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APJ ABDULKALAM TECHNOLOGIC 08 PALAKKAD CLUST

Q. P. Code : TE0821202-I

(Pages: 3)

SECOND SEMESTER M.TECH. DEGREE EXA

.Branch: Civil Engineering

Specialization: Transportation Engineering

08CE6202 REGIONAL TRANSPORTATION PLANNING

(Common to TE)

Time: 2 hour 15 minutes

Max. Marks: 60

Answer all six questions.

Modules 1 to 6: Part 'a' of each question is compulsory and answer either part 'b' or part 'c' of each question.

Q. No. Module 1 Marks List down various trend models used for demographic forecasting and give 1. a 3 their basic model forms.

Answer b or c

b Fit a logistic model for the given population data (in 10,000).

Year	1950	1960	1970	1980	1990	2000
Population	30	40	50	60	70	80

C

Derive the formula for final distribution of residential population in 6 multiregional case: $P = [(I-HS)]^{(-1)} HE^{P}$

Q. No. Module 2 2. a Classify Regions as stipulated in Meyers' Approach.

Answer b or c

- Illustrate how the concept of spatial demand cones is used to describe the b 6 demand of various goods and services.
- Compare Christallers and Losch Theories on the grounds of their theories of С 6 development and application.

Marks

6

3

Q. No.	Module 3	Marks
3. a	Justify the need of land use- transport models in planning process.	3
	Answer b or c	
b	State the limitations of Lowry model? Explain the contributions made by Garin, Wilson and Putman in Lowry Landuse transport model.	6
c	Elaborate the basic equation systems of the Lowry's model of land use.	6
Q. No.	Module 4	Marks
4. a	What are the major methods adopted for collecting data for freight transportation planning?	3
	Answer b or c	
b	With the help of a flow chart explain multi-step freight planning models. Explain its sub-models and data inputs.	6
c	i. Write short note on intermodal freight transportation.	6

ii. Explain how input output models are useful in freight demand planning

Q. No.

b

1

Module 5

Marks

2

5. a Write a note on 'Minimum spanning tree' and 'Greedy triangulation' and their 4 relevance in network generation.

Answer b or c

Elaborate the various measures used for transportation network analysis with a suitable sample network.

Explain the role of α , β and γ indices in the network theory. Obtain the same for the given plane graph.

c



Q. No.	Module 6	Marks
6. a	Distinguish between corridor route, residential route, activity route and transfer route.	4
	Answer b or c	
b	Explain various activities involved in public transportation planning.	8
C	Transit network design problem is considered by planners as an optimization exercise. Justify the statement.	8