss about category analysis.	[7]

UNIT - IV

7	a)	What is trip assignment? List out various trip assignment techniques?	[7]
	b)	Describe all or nothing assignment techniques with suitable numerical example.	[7]
		(OR)	
8	a)	What are the various applications of traffic assignment?	[5]
	b)	Explain about IIA property in detail.	[9]

UNIT - V

9	a)	Write a case study on selection of corridor and problems associated with it.	[7]
	b)	Write a case study on corridor identification and problems associated with it.	[7]
		(OR)	
10	a)	Write short note on master plan for successful UTPS?	[7]
	b)	Write a case study on corridor deficiency Analysis.	[7]

Code No: **R204101D** **R20** **Set No. 4**

IV B.Tech I Semester Regular Examinations, January – 2024

URBAN TRANSPORTATION PLANNING

(Civil Engineering)

Time: 3 hours **Max. Marks: 70**

Answer any FIVE Questions
ONE Question from Each unit
All Questions Carry Equal Marks

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UNIT - I

1	a)	Write short note on aggregate and disaggregate techniques with suitable examples.	[7]
	b)	Explain the detailed process of urban transportation planning with more emphasis on short-term planning process.	[7]
		(OR)	
2	a)	What is the demand function? Explain the importance of demand function and independent variables in UTPS.	[7]
	b)	Explain the importance of system approach in effective planning of urban transportation along with a flow diagram.	[7]

UNIT - II

3	a)	Elucidate various expansion factors and accuracy checks.	[7]
	b)	Discuss the following in connection data collection: i) Income ii) Population iii) Employment	[7]
		(OR)	
4	a)	Write short note on study area and zoning in Urban Transportation Planning?	[7]
	b)	Write short notes on organisation of surveys and their analysis.	[7]

UNIT - III

5	a)	Write detailed notes on the household models.	[7]
	b)	Illustrate UTPS approach in trip generation.	[7]
		(OR)	
6	a)	Write short note on commercial trip rates?	[7]
	b)	Compare Growth Factor Model Vs Gravity Models.	[7]

UNIT - IV

7	a)	Illustrate Binary logit and Multinomial logit models.	[7]
	b)	Write short note on discrete choice analysis and choice sets.	[7]
		(OR)	
8	a)	Explain with neat sketch, the equilibrium assignment with suitable example.	[7]
	b)	Explain with neat sketch, the reallocation of assigned volumes with suitable examples?	[7]

UNIT - V

9	a)	What is Master plan? How do you develop a master for urban transportations planning?	[7]
	b)	List out the challenges faced during the selection of corridor for a road network?	[7]
		(OR)	
10	a)	List out advantages of the new development on the transportation facilities with suitable case study?	[7]
	b)	List out the benefits and importance of travel forecasts to evaluate alternative improvements.	[7]