

CEE123

Transportation Systems III: Planning & Forecasting

Quiz 3. Travel Forecasting

- Trip Generation
- Trip Distribution
- Time-of-Day Analysis
- Trip Assignment
- Post-processing

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A Framework for Travel Forecasting

1. Question 137-02 (1 point)

Which behavioral path choice rule is deterministic, capacity restrained, and reflects marginal costs?

- a. All-or-Nothing
- b. User Equilibrium
- c. **System Optimal**
- d. Dijkstra's Algorithm

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Travel Forecasting & the Four Step Model

2. Question 140-09 (1 point)

Which step of the FSM integrates performance functions?

- a. trip generation
- b. trip distribution
- c. mode choice
- d. **trip assignment**

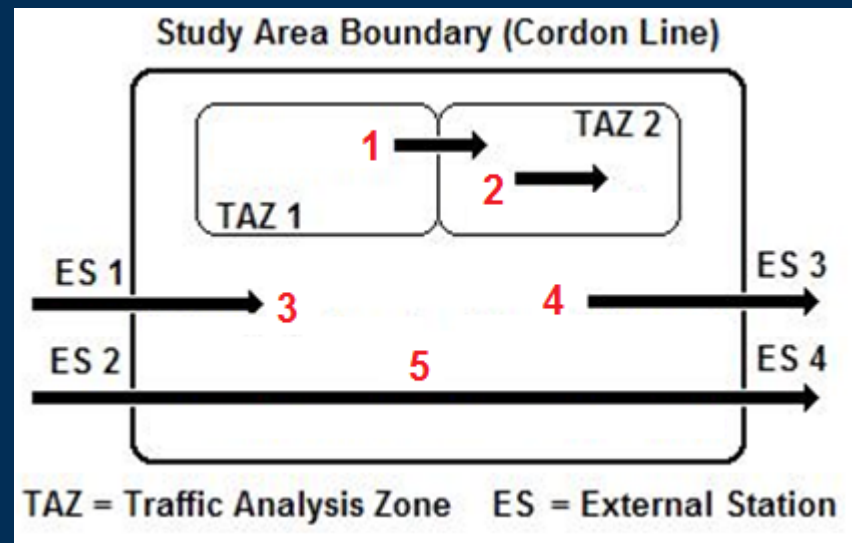
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3. Question 135-07 (1 point)

For the study area shown below, which numbered arrow represents an intrazonal trip?

- a. Arrow 1
- b. Arrow 2
- c. Arrow 3 or 4
- d. Arrow 5



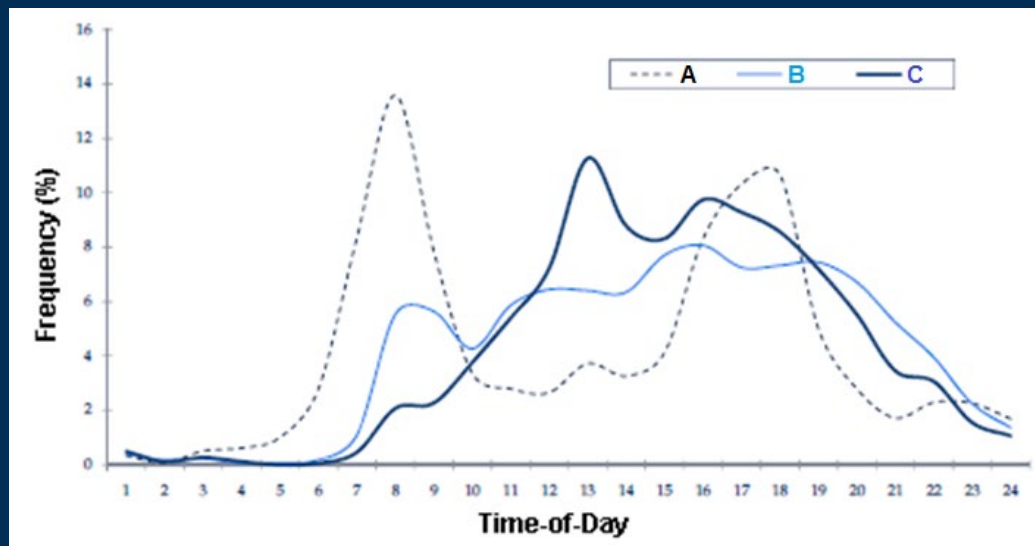
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4. Question 135-11 (1 point)

For the distribution of trips by purpose, which curve best represents the diurnal pattern of Home-based Work trips?

- a. **Curve A** (dashed line)
- b. Curve B (light blue line)
- c. Curve C (dark blue line)
- d. None of the above



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FSM: Time-of-Day

5. Question 144-03 (1 point)

Which of the following adjustments must be made to a trip table prior to trip assignment?

- a. Split the trip table by trip purposes
- b. Apply K Factors
- c. **PA to OD conversion**
- d. Adjust link capacities

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FSM: Trip Distribution

6. Question 142-08 (1 point)

Given only the total number of trips, which of the following trip distributions is most probable?

- a. All trips assigned to one cell
- b. Trips equally assigned to all cells
- c. All trips assigned to intrazonal interchanges
- d. None of the above

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FSM: Time-of-Day

7. Question 144-01 (1 point)

In metropolitan areas, time-of-day modeling is most often applied:

- a. **With conversion of trip tables from PA to OD format**
- b. As part of trip generation
- c. As factors applied to final 24-hour link volumes
- d. It's not usually applied

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FSM: Time-of-Day

8. Question 144-07 (1 point)

For the PA trip table shown, with PAF and APF equal to 0.5, what is the corresponding OD trip table?

- a. Trip Table **A**
- b. Trip Table **B**
- c. Trip Table **C**
- d. None of the above

PA Trip Table

	1	2	P_i
1	0	2	2
2	0	1	1
A_j	0	3	3

A

	1	2	O_i
1	0	0	0
2	2	1	3
D_j	2	1	3

B

	1	2	O_i
1	0	1	1
2	1	1	2
D_j	1	2	3

C

	1	2	O_i
1	2	0	2
2	0	1	1
D_j	2	1	3

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FSM: Trip Assignment

9. Question 145-08 (1 point)

Assigning volumes to links along a designated network path is known as:

- a. coding
- b. **loading**
- c. skimming
- d. cutting

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FSM: Trip Assignment

10. Question 145-06 (1 point)

What is the primary output of a trip assignment model?

- a. Skim Trees
- b. Productions and Attractions
- c. Trip Tables
- d. **Link volumes**

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FSM: Trip Assignment

11. Question 145-11 (1 point)

Into which cell in the method classification matrix below would you place User Equilibrium assignment?

- a. With All-or-Nothing Assignment
- b. With Multi-path Assignment
- c. **With Iterative Assignment**
- d. With Stochastic UE

Dimensions	Deterministic	Stochastic
Free Assignment	All-or-Nothing	Multi-path
Capacity-restrained	Iterative Assignment	Stochastic UE

CEE 123 Quiz 3

Travel Forecasting

End of Quiz 3