**Chapter 6**

**Using GIS for Spatial Analysis**

1. Using spatial analysis, Dr. John Snow traced the source of which disease to London’s water pumps?

 a. tuberculosis

 b. syphilis

 c. cholera

 d. dysentery

2. GIS queries are composed in which computer language?

 a. SQL

 b. FORTRAN

 c. C+

 d. assembly

3. The relational operator for “not equal” is:

 a. <

 b. >

 c. = NE

 d. <>

4. The relational operator for “less than or equal to” is:

 a. < =

 b. = >

 c. <=>

 d. <>

5. The Boolean operator used for an intersection query is:

 a. OR.

 b. NOT.

 c. AND.

 d. XOR.

6. An OR Boolean query results in a(n):

 a. intersection.

 b. union.

 c. negation.

 d. exclusive or.

7. Suppose you want a set of data that eliminates everything that the data layers have in common. Which type of Boolean operator would you use?

 a. AND

 b. OR

 c. NOT

 d. XOR

8. Which Boolean operator results in a negation?

 a. AND

 b. OR

 c. NOT

 d. XOR

9. Which Boolean operator results in an exclusive or?

 a. AND

 b. OR

 c. NOT

 d. XOR

10. Which would result from the following compound query?

INC2013>=35000 OR MEANINC2013>28500

 a. union

 b. intersection

 c. exclusive or

 d. negation

11. Suppose you want to identify the number of retail stores within the five boroughs of New York City: Manhattan, Queens, Brooklyn, Staten Island, and the Bronx. To help with your research, you might draw a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_ around New York City.

a. query

b. buffer

c. identity

d. site suitability algorithm

12. The original version of a map of the United States shows each state’s boundaries. Another map is created from the original showing just the outline of the entire United States, eliminating the state boundaries. Which type of operation has been performed?

 a. buffer

 b. dissolve

 c. geocaching

 d. exclusive or

13. All of the following are common overlay methods EXCEPT:

 a. identity

 b. exclusive or

 c. symmetrical difference

 d. union

14. In which type of overlay does the new layer show only the common features of the input layers?

 a. intersect

 b. identity

 c. symmetrical difference

 d. union

15. Suppose you have four layers of data and you want a new layer that shows everything in all four of those layers. Which type of overlay operation would you use?

 a. intersect

 b. identity

 c. symmetrical difference

 d. union

16. Which type of overlay eliminates the areas that the layers have in common?

 a. intersect

 b. identity

 c. symmetrical difference

 d. union

17. A suitability index is a system that ranks locations according to how well they fit a set of criteria.

 a. True

 b. False

18. MCE involves the use of several factors, weighted and combined, to determine the suitability of a site for a specific purpose.

 a. True

 b. False

19. Because GIS models are primarily spatial, they are mostly of cartographic interest and have little application to business decisions.

 a. True

 b. False

20. What does SQL stand for?

a. Student Queue Language

b. Simplified Qwerty Language

c. Sampled Question Language

d. Structured Query Language

21. The conditions used to retrieve data from a database:

a. query

b. getter

c. data request set

d. relation

22. If you create a 1-mile buffer around a single point, the shape of the buffer will be:

a. a square

b. a circle

c. a geoid

d. a point (dimensionless)

23. Buffers created around line features will result in:

a. Points

b. Lines

c. Polygons

d. Rasters

24. Combining two or more layers in a GIS is referred to as an overlay operation.

a. True

b. False

25. A site suitability analysis where two or more raster layers are added together is an example of:

a. mashups

b. map algebra

c. buffer

d. symmetrical difference