**Chapter 8**

**Getting There Quicker with Geospatial Technology**

1. Vehicle navigation systems typically do much less than a GPS receiver.

a. True

b. False

2. When a vehicle navigation system provides incorrect directions to a driver, the error is usually the result of problems in the base network data.

a. True

b. False

3. Which term is best defined as a series of junctions and edges connected together for modeling geospatial concepts such as streets?

a. network

b. node

c. Linksys

d. core model

4. Which of the following terms is NOT a synonym for the other three?

a. edge

b. point location

c. node

d. junction

5. Which of the following is NOT a type of edge in a road network?

a. subways

b. walking paths

c. highway entrances

d. railroads

6. Which of the following is NOT a type of junction in a road network?

a. freeway overpasses

b. subway stops

c. rail terminals

d. walking paths

7. A vehicle navigation system that shows the correct entrances and exits onto or off a highway exhibits accurate connectivity.

a. True

b. False

8. In a good model, each edge is considered a separate entity.

a. True

b. False

9. The best models represent a road as a single segment rather than many segments.

a. True

b. False

10. All of the following are valid attributes for the line segments of a long road, EXCEPT:

a. the type of road.

b. the speed limit.

c. the full length of the road.

d. the address ranges for each side of the street.

11. Road network data is provided by the U.S. Census Bureau in the form of:

a. printed atlases.

b. pre-programmed vehicle navigation systems.

c. TIGER/Line files.

d. geocaching.

12. TIGER/Line files typically specify no more than five attributes.

a. True

b. False

13. The process of matching a typed description like “114 Maple Lane, Smithville, NY” to a specific location is called:

a. geocaching.

b. geocoding.

c. nodal matching.

d. network connectivity.

14. TIGER/Line files are often used in address matching.

a. True

b. False

15. A TIGER/Line file should not be used as a reference database.

a. True

b. False

16. The method used to plot a point at its approximate distance along a segment is:

a. parsing.

b. address standardization.

c. linear interpolation.

d. geocaching.

17. In the address “1865 South Oak Ridge Lane,” which type of attribute is “Lane”?

a. prefix

b. number

c. suffix

d. street type

18. Which of the following is most likely to return the highest-ranked result from a vehicle navigation system?

a. 1600 Mich Ave, Chicago

b. 1600 Michigan Ave, IL

c. 1600 Michigan Avenue, Chicago, IL

d. 1600 Michigan Avenue, Chicago, IL 60601

19. Suppose a street has ten houses numbered 1–10. It is almost certain that house 5 is in the middle of that street.

a. True

b. False

20. The “shortest path” between two locations is based on criteria determined by the person who is using a vehicle navigation system.

a. True

b. False

21. “Impedance” is the opposite of “transit cost.”

a. True

b. False

22. Dijkstra’s Algorithm is used to calculate:

a. the shortest path between an origin and a destination.

b. the route that covers the least physical distance in miles.

c. the route that minimizes tolls and other expenses.

d. the path between origin and destination with minimal use of highways.

23. A “Via Point” is synonymous with the origin point of a trip.

a. True

b. False

24. A “stop” is simply a destination to be visited on a particular network.

a. True

b. False

25. Google Earth’s “Street View” allows users to access 360-degree photographic images.

a. True

b. False