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**Practice Examination 1 "A"** (Actual questions from Spring 2007)

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**DIRECTIONS:**

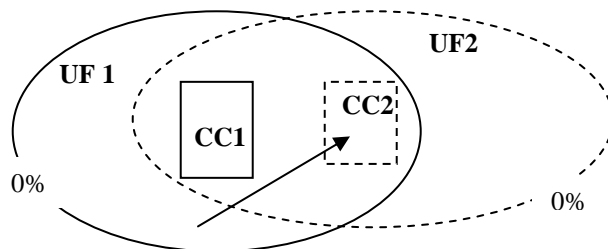
- ? Choose the **one best** answer to each question.
  - Mark the answer you choose on the SCANTRON form.
  - ✍ If you change an answer, erase completely.
  - 😊 Answer all questions.
  - 👋 When you leave, exit quietly as others will still be working
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**1-5. TRUE-FALSE.**

Mark "A" on your answer sheet if the statement is TRUE. Mark "B" if it is FALSE

1. \_\_\_\_\_ U.S. **agricultural surplus** has *increased* since the pedestrian-city era.
2. \_\_\_\_\_ The **sector** model is a **polycentric** representation of urban form because there are many (poly) zones of housing all radiating out from a single center.
3. \_\_\_\_\_ According to the equilibrium analysis of the household location decision discussed in class, in order for utility levels to be constant throughout the city, households locating farther out must be able to afford to purchase more units of housing than those close to the center of the city.
4. \_\_\_\_\_ In the equilibrium analysis discussed in class it was derived that households choose to purchase **more** units of composite consumer good,  $C(x)$ , the farther out they choose to locate in order to compensate for higher commuting costs.
5. \_\_\_\_\_ The boundaries of the Tucson **Metropolitan Statistical Area** (MSA) enclose a larger land area than those of the Tucson **Urbanized Area** (UA).
6. What is the theoretically lowest possible population for a **Metropolitan Statistical Area**?
  - (A) 2,500
  - (B) 50,000
  - (C) 100,000
  - (D) 250,000
  - (E) 1,000,000
7. The geographic areas of which urban units are determined based on **county** boundaries?
  - (A) Urbanized Areas
  - (B) Urban Constellations
  - (C) Conurbations
  - (D) Metropolitan Statistical Areas
  - (E) Megalopolises

8. Which of the following was the first urban public transportation mode?  
 (A) Horsecar railway  
 (B) Cable car  
 (C) Trolley car  
 (D) Diesel bus  
 (E) Omnibus
9. Two overlapping Urban Fields (UF1 and UF2) with their Central Cities (CC1 and CC2) are shown on the diagram:



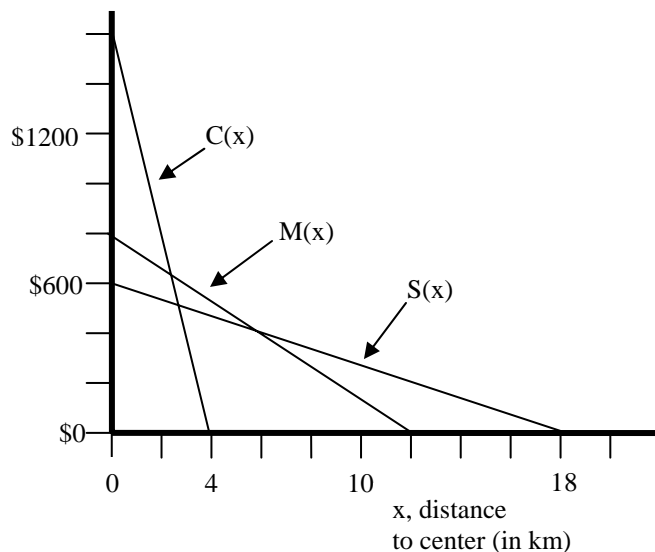
According to the Plane typology discussed in class, the commuting trip represented by the arrow would be classified as a(n) \_\_\_\_\_ flow for Urban Field 1, but as a(n) \_\_\_\_\_ flow for Urban Field 2.

