Test Bank for Introduction to Geographic Information Systems 8th Karl

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Chapter 02
Test Bank

Worksheet Questions

1.

What is a map projection?

no correct responses defined

Gradable: manual
Topic: Map Projection

2.

How does an ellipsoid differ from a sphere in approximating the shape and size of the Earth?

no correct responses defined

Gradable: manual
Topic: Ellipsoid

3.

What is it meant by “reprojection”?

no correct responses defined

Gradable: manual
Topic: Reprojection

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4.

Explain the difference between the standard line and the central line.

no correct responses defined

Gradable: manual
Topic: Central Line
Topic: Standard Line

5.

What is a datum?

no correct responses defined

Gradable: manual
Topic: Datum

6.

How can “datum shift” affect GIS work?

no correct responses defined

Gradable: manual
Topic: Datum Shift

7.

List the four types of map projections by the preserved property.

no correct responses defined

Gradable: manual
Topic: Map Projection

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8.

Name the ellipsoids (or spheroids) that are the basis for NAD27, NAD83, and GPS, respectively.

no correct responses defined

Gradable: manual
Topic: GRS80
Topic: NAD27
Topic: NAD83

9.

Briefly explain how a UTM zone is defined in terms of its central meridian, standard meridian, and scale factor.

no correct responses defined

Gradable: manual
Topic: Universal Transverse Mercator (UTM) Grid System

10.

Illustrate with a specific example the importance of map projection/coordinate system in GIS operations.

no correct responses defined

Gradable: manual

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11.

ArcGIS offers the following three methods for defining a coordinate system: select, import, or create a coordinate system. Explain the difference between select and import a coordinate system.

no correct responses defined

Gradable: manual

12.

Describe how on-the-fly projection works.

no correct responses defined

Gradable: manual
Topic: On-the-Fly Projection

13.

All layers to be used together in a GIS operation must align spatially.

True

Gradable: automatic
Topic: Map Projection

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14.

A map projection transforms the geographic coordinates on an ellipsoid into locations on a plane.

True

Gradable: automatic
Topic: GRS80
Topic: Map Projection

15.

A conformal projection preserves the property of:

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local shapes

Gradable: automatic
Topic: Map Projection

16.

Which of the following statements is true about North American Datum (NAD)?

Only NAD83 is a newer datum than NAD27 and NAD83 is based on a satellite-determined spheroid.

Gradable: automatic
Topic: NAD27
Topic: NAD83

17.

When converted from NAD27 to NAD83, horizontal shifts of point positions in the conterminous United States can be as much as 100 meters (328 ft).

True

Gradable: automatic
Topic: Datum Shift

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18.

Which of the following statements is not true about a meridian with a scale factor of 1?

The meridian must be the line of 00 longitude.

Gradable: automatic
Topic: Scale Factor

19.

The center of a map projection is determined by the:

central parallel and central meridian

Gradable: automatic
Topic: Central Line

20.

The secant case means that a cylindrical projection has _____ line(s) of tangency:

2

Gradable: automatic

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21.

Which of the following spheroids is ground-measured, rather than satellite-determined?

Clarke1866

Gradable: automatic
Topic: NAD27

22.

The longitude reading of a point in Oregon should be entered as a _____ value in a GIS package:

negative

Gradable: automatic

23.

Which of the following statements is true?

A coordinate system is based on a map projection.

Gradable: automatic
Topic: Map Projection

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24.

Each UTM zone covers _____ degrees in longitude:

6

Gradable: automatic
Topic: Universal Transverse Mercator (UTM) Grid System

25.

The two common map projections used for the SPC (State Plane Coordinate) system are:

transverse Mercator and Lambert conformal conic

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Gradable: automatic
Topic: State Plane Coordinate (SPC) System

26.

The central meridian of a UTM zone has a scale factor of:

0.9996

Gradable: automatic
Topic: Universal Transverse Mercator (UTM) Grid System

27.

An X-shift of -500,000 means you add 500,000 to the original X coordinate value.

False

Gradable: automatic

28.

When converted from DMS to DD units, 46°30’00’’ will read:

46.5°

Gradable: automatic

29.

Which coordinate does a false easting apply to?

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X

Gradable: automatic

30.

The Geographic Coordinate Data Base (GCDB) is a database based on the:

PLSS (Public Land Survey System)

Gradable: automatic
Topic: Public Land Survey System (PLSS)

31.

Which of the following coordinate systems is treated as a predefined coordinate system in ArcGIS?

only UTM (Universal Transverse Mercator) and STP (State Plane)

Gradable: automatic

32.

Which of the following statements is true?

Meridians are lines for measuring location in the E-W direction, and parallels are lines for measuring location in the N-S direction.

Gradable: automatic

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33.

Which datum are GPS readings based on?

WGS84

Gradable: automatic

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