CEE123
Transportation Systems III: Planning & Forecasting

Quiz 2.

Trip Characteristics

Trip Generation

Trip Distribution

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A Framework for Travel Forecasting

1. Question 130-12 (1 point)

   Model validation can include:

   a. Comparing observed and estimated flows at screen lines
   b. Comparing model parameters with models for similar areas
   c. Reasonableness checks
   d. All of the above

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A Framework for Travel Forecasting

2. Question 132-21 (1 point)

   What network link type is best described as:

   "*abstractly connecting TAZs to the network, represented with high capacities and low speeds*"

   a. Centroid connector
   b. Local roads
   c. Collectors
   d. Arterials

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Travel Behavior & Trip Characteristics

3. Question 135-03 (1 point)

   A person leaves work and stops at a grocery store on the way home. The trip from work to the store is a:

   a. home-based work (HBW) trip
   b. home-based other (HBO) trip
   c. non-home-based (NHB) trip
   d. none of the above

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FSM: Trip Generation

4. Question 141-04 (1 point)

   Which formulation for FSM trip generation models is most common for regional trip attraction models?

   a. Category (cross classification) models using household level demographic and socio-economic data

   b. Regression models using zone-level demographic and socio-economic data

   c. Regression models using household level demographic and socio-economic data

   d. Land use based trip rates

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FSM: Trip Generation

5. Question 141-05 (1 point)

   What is the primary output of a trip generation model?

   a. Skim Trees

   b. Productions and Attractions

   c. Trip Tables

   d. Link volumes

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FSM: Trip Generation

6. Question 141-10 (1 point)

   For the HBW production model below, what is the best estimate of HB Work trip productions (P_i) for a TAZ with zero households (H_i) and 100 employees (E_i) ?

   $$P_i = 20 + 2.1\ H_i + 0.2\ E_i$$

   a. 40 HBW productions

   b. 20 HBW productions

   c. **0 HBW productions**

   d. None of the above

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FSM: Trip Distribution

7. Question 142-02 (1 point)

   Which of the following variables are not included in the conventional gravity model for trip distribution?

   a. Ps and As

   b. F Factors

   c. K Factors

   d. V/C Ratios

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FSM: Trip Distribution

8. Question 142-06 (1 point)

   What is the primary output of a trip distribution or destination choice model?

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

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FSM: Trip Distribution

9. **Question 142-08 (1 point)**

   Which of the following is a travel time impedance function used in gravity models?

   a. $f(t_{ij}) = \sum_a x_a \, t_a(x_a)$

   b. $f(t_{ij}) = t^0 [1 + \alpha (x_a/c_a)^\beta]$

   c. **$f(t_{ij}) = \exp (- \mu \, t_{ij})$**

   d. $f(t_{ij}) = \sum_{od} \sum_k f_k^{od} \; \delta_{ak}^{od}$

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10. Question 135-09 (1 point)

For the trip table shown below, which partition represents through trips?

a. Partition A

b. Partition D

c. Partition I

d. Partitions F and H

T_{ij}	Internal Zones (TAZs)	External Stations	P_i
Internal Zones (TAZs)	A	B	E
External Stations	C	D	F
A_j	G	H	I

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FSM: Trip Generation

11. Question 141-20 (1 point)

What specific trip generation models did you need to calibrate for Miasma Beach in 2018?

a. HBW productions and attraction models
b. HBO productions and attraction models
c. NHB productions and attraction models
d. All of the above