- (A) lateral / inward  
 (B) lateral / impossible  
 (C) impossible / inward  
 (D) within central city / cross  
 (E) cross / lateral

**10–13. Match the models on the left with the correct descriptions on the right:**

- |                         |   |
|-------------------------|---|
| 10. ___ Concentric Zone | A. Proposed by a land economist, Homer Hoyt, it posits that different categories of housing occupy wedge-shaped areas radiating out from the CBD                                      |
| 11. ___ Urban Realms    | B. First set forth by a geographer, Vance, its key element is the emergence of large, self-sufficient suburban sectors each focused on a downtown independent of the traditional CBD. |
| 12. ___ Sector          | C. Specified by geographers Harris and Ullman, and based on Seattle, Washington, it was an early attempt to show the polycentric nature of auto-age cities                            |
| 13. ___ Multiple Nuclei | D. Described in a book called <i>The City</i> by Burgess, a sociologist, it was based on Chicago and shows how different groups occupy rings of territory around the CBD.             |
14. What was the power source for *omnibus* lines?  
 (A) Underground steel cables with steam engines in fireproof powerhouses  
 (B) Diesel engines  
 (C) Electric engines  
 (D) Horses  
 (E) Elves

15–16. Use the diagram below. The graph shows bid-rent lines for Commercial land use,  $C(x)$ , Multi-family residential land use,  $M(x)$ , and Single-family residential land use,  $S(x)$ , in the Toosunny urban area:



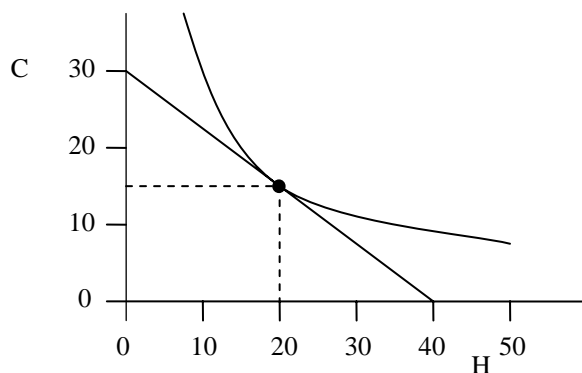
15. If you were to travel out from the center of this city towards its edge, at which distance from the center would you begin to see single-family houses?
- (A) 4 km  
 (B) 6 km  
 (C) 12 km  
 (D) 14 km  
 (E) 18 km
16. Which of the following is the equation for the **bid rent** line for Commercial land use in Toosunny?
- (A)  $C(x) = \$800x / 4$   
 (B)  $C(x) = \$800 - \$33.33x$   
 (C)  $C(x) = \$1600e^{-4x}$   
 (D)  $C(x) = \$1600 - \$400x$   
 (E)  $C(x) = 4x + \$1600$

*NOTE Questions 17-21 were based on the former not the current textbook. Your exam WILL have similar style of questions based on required reading in YOUR textbook (Kaplan, Wheeler, and Holloway)...*

17. ~~The five levels of analysis in urban geography described by Pacione in the assigned Textbook reading are:~~
- (A) ~~Substructure, Street, Above Ground Utility, Upper Storey, Atmospheric~~  
 (B) ~~Structuralist, Positivist, Neoclassical, Marxian, Post-Hippocratic~~  
 (C) ~~The Dweller's Experience, The Capitalist's Perspective, The Public Official's Purview, The Visitor's Image, The Researcher's Realm~~  
 (D) ~~The Neighbourhood, The City, The Region, The National System of Cities, The World System of Cities~~
18. ~~Which is NOT one of the early hearths of cities described in the reading in the Pacione textbook?~~
- (A) ~~The Rhine River Valley~~  
 (B) ~~Mesopotamia~~  
 (C) ~~Egypt~~  
 (D) ~~The Yellow River (valley of the Huangho)~~  
 (E) ~~Mesoamerica~~

