

Package Title: Testbank

Course Title: Introducing Physical Geography 6e

Chapter Number: 01

Question Type: Multiple Choice

01) The Sun's rays strike the surface of the Earth at 90 degrees at the _____ on December 22.

- a) Tropic of Cancer
- b) Equator
- c) Tropic of Capricorn
- d) Arctic Circle
- e) Antarctic Circle

Answer: c

Difficulty: Medium

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

02) The Earth's axis is always tilted at an angle of _____ degrees to the plane of the ecliptic.

- a) 15
- b) 23.5
- c) 33.3
- d) 66.5
- e) 90

Answer: b

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

03) In the southern hemisphere, the vernal equinox occurs on or around:

- a) June 22
- b) December 22
- c) March 21
- d) September 23

e) January 4

Answer: d

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

04) Latitude:

- a) describes the east-west locations on the globe
- b) is a measure of the rotation of the Earth
- c) lines (parallels) are all the same length
- d) lines (parallels) include the Equator
- e) lines (parallels) include the International Date Line

Answer: d

Difficulty: Easy

Section Reference 1: The Geographic Grid

Learning Objective 1: 1.3: Describe the features of the geographic grid

05) The meridian at 0 degrees is:

- a) the prime meridian
- b) the Equator
- c) the Arctic Circle
- d) the Antarctic Circle
- e) the International Date Line

Answer: a

Difficulty: Easy

Section Reference 1: The Geographic Grid

Learning Objective 1: 1.3: Describe the features of the geographic grid

06) When the subsolar point is located at its highest latitude in the northern hemisphere it is:

- a) the summer solstice
- b) the winter solstice
- c) the autumnal equinox
- d) the vernal equinox
- e) the spring equinox

Answer: a

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

07) At the vernal equinox in the northern hemisphere:

- a) more solar radiation reaches the northern hemisphere
- b) more solar radiation reaches the southern hemisphere
- c) equal amounts of solar radiation reach both hemispheres
- d) regions north of the Arctic Circle receive 24 hours of daylight
- e) regions north of the Arctic Circle receive 24 hours of night

Answer: c

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

08) The point on the Earth's surface where the Sun is directly overhead is:

- a) subsolar point
- b) circle of illumination
- c) great circle
- d) small circle
- e) Arctic Circle

Answer: a

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

09) At the moment of the aphelion, the Earth's position in its orbit is:

- a) directly between the plane of the ecliptic and the Tropic of Capricorn
- b) farthest from the Sun
- c) closest to the Sun
- d) farther from the Moon than at the perihelion
- e) closer to the Moon than at the aphelion

Answer: b

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

10) What forces cause the Earth to assume the shape of an oblate ellipsoid?

- a) Gravitational pull of the Sun
- b) Outward force of the Earth's rotation
- c) Earth's revolution around the Sun
- d) Tectonic forces
- e) Gravitational influence of the Moon

Answer: b

Difficulty: Easy

Section Reference 1: The Shape of the Earth

Learning Objective 1: 1.1: Describe the shape of the Earth

11) On which of the following projections does a straight line represent a true and constant compass bearing?

- a) conic
- b) cylindrical
- c) isarithmic
- d) equal-area
- e) Mercator

Answer: e

Difficulty: Easy

Section Reference 1: Map Projections

Learning Objective 1: 1.4: Explain different types of map projections

12) Which of the following statements is incorrect?

- a) The Earth rotates counterclockwise on its axis when viewed from the North Pole.
- b) The circumference of the Earth at the Equator is greater than the circumference of the Earth around the poles.
- c) The distance traveled during a complete rotation of the Earth by a person standing on one of the poles is approximately the same as someone else standing at the Equator.
- d) The rotation of the Earth on its axis determines the length of a calendar day.

e) The lines of longitude converge at the poles.

Answer: c

Difficulty: Hard

Section Reference 1: The Earth's Rotation

Learning Objective 1:1.2: Explain Earth's rotation

13) Which of the following associations in the southern hemisphere is incorrect?

