

Unit 4 - Week 2

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

- Lecture 06 : Theoretical foundations Part 1
- Lecture 07 : Theoretical foundations Part 2
- Lecture 08 : Modeling approaches
 - Lecture 09 : Existing integrated land use transportation models
- Lecture 10 : Land use transportation model components and future challenges

Lecture Material

Quiz : Assignment 2

Feedback for Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

DOWNLOAD VIDEOS

Assignment Solution

Live Interactive Session

Text Transcripts

Assignment 2

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-09-30, 23:59 IST.

1) Which of the following statement(s) is/are correct for Bid rent theory?

A. Transportation cost increases at an increasing rate as the distance from CBD increases.

B. Rent decreases at an increasing rate as the distance from CBD increases.

C. Individuals or firms select locations based on a tradeoff between transportation cost and land price.

a. A only

b. B and C

c. A and C

d. A, B and C

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

1 point

2) Alonso (1964) model is based on minimization of transportation costs between _____ and _____.

a. production area and market

b. residential area and workplace

c. residential area and market

d. production area and workplace

No, the answer is incorrect.

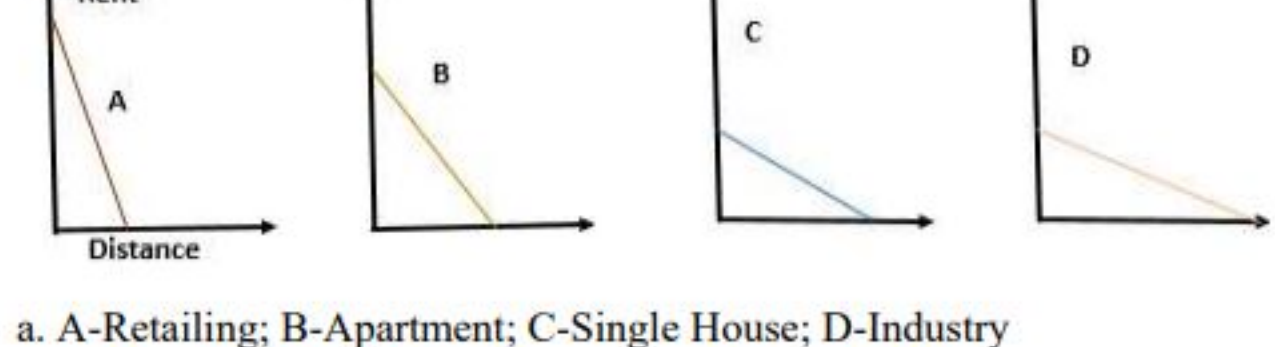
Score: 0

Accepted Answers:

d.

1 point

3) Select the correct bid rents for the given figure?



a. A-Retailing; B-Apartment; C-Single House; D-Industry

b. A-Industry; B-Retailing; C-Apartment; D-Single House

c. A-Industry; B-Retailing; C-Single House; D-Apartment

d. A-Retailing; B-Industry; C-Apartment; D-Single House

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

1 point

4) Select the correct option for the types of urban spatial-interaction location models (gravity model)?

| | |
|---------------------------------|--|
| A. Unconstrained model | I. Fixed origin and destination |
| B. Attraction constrained model | II. Household searching for residence |
| C. Production constrained model | III. Household without job and residence |
| D. Doubly constrained model | IV. Jobs are not fixed |
| | V. Jobs are fixed |

a. A-III, B-II, C-IV, D-I

b. A-III, B-II, C-V, D-I

c. A-I, B-II, C-IV, D-III

d. A-I, B-IV, C-V, D-III

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

1 point

5) Select the correct option for the different components of land use and transportation model?

| | |
|-------------------------------------|---------------------------------|
| A. Real estate development model | I. Population forecast |
| B. Demographic transition model | II. Job creation and loss |
| C. Economic transition model | III. New commercial development |
| D. Employment location choice model | IV. Workplace location |

a. A-IV, B-I, C-II, D-III

b. A-III, B-1, C-II, D-IV

c. A-III, B-1, C-IV, D-II

d. A-III, B-II, C-I, D-IV

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

1 point

6) _____accessibility is the ease with which different activities may be reached from one zone to other zones.