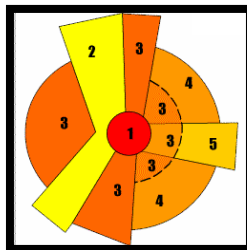
19. Pacione in the assigned textbook reading discusses a system of land division in the United States that facilitated the westward expansion of settlement. Federal legislation (the Land Ordinance of 1785) specified that territory should be laid out in regular units 6 miles square. Each of these large areas would then be subdivided into one square mile (640-acre) sections. Each section might be further subdivided in quarter sections of 160 acres (which became a standard unit for many family farms). This is known as the \_\_\_\_\_ system of land division.
- (A) ~~long lots~~
  - (B) ~~Manhattan~~
  - (C) ~~township and range~~
  - (D) Madisonian
  - (E) ~~orthopedic~~
20. Pacione in the textbook reading describes one of the zones of Burgess's concentric zone model thusly:
- Early in the history of the city this formed a suburban fringe that housed many of the merchants and well-to-do citizens. With the growth of the city, however, industries encroached into this zone from the inner zone, and the quality of the residential environment deteriorated. ... The once fashionable town houses have been converted into flats, furnished rooms and even small industries. ... It is also an area frequented by vagrants and criminals, and rates of crime and mental illness are the highest in the city.*
- Which zone is this?
- (A) ~~Zone of Independent Working Men's Homes~~
  - (B) ~~Zone in Transition (or Gray Zone)~~
  - (C) ~~CBD (Central Business District)~~
  - (D) ~~Commuter Belt~~
  - (E) Exurbia
21. According to the assigned textbook reading, which global megacity is the world's largest urban agglomeration based on population size?
- (A) ~~London~~
  - (B) ~~Los Angeles~~
  - (C) ~~Mexico City~~
  - (D) ~~Tokyo~~
  - (E) Shanghai
22. Which of the following is **TRUE** of urbanized areas?
- (A) They are based on population density and closely approximate the "built-up" land in and surrounding major cities.
  - (B) They must have a minimum population of 1 million.
  - (C) They are composed of entire counties (except in New England where towns are the basic building blocks).
  - (D) They were first defined in 1790 and represent an outdated reality because they may be settlements having as few as 25,000 people.
23. The Concentric Zone Model of Burgess was given important economic underpinnings when William Alonso showed how it could be derived using:
- (A) the "Centrifugal and Centripetal Force" concept of Waldo Tobler
  - (B) the "Bases of Spatial Interaction" as postulated by William Garrison and Edward Ullman
  - (C) the "Special Theory of Urban Relativity" as set forth by Allan Pred and Gideon Hecht
  - (D) the "Sector Model" of land economist Homer Hoyt
  - (E) the concept of "Economic or Bid Rent" as formulated by Johann Heinrich von Thünen

24–26. *Use the diagram below.* The graph below is based on the equilibrium analysis of household consumption presented in class. It shows the budget line and the point of tangency of this line with an indifference curve for the Fester family if they choose to live right at the center of Hypoville (distance  $x = 0$ ). The family's monthly disposable income if they choose to live at  $x = 0$  is \$1200.



24. What is the price,  $P_H(0)$ , per unit of housing at location  $x = 0$ ?
- (A) \$10
  - (B) \$15
  - (C) \$20
  - (D) \$30
  - (E) \$40
25. How many units of composite consumer good,  $C^*(0)$ , should the Festers purchase monthly to maximize utility given their budget constraint?
- (A) 15
  - (B) 20
  - (C) 30
  - (D) 40
  - (E) 120
26. If they choose to live not at location  $x=0$  but instead at  $x=5$  miles from the center, what can we say about their optimal purchases of housing and composite consumer good?
- (A) Because composite consumer good costs the same everywhere in the city they should buy the same amount of it regardless of where they choose to live.
  - (B) They need to buy more units of composite consumer good to derive an equal level of utility at this location because they will waste time and money on commuting to work.
  - (C) They should buy more units of housing and but fewer units of composite consumer good at this location in order to derive an equal level of utility.
  - (D) Because of the additional expense of commuting they won't be able to buy as much composite consumer nor as much housing; thus they will experience a lower level of utility if they live here instead of at the center.
27. The front company in the 'Great Transportation Conspiracy' that was financed by General Motors and other auto interests to buy up and destroy urban trolley car systems was named:
- (A) The Motor Bus Corporation of America
  - (B) Baxter-Travelall
  - (C) Congoleum, Inc
  - (D) Traction Transportation Company (TTC)
  - (E) National City Lines