- a) autumnal equinox – March 21
- b) spring equinox – September 23
- c) summer solstice – December 22
- d) winter solstice – June 22
- e) vernal equinox – March 21

Answer: e

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

14) Passengers traveling by air from Tokyo to San Francisco hear the pilot announce that the plane is about to cross the International Date Line. Their watches at that moment indicate that the correct local time is 2:00 p.m. on Monday. Upon crossing the date line they should _____.

- a) change their watches to 3:00 p.m. on Monday
- b) change their watches to 1:00 p.m. on Monday
- c) change their watches to 2:00 p.m. on Tuesday
- d) change their watches to 2:00 p.m. on Sunday
- e) change their watches to 3:00 p.m. on Tuesday

Answer: d

Difficulty: Easy

Section Reference 1: Global Time

Learning Objective 1: 1.5: Describe Earth's time zones

15) The boundary between the half of the Earth in sunlight and the half of the Earth in darkness is the _____.

- a) solar zenith
- b) International Date Line

- c) Arctic Circle
- d) plane of the ecliptic
- e) circle of illumination

Answer: e

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

16) At the moment of the perihelion, the Earth's position in its orbit is _____.

- a) directly between the plane of the ecliptic and the Tropic of Capricorn
- b) farthest from the Sun
- c) closest to the Sun
- d) farther from the Moon than at the aphelion
- e) closer to the Moon than at the aphelion

Answer: c

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

17) The summer solstice in the northern hemisphere occurs approximately on which of the following dates?

- a) March 21
- b) June 22
- c) July 23
- d) August 24
- e) September 25

Answer: b

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

18) Which of the following statements about meridians is true?

- a) They originate at the equator at 0 degrees and reach the poles both north and south at 90 degrees

- b) They originate at the Equator at 90 degrees and reach the poles both north and south at 0 degrees
- c) They originate at 0 degrees longitude and reach a location approximately at the International Date Line at 180 degrees longitude
- d) They originate at 180 degrees longitude and reach a location approximately at the International Date Line at 0 degrees longitude
- e) Meridians never intersect

Answer: c

Difficulty: Hard

Section Reference 1: The Geographic Grid

Learning Objective 1: 1.3: Describe the features of the geographic grid

19) How many degrees separate the central meridians that each time zone is based on?

- a) 1 degree
- b) 2 degrees
- c) 5 degrees
- d) 10 degrees
- e) 15 degrees

Answer: e

Difficulty: Easy

Section Reference 1: Global Time

Learning Objective 1: 1.5: Describe Earth's time zones

20) Which of the following associations in the northern hemisphere is incorrect?

- a) winter solstice – December 22
- b) summer solstice – June 22
- c) spring equinox – March 21
- d) autumnal equinox – October 23

Answer: d

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

21) When do regions north of the Arctic Circle experience 24 hours of daylight?

- a) winter solstice
- b) summer solstice
- c) spring equinox
- d) autumnal equinox

Answer: b

Difficulty: Medium

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

22) Which of the following is true about the rotation of the Moon?

- a) The Moon rotates in the opposite direction of the Earth
- b) The Moon does not rotate
- c) The Moon rotates so that one side is always hidden from the Earth
- d) The Moon rotates faster than the Earth
- e) The Moon's rotation determines the phases of the Moon

Answer: c

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

23) What is the declination of the Sun at the equinoxes?

- a) 90 degrees
- b) 66.5 degrees
- c) 45 degrees
- d) 23.5 degrees
- e) 0 degrees

