

## Chapter 2 Test Bank Questions

### Multiple Choice:

1. A datum represents
  - a. **a reference surface used in computing coordinates.**
  - b. a zero point from which to calculate elevations.
  - c. the origin point for longitude measurements.
  - d. the curvature of Earth, used in computing latitude and longitude.
  
2. A model of Earth based on mean sea level is
  - a. **geoid.**
  - b. spheroid.
  - c. ellipsoid.
  - d. the Great Circle.
  
3. Where is the WGS84 datum used for measurements?
  - a. The whole world, except for the north and south poles
  - b. Only the entire northern hemisphere
  - c. **At all points across the world**
  - d. Only in North America
  
4. Latitude and longitude is used as the measurement system for which of the following?
  - a. USNG
  - b. UTM
  - c. SPCS
  - d. **GCS**
  
5. One minute of latitude is equivalent to
  - a. 60 degrees of latitude.
  - b. 1 degree of longitude.
  - c. **60 seconds of latitude.**
  - d. 60 meters.
  
6. The origin point for 0 degrees longitude is
  - a. **Greenwich, England.**
  - b. Washington D.C., United States.
  - c. Paris, France.

- d. San Salvador Island, the Bahamas.
7. What marks the difference between north and south latitude?
- a. Compass Rose Line
  - b. Equator**
  - c. Prime Meridian
  - d. International Date Line
8. What marks the change between east and west longitude?
- a. Equator
  - b. Prime Meridian**
  - c. Antimeridian
  - d. International Date Line
9. The shortest distance between two points on a sphere is the
- a. Great Circle Distance.**
  - b. longitude distance.
  - c. equatorial distance.
  - d. datum distance.
10. If it is 11pm Sunday night in London, England, what day and time is it in New York City, New York?
- a. 4am Sunday
  - b. 6pm Sunday**
  - c. 4am Monday
  - d. 6pm Monday
11. A map projection is a
- a. translation of locations on Earth's surface to their corresponding locations on a flat surface.**
  - b. model of Earth with regard to size and shape of objects on Earth's surface.
  - c. representation of how time zones are distributed with respect to geographic boundaries.
  - d. system used in translating decimal degrees to other forms of measurement.
12. Each UTM zone covers how many degrees of longitude wide?
- a. 3
  - b. 6**
  - c. 15
  - d. 30

13. UTM coordinates are measured in
- degrees, minutes, and seconds.
  - miles.
  - meters.**
  - feet.
14. What is used to ensure that UTM measurements of the southern hemisphere have a positive value?
- A false northing value**
  - A false easting value
  - A false southing value
  - A false polar value
15. Each UTM zone uses a false easting value of
- 50 miles.
  - 500,000 meters.**
  - 10,000,000 feet.
  - 15 degrees of longitude.
16. How are SPCS zones determined?
- Every 3 degrees of longitude and every 3 degrees of latitude indicates a new zone.
  - Every 2,000,000 feet begins a new zone.
  - The geographic boundaries of states and counties are used.**
  - The states' outlines are used for the boundaries, and then each state is cut exactly in half.
17. The International Date Line
- is similar to the 180th meridian but bends to accommodate geographic boundaries.**
  - is similar to the Equator but bends away from it due to political boundaries.
  - marks the change from day to night.
  - exactly follows the 0 degree line of longitude.
18. The Mercator map projection will accurately keep which of the following throughout?
- Shapes**
  - Sizes
  - Distances
  - Directions