Hint

No, the answer is incorrect.

Score: 0

Accepted Answers:

(Type: String) Regional

1 point

7) Lowry model of Metropolis (1964) was a _____ spatial interaction model?

a. Unconstrained

b. Non-singly constrained

c. Singly constrained

d. Doubly constrained

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

1 point

8) Which of the following is not an Urban land use and transportation model in use?

a. MUSSA

b. URBANSIM

c. NYMTC-LUM

d. CMP

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

1 point

9) Which of the following model is exogenous to URBANSIM?

a. Travel demand model

b. Accessibility model

c. Land price model

d. Household and employment mobility model

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

1 point

10) Hagerstrand (1970) identified various constraints in his work on time geography. Which constraints refers to an individual's limitation to participate in activities due to sharing a resource with another person at a specified time or need to participate in an activity with another person?

Hint

No, the answer is incorrect.

Score: 0

Accepted Answers:

(Type: String) Coupling

0 points

11) Which of the following model is based on the concept of polycentric employment city?

a. Burgess model

b. Von Thunen model

c. Harris and Ullman model

d. Hoyt's sector model

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

1 point

12) Which of the following statement(s) is (are) correct for the discrete choice model developed by McFadden in 1978?

A. The discrete choice model is based on the concept of utility.

B. The discrete choice model considers mutually exclusive and exhaustive alternatives or choices.

C. The discrete choice model is deterministic.

D. An individual considers two choices i.e. willing to move from the present house and willing to stay in the present house. A discrete choice model can be applied to predict the individual's housing mobility.

a. A, B, and D

b. A, B, and C

c. A and D

d. B and D

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

1 point

13) _____ modelling approach is used to predict land-use changes for smaller time horizons and for business as usual scenarios?

a. Rule-based simulation

b. Optimization

c. Pure statistical

d. Cellular Automata

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

1 point

14) _____ modeling approach imitates urban processes while considering limitations arising out of government's development policies and allocates population to locations based on strict rules?

a. Rule-based simulation

b. Optimization

c. Pure statistical

d. Agent-based model

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

1 point

15) _____ modelling approach can be used to model fixed entities whereas _____ modelling approach can be used to model spatially movable entries.

a. Agent-based model and Cellular automata

b. Cellular Automata and Microsimulation model

c. Agent-based model and Microsimulation model

d. Cellular Automata and Agent-based model

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

1 point

16) Invasion succession and dominance theory are examples of _____.

a. Location theory

b. Accessibility theory

c. Social theory

d. Economic theory

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

1 point

17) Which of the following is a correct expression for accessibility of zone i to destinations j if the cost of travel from zone i to destinations j is cij?

a. $Ai = \frac{e^{-\beta cij}}{\sum_j D_j}$

b. $Ai = \frac{1}{\sum_j D_j + e^{-\beta cij}}$

c. $Ai = \frac{1}{\sum_j D_j + e^{\beta cij}}$

d. $Ai = \frac{1}{\sum_j D_j + e^{\beta cij}}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

1 point

18) Which of the following statement(s) is (are) correct for the Microsimulation modeling approach?

A. It capture heterogeneity at the level of individuals, firms, or households.

B. The data requirement is large.

C. It does not suffer from monte Carlo error

a. A only

b. A and B

c. A and C

d. B and C

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

1 point

19) Which of the following statement is correct for the Comprehensive Mobility Plans (CMPs)?

A. It promotes integrated land use and transportation planning.

B. Demand for passenger transport is estimated using a four stage model.

C. It does not consider parking plans.

D. A travel demand forecasting model is developed to evaluate several strategic scenarios for urban growth.

a. A and B

b. B and D

c. A, B and C

d. A, B and D

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

1 point

20) Which zone is characterized by mixed residential and commercial establishments in Burgess's Concentric zone model (1920)?

a. Zone of better residence

b. Zone of transition

c. CBD

d. Zone of independent working class

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

1 point