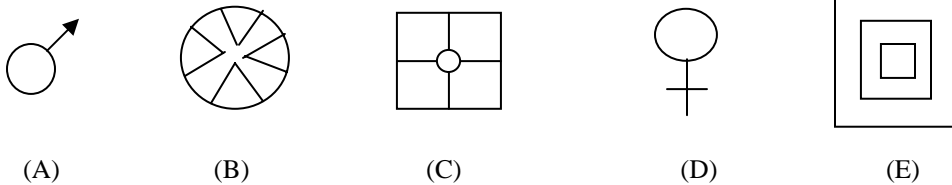
28–30. Refer to this diagram:



28. Which urban model does this show?
- Windmill Motion Model of J. Finch
  - Multiple Nuclei Model of C. Harris and E. Ullman
  - Concentric Zone Model of E. Burgess
  - Sector Model of H. Hoyt
  - Wedgie Model of U. Wise
29. Which variable did the developer model of the model base it upon?
- Housing prices
  - Percent of population born abroad
  - Average size of lots
  - Retail sales volumes
  - Rush hour automobile traffic volumes
30. A strength of this model is that it accommodates well:
- redevelopment of racially and ethnically segregated ghetto areas
  - the recent offshoring and outsourcing of American jobs
  - the predominant American pattern of mixed-income neighborhoods
  - development 'momentum' and growth 'axes'
  - the random accessibility afforded by the private automobile
31. Which of the following is **NOT** one of the types of commuting flow analyzed in the Plane study on New England urban fields?
- Reverse
  - Forward
  - Lateral
  - Cross
  - Inward
32. Two urban fields overlap each other. A commuting trip may be classified differently depending on whether it is examined from the perspective of urban field "A" or urban field "B." Which of the following is an *IMPOSSIBLE* classification of a commuting trip? (*HINT: Trying sketching an example of each!*)
- A reverse flow for "A"; a lateral flow for "B"
  - An inward flow for "A"; a reverse flow for "B"
  - A lateral flow for both fields.
  - A cross flow for "A"; a lateral flow for "B"
  - An inward flow for both fields.

33. Which of the following types of commuting flow were found in the Plane study to be most common?
- (A) Forward
  - (B) Inward
  - (C) Cross
  - (D) Reverse
  - (E) Lateral

34. Which of the following is the ancient 1<sup>st</sup> Dynasty Egyptian hieroglyphic determinative for 'city'?



35. The bid-rent equations for commercial land use and single-family housing in Shakatown (a laid-back hypothetical monocentric city) are:

$$C(x) = 8000 - 2000x$$

$$S(x) = 4000 - 500x$$

where  $x$  is the distance, in kilometers, from the center point of town (the "Wagging Hand Statue" in Plaza Pas-de-Problem). *Multifamily* residential land use occupies a ring-shaped zone located between **2** and **4** kilometers from the center. These are the only three land uses found in town. Which of the following is the multifamily housing bid-rent function?

- (A)  $M(x) = 6000 - 1000x$
  - (B)  $M(x) = 4000 - 2000x$
  - (C)  $M(x) = 6000 - 2000x$
  - (D)  $M(x) = 4000 - 1000x$
  - (E)  $M(x) = 8000 - 4000x$
36. Wilkinsonville has a negative exponential density gradient that is perfectly represented by the equation:
- $$D(x) = 12,345 e^{-0.012345x}$$
- where  $D(x)$  is the population density in persons per square mile at distance  $x$  from the center of the city. According to this model, what is the central density (i.e., the density at distance  $x=0$ ) for Wilkinsonville?
- (A) 0.012345 persons per square mile (hardly anyone is predicted to live at the center)
  - (B) 12,345 persons per square mile
  - (C) 33,557 persons per square mile (12,345 multiplied by the value of "e," the base of the natural logarithms, which is approximately equal to 2.71828)
  - (D) 123,345 (the  $b$ -parameter harmonic ratio of 10 multiplied times the  $y$ -intercept)
37. Which of the following *is* one of the stages of suburban development discussed in lecture?
- (A) Articulated deconcentration
  - (B) Bedroom community
  - (C) Catatonic growth
  - (D) Dissemination
  - (E) Exodus

