

Geographical Astronomy and Earth Sciences

Astronomy · Answer Key · 12 Questions

1. Which specific location on Earth experiences the 'Midnight Sun' for the longest continuous duration during the northern summer solstice?

- A) The North Pole**
- B) Reykjavík, Iceland
- C) Hammerfest, Norway
- D) Murmansk, Russia

2. The Tropic of Cancer currently corresponds to which specific approximate geographic latitude?

- A) 22.5 degrees North
- B) 23.4 degrees North**
- C) 24.1 degrees North
- D) 25.0 degrees North

3. Which desert is home to the ALMA Observatory, chosen for its high altitude and extreme aridity, which minimizes atmospheric water vapor interference?

- A) Sahara Desert
- B) Gobi Desert
- C) Atacama Desert**
- D) Kalahari Desert

4. The 'Great Circle' path that passes through the celestial poles and defines the Earth's prime meridian is known as what?

- A) Equator
- B) Ecliptic
- C) Longitude 0**
- D) Zenith

5. At which latitude is the sun directly overhead at noon during the March equinox?

- A) 0 degrees**
- B) 23.5 degrees North
- C) 23.5 degrees South
- D) 66.5 degrees North

6. Which astronomical phenomenon is directly responsible for the 'geoid' shape of the Earth, deviating from a perfect sphere?

- A) Tidal locking
- B) Centrifugal force from rotation**
- C) Magnetic pole reversal
- D) Atmospheric pressure

7. The Mauna Kea Observatory is located on a dormant volcano in which specific US state?

- A) Alaska
- B) California
- C) Hawaii**
- D) Arizona

8. Which historical astronomical site in England is aligned with the sunrise on the summer solstice?

- A) Silbury Hill
- B) Stonehenge**
- C) Avebury
- D) Old Sarum

9. What is the term for the geographic point on Earth's surface where the sun is directly overhead at solar noon?

- A) Subsolar point**
- B) Zenith point
- C) Nadir
- D) Geodetic datum

10. The South Pole Telescope is located in which specific Antarctic region?

- A) Ross Ice Shelf
- B) Amundsen-Scott South Pole Station**
- C) Vostok Station
- D) McMurdo Dry Valleys

11. Due to the Earth's axial tilt, which region experiences the 'Polar Night' during the winter solstice?

- A) Equatorial zone
- B) Tropics
- C) Arctic Circle**
- D) Temperate zone

12. What is the approximate altitude of the Karman line, which is often used to define the boundary between Earth's atmosphere and outer space?

A) 50 kilometers

B) 100 kilometers

C) 200 kilometers

D) 500 kilometers