

CEE123/223 Transportation Systems III: Planning & Forecasting

Quiz 1. Solutions

Transportation Planning Process

Transportation Systems Analysis

Demand, Performance, Equilibration

Link Performance Functions

Minimum Paths

Spring 2026

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CEE123 Quiz 1 Transport Problems

1. Question 100-01 (1 point)

Transportation problems:

- a. are gaps between desired and observed measures of transportation system performance
- b. impact both transportation and other metropolitan systems and need to be mitigated
- c. are usually prioritized based on an area's overall vision, values, goals, and objectives
- d. All of the above

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CEE 123 Quiz Master Transport Problems

2. Question 100-31 (1 point)

Which of the following statements regarding mobility and accessibility is true?

- a. Accessibility is a system output defining real travel costs and real activity benefits
- b. Mobility is a system input representing potential travel costs and activity benefits
- c. Both of the above
- d. Neither of the above

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CEE123 Quiz 1 Transportation Planning Process

3. Question 110-04 (1 point)

Travel Forecasting occurs as part of which step in the Transportation Planning Process?

- a. Generation of Alternative Solutions
- b. Engineering Design and Project Programming
- c. Analysis of Alternative Solutions
- d. Implementation and Monitoring

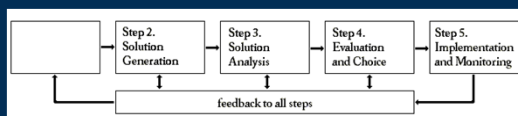
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CEE 123 Quiz Master Transportation Planning Process

4. Question 110-03 (1 point)

Which label should be placed in the empty box in this flowchart for the Transportation Planning Process?

- a. Problem Definition
- b. Trip Generation
- c. Environmental Analysis
- d. The TPP only has 4 steps!



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CEE 123 Quiz Master Transportation Systems Analysis

5. Question 120-01 (1 point)

Which of the following sequences reflects the correct top to bottom hierarchy of Transportation Systems Analysis (TSA), the Transportation Planning Process (TPP), and the Four Step Model (FSM)?

- a. TSA > FSM > TPP
- b. TSA > TPP > FSM
- c. TPP > TSA > FSM
- d. TPP > FSM > TSA

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CEE 123 Quiz Master Transportation Systems Analysis

6. Question 121-01 (1 point)

Which statement best describes travel demand?

- a. The traffic volume on a specific link at a specific time
- b. A network's equilibrated volume and level-of-service
- c. **A general relationship representing volume as a function of level-of-service and activity system attributes**
- d. None of the above

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CEE 123 Quiz Master Transportation Systems Analysis

7. Question 122-03 (1 point)

Performance functions relate Level-of-Service to:

- a. Characteristics of the Activity System **A**
- b. **Characteristics of the Transportation System T**
- c. Travel budget constraints
- d. All of the above

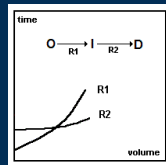
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CEE 123 Quiz Master Transportation Systems Analysis

8. Question 124-01 (1 point)

When combining two links in a series:

- a. the volume on each link equals the OD (or path) volume
- b. The OD path travel time is the sum of link times
- c. The combined performance function is the sum of the individual link functions over the time axis
- d. **All of the above**



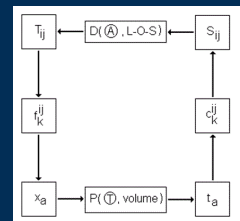
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CEE 123 Quiz Master Transportation Systems Analysis

9. Question 125-01 (1 point)

In Manheim's transportation system equilibration (below), where does path finding occur?

- a. **On the right-hand side**
- b. In the top level
- c. On the left-hand side
- d. In the bottom level



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CEE 123 Quiz Master TSA: Paths

10. Question 128-03 (1 point)

Summing travel times or other link characteristics along a designated path is known as:

- a. Coding
- b. Loading
- c. **Skimming**
- d. Cutting

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CEE 123 Quiz Master A Framework for Travel Forecasting

11. Question 130-31 (1 point)

Who developed TransCAD and what version are we using?

- a. Citilabs, Version 5
- b. Citilabs, Version 10
- c. Caliper, Version 5
- d. **Caliper, Version 10**

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