38. During the middle part of the 1800s, which of these cities was growing the fastest?
- (A) Augusta, Maine
  - (B) Boston
  - (C) New York
  - (D) Philadelphia
  - (E) Tucson, Arizona
39. Which of the following is NOT true of the streetcar suburbs built from ca. 1895 to 1949?
- (A) were built by land development companies with streetcar lines put in before the housing.
  - (B) only upper-class people could pay the daily transit fares and move out of the crowded inner city.
  - (C) Homogeneity of housing types and social values were found within the new neighborhoods.
  - (D) Growth often took place in a finger-like spread out along the new streetcar lines giving the urban area the shape of a starfish.
  - (E) Housing costs finally came within the reach of the ordinary family as mass production ideas reached the housing industry.
40. Why did New York City horsecar lines in the mid-1800s cost \$214,000 per mile to build whereas all U.S. railways at that time were being built at an average cost of \$43,000?
- (A) Expensive cost of labor in big cities as opposed to the countryside
  - (B) Needed to build heavy-duty railbeds and to use concrete rather than wooden ties
  - (C) Payments (bribes) to government officials to obtain franchises to lay the routes down city streets
  - (D) High interest rates applying during this period of 'stagflation'
  - (E) The 'Great Epizootic' had wiped out the entire U.S. horse fleet; new draft-horse stock had to be imported from Saudi Arabia.

*Questions for lectures 5 and 6 (Covered in Modules II and III -- not I -- in Spring 2007):*

41. Which is not one of the five strictly segregated components of sprawl identified in the book *Suburban Nation* and covered in lecture?
- (A) Housing subdivisions ("clusters" or "pods"; exclusively residential; income segregated)
  - (B) Shopping centers ("strip centers," "malls," "power centers," "big box retail")
  - (C) Office parks ("business parks"; workplaces only, isolated from other uses)
  - (D) The Central Business District ("high-rise," "core uses," government functions, transportation terminals)
  - (E) Roadways (transportation space: streets & parking now the 2nd largest consumer of land in American metro areas after residential)
42. In the Video *Subdivide and Conquer*, which city was given as an example of successful downtown revitalization as a result of the construction of a major league ballpark?
- (A) Albuquerque, New Mexico
  - (B) Boise, Idaho
  - (C) Chicago
  - (D) Phoenix, Arizona
  - (E) Seattle, Washington
43. **Name that term...** This new word entered the English language in the 1960s to describe concepts derived from Social Area Analysis and Factorial Ecology as now widely used in the business world for target marketing and market segmentation.
- (A) Articulation
  - (B) Basicity
  - (C) Complementarity Analysis
  - (D) Demographics
  - (E) Focal Groups

44. *Name that dimension...* In urban factorial ecology studies variables such as: Size of Household (average persons per household: PPH; percent single, etc.), Age (Median age; pct. Pop > 65; <15 etc.), Marital Status (Pct. never married), and Type of Housing (Pct. Single-family detached; pct pop. living in apartments etc.) are commonly used to construct an index of this dimension of urban social structure.
- (A) Family Status (or Stage of Lifecycle)
  - (B) Educational Status (or Attainment)
  - (C) Socioeconomic Status (or Social Rank)
  - (D) Ethnic Status (or Segregation)
  - (E) Mobility Status (or Verticality)
45. Which shows the most likely match-up between one of the underlying dimensions of urban social structure found in a factorial ecology study and its likely geographic pattern?
- (A) Socioeconomic status / Concentric zone pattern
  - (B) Family status or stage in lifecycle / Sector pattern
  - (C) Ethnic status / Concentric zone pattern
  - (D) Family status or stage in lifecycle / Multiple nuclei pattern
  - (E) Socioeconomic status / Sector pattern

## TRUE-FALSE:

46. \_\_\_\_\_ As illustrated on the **age schedule of migration**, people in their early 20s are those who exhibit the highest rates of changing their usual places of residence.