

CEE 123 Quiz 3 A Framework for Travel Forecasting

1. Question 137-01 (1 point)

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

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

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CEE 123 Quiz 3 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**

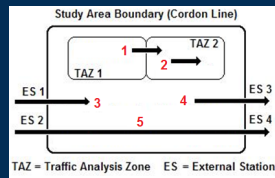
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CEE 123 Quiz 3 A Framework for Travel Forecasting

3. Question 135-10 (1 point)

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

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



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CEE 123 Quiz 3 FSM: Time-of-Day

4. 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				A				B				C			
	1	2	P_i		1	2	O_i		1	2	O_i		1	2	O_i
1	0	2	2	1	0	0	0	1	0	1	1	1	2	0	2
2	0	1	1	2	2	1	3	2	1	1	2	2	0	1	1
A_j	0	3	3	D_j	2	1	3	D_j	1	2	3	D_j	2	1	3

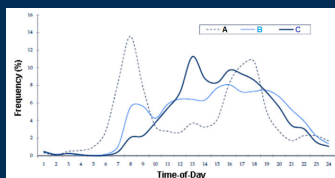
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CEE 123 Quiz 3 A Framework for Travel Forecasting

5. 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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CEE 123 Quiz 3 FSM: Trip Assignment

6. Question 145-03 (1 point)

In regional travel forecasting, trip assignment typically assumes:

- a. **User equilibrium, which is solved via weighted applications of minimum paths and All-or-Nothing loading**
- b. System optimal, a solution defined by equal marginal path travel times and a minimum average travel time
- c. Stochastic loading, where actual travel times are not perfectly known producing a multipath assignment
- d. Stochastic user equilibrium, a user equilibrium solution with stochastic loading replacing All-or-Nothing loading

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CEE 123 Quiz 3
FSM: Time-of-Day

7. 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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CEE 123 Quiz 3
FSM: Trip Distribution

8. 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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CEE 123 Quiz 3
FSM: Time-of-Day

9. 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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CEE 123 Quiz 3
FSM: Trip Assignment

10. Question 145-07 (1 point)

Which of the following is **not** a standard **output** of a trip assignment model?

- a. **Skim Trees**
- b. Performance measures (such as VMT)
- c. Link flows
- d. Turning movements

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CEE 123 Quiz 3
FSM: Trip Assignment

11. Question 145-15 (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

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CEE123 Quiz 3
FSM: Cost Estimation

12. Question 149-21 (1 point)

Which economic analysis method was recommended for Miasma Beach?

- a. Benefit Cost Analysis
- b. Net Present Value
- c. Rate of Return Analysis
- d. **Cost Effectiveness Analysis**

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