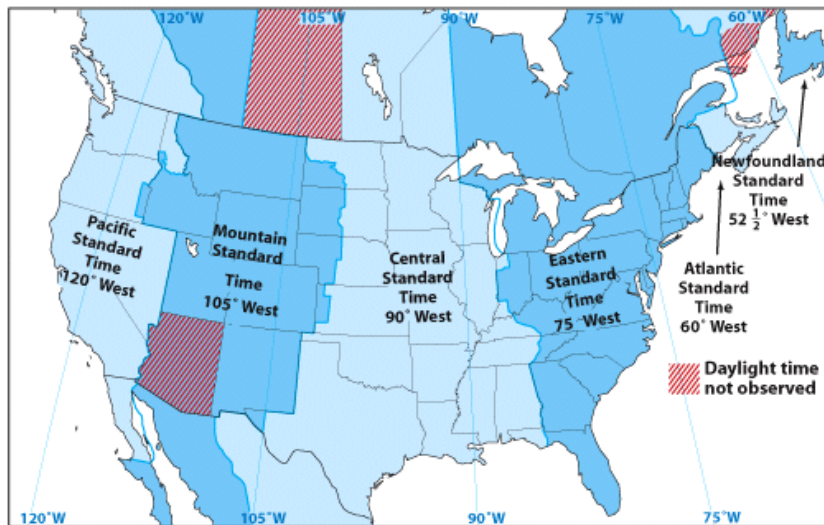
Answer: e

Difficulty: Medium

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

24) If it is 1 p.m. in Miami, Florida, what time is it in Eugene, Oregon?



- a) 4 p.m.
- b) 12 p.m.
- c) 11 a.m.
- d) 10 a.m.
- e) 9 a.m.

Answer: d

Difficulty: Easy

Section Reference 1: Global Time

Learning Objective 1: 1.5: Describe Earth's time zones

25) Which of the following best describes the shape of the Earth?

- a) a geoid
- b) a sphere
- c) a beach ball
- d) a billiard ball
- e) a rugby ball

Answer: a

Difficulty: Easy

Section Reference 1: The Shape of the Earth

Learning Objective 1:1.1: Describe the shape of the Earth

26) One degree of latitude is approximately how many kilometers in distance?

- a) 100

- b) 120
- c) 111
- d) 122
- e) 101

Answer: c

Difficulty: Easy

Section Reference 1: The Geographic Grid

Learning Objective 1: 1.3: Describe features of the geographic grid

27) Around which time of the year in the northern hemisphere is the Earth at the perihelion?

- a) spring equinox
- b) fall equinox
- c) summer solstice
- d) winter solstice
- e) Groundhog Day

Answer: d

Difficulty: Medium

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

28) The time difference between the prime meridian and the International Date Line is:

- a) 24 hours
- b) 12 hours
- c) 8 hours
- d) 1 hour
- e) the same time but a different date

Answer: b

Difficulty: Easy

Section Reference 1: Global Time

Learning Objective 1: 1.5: Describe Earth's time zones

29) Which of the following is true about Greenland in June?



- a) the subsolar point is at 23.5 degrees south
- b) the subsolar point is at 66.5 degrees north
- c) Greenland experiences 24 hours of darkness
- d) Insolation is received even at midnight
- e) The Earth is at perihelion

Answer: d

Difficulty: Medium

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

Question Type: True/False

30) If you were to look down on Earth from above the North Pole, the Earth would be seen to rotate in a clockwise direction.

Answer: False

Difficulty: Easy

Section Reference 1: The Earth's Rotation

Learning Objective 1: 1.2: Explain Earth's rotation

31) The Earth's equatorial diameter is slightly larger than the polar diameter.

Answer: True

Difficulty: Easy

Section Reference 1: The Shape of the Earth

Learning Objective 1: 1.1: Describe the shape of the Earth

32) Shearing corrects distortion in map projections.

Answer: False

Difficulty: Easy

Section Reference 1: Map Projections

Learning Objective 1: 1.4: Explain different types of map projections

33) Shearing occurs when parallels, but not meridians, are curved.

Answer: False

Difficulty: Easy

Section Reference 1: Map Projections

Learning Objective 1: 1.4: Explain different types of map projections

34) Tides are the result of the Earth's rotation combined with the Moon's gravitational pull.

Answer: True

Difficulty: Easy

Section Reference 1: The Earth's Rotation

Learning Objective 1: 1.2: Explain Earth's rotation

35) In a polar projection, the meridians are shown parallel to each other.

Answer: False

Difficulty: Easy

Section Reference 1: Map Projections

Learning Objective 1: 1.4: Explain different types of map projections

36) A straight line drawn on a Mercator projection shows the line of compass bearing, although it does not necessarily provide the shortest distance between two points.

Answer: True

Difficulty: Easy

Section Reference 1: Map Projections

Learning Objective 1: 1.4: Explain different types of map projections

37) A map projection that shows relative areas correctly is an equal-area projection.

Answer: True

Difficulty: Easy

Section Reference 1: Map Projections

Learning Objective 1: 1.4: Explain different types of map projections

38) The declination of the Sun is the angle of the Sun measured at solar noon.

Answer: False

Difficulty: Easy

Section Reference 1: Global Time

Learning Objective 1: 1.5: Describe Earth's time zones

39) One hundred eighty degrees of latitude and 360 degrees of longitude geographically cover the entire Earth.

Answer: True

Difficulty: Medium

Section Reference 1: The Geographic Grid

Learning Objective 1: 1.4: Describe the features of the geographic grid

40) A line of latitude is always a great circle.

Answer: False

Difficulty: Easy

Section Reference 1: The Geographic Grid

Learning Objective 1: 1.4: Describe the features of the geographic grid

41) Theoretically, the Earth is divided into 24, 15-degree-wide time zones.

Answer: True

Difficulty: Medium

Section Reference 1: Global Time

Learning Objective 1: 1.5: Describe Earth's time zones

42) During daylight saving time (DST), the Earth's rotation is slowed by 1 hour to lengthen the day by 1 hour.

Answer: False

Difficulty: Medium

Section Reference 1: Global Time

Learning Objective 1: 1.5: Describe Earth's time zones

43) The Earth's rotation is the annual journey around the Sun and gives us the calendar year.

Answer: False

Difficulty: Easy

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

44) There are three time zones in China.



Answer: False

Difficulty: Easy

Section Reference 1: Global Time

Learning Objective 1: 1.5: Describe Earth's time zones

Question Type: Essay

45) Describe and explain the length of daylight at your current location at the solstices and the equinoxes.

Answer:

Difficulty: Medium

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

46) Identify the precise latitude and longitude of three local landmarks using a local mapsheet.

Answer:

Difficulty: Hard

Section Reference 1: Map Projections

Learning Objective 1: 1.4: Explain different types of map projections

47) For further research, identify the precise latitude and longitude of three famous landmarks. For example, the Empire State Building in New York, the CN Tower in Toronto, Buckingham Palace in London, or the Opera House in Sydney.

Answer:

Difficulty: Hard

Section Reference 1: Map Projections

Learning Objective 1: 1.4: Explain different types of map projections

48) Compare and contrast the polar, Mercator, and Winkel Tripel map projections. Discuss the strengths and weaknesses of each projection. Which projection would be most suitable for use as a world climate map or for plotting a course through the Arctic?

Answer:

Difficulty: Hard

Section Reference 1: Map Projections

Learning Objective 1: 1.4: Explain different types of map projections

49) Calculate the current time (or time closest to the nearest hour) at five major cities (for example, London, Paris, New York, Houston, Rio de Janeiro, Calgary).

Answer:

Difficulty: Medium

Section Reference 1: Global Time

Learning Objective 1: 1.5: Describe Earth's time zones

50) Using a well-known example of a highway (for example, Route 66 from Chicago to California, the Pacific Coast Highway from Seattle to Monterey, or Highway 1 across Canada) identify time zone changes and changes in the length of daylight for a specific time of year.

Answer:

Difficulty: Hard

Section Reference 1: Global Time

Learning Objective 1: 1.5: Describe Earth's time zones

51) Explain the Sun's subsolar point during the four seasons of the year.

Answer:

Difficulty: Medium

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

52) Explain the difference between a "high sun angle" season and a "low sun angle" season.

Answer:

Difficulty: Medium

Section Reference 1: The Earth's Revolution around the Sun

Learning Objective 1: 1.6: Describe Earth's seasons using its revolution around the Sun.

53) Describe three reasons why the rotation of the Earth is important.

Answer:

Difficulty: Medium

Section Reference 1: The Earth's Rotation

Learning Objective 1: 1.2: Explain Earth's rotation