

**Astro Quiz 2 (ch2)****Multiple Choice**

*Identify the choice that best completes the statement or answers the question.*

- \_\_\_\_\_ 1. Star A has an apparent visual magnitude of 13.4 and star B has an apparent visual magnitude of 15.4. Star A is \_\_\_\_\_ than star B.
- 2 times fainter
  - 2 times brighter
  - 6.3 times fainter
  - 6.3 times brighter
  - 29.8 times fainter
- \_\_\_\_\_ 2. Which of the following statements correctly describes the relationship between stars and constellations?
- Only stars close to the ecliptic (the Earth's orbital plane) are located in constellations.
  - Every star is located in a constellation.
  - Only the brighter stars are in constellations.
  - Only those stars that were visible to the ancient Greeks are located in constellations.
- \_\_\_\_\_ 3. The synodic period of the moon
- is about 27.32 days long.
  - is the period of time for the moon to orbit Earth once with respect to the stars.
  - is the period of time between successive eclipses at a given location on Earth.
  - is the period of time from when the moon rises until the moon rises again the next night.
  - none of the above
- \_\_\_\_\_ 4. During a total lunar eclipse,
- the moon must be new.
  - the observer must be in the path of totality.
  - the moon's color will be affected by Earth's atmosphere.
  - the moon must be at about its greatest distance from Earth.
  - it must be near the time of one of the equinoxes.
- \_\_\_\_\_ 5. During a total lunar eclipse, which of the following are true?
- The photosphere of the sun is obscured by the moon.
  - The moon is in Earth's umbra.
  - The moon is new.
  - The moon is full.
- I, III
  - II, IV
  - I, II, III
  - II, III
  - I, II, III, IV

- \_\_\_\_\_ 6. The ecliptic can be defined as
- the plane that is perpendicular to the Earth's axis of rotation.
  - the projection of the Earth's equator onto the sky.
  - the path traced out by the Moon in our sky in one month against the background stars.
  - the path traced out by the Sun in our sky over one year against the background stars.
- \_\_\_\_\_ 7. The lowest amount of solar energy per square meter is incident upon the surface of Earth in the northern hemisphere on or about
- December 21, the winter solstice.
  - March 21, the vernal equinox.
  - September 21, the autumnal equinox.
  - June 21, the summer solstice.
- \_\_\_\_\_ 8. Precession of the rotation axis of Earth is caused by
- the force of gravity from the sun and moon on Earth's equatorial bulge.
  - the force of gravity from the sun and Jupiter on the Earth-moon system.
  - the magnetic field of Earth.
  - the formation and subsequent melting of glaciers during the ice-ages.
  - the impact of asteroids.
- \_\_\_\_\_ 9. The point in Earth's orbit where Earth is farthest from the sun is known as
- aphelion.
  - perihelion.
  - precession.
  - the winter solstice
  - a and d
- \_\_\_\_\_ 10. The celestial equator is
- a line around the sky directly above Earth's equator.
  - the dividing line between the north and south celestial hemispheres.
  - the path that the sun appears to follow on the celestial sphere as Earth orbits the sun.
  - a and b.
  - a and c.
- \_\_\_\_\_ 11. The \_\_\_\_\_ is the point on the celestial sphere directly above an observer who can be at any point on the Earth..
- north celestial pole
  - south celestial pole
  - zenith
  - celestial equator
  - nadir

- \_\_\_\_\_ 12. Most star names, such as Aldebaran and Betelgeuse, are in \_\_\_\_\_.
- Latin.
  - Greek.
  - Arabic.
  - English.
  - Italian.
- \_\_\_\_\_ 13. The magnitude scale
- originated just after the telescope was invented.
  - can be used to indicate the apparent intensity of a celestial object.
  - was devised by Galileo.
  - is no longer used today.
  - was used to determine the rate of precession.
- \_\_\_\_\_ 14. The apparent visual magnitude of a star is a measure of the star's
- size.
  - intensity.
  - distance.
  - color.
  - temperature.
- \_\_\_\_\_ 15. The apparent visual magnitude of a star is 7.3. This tells us that the star is
- one of the brighter stars in the sky.
  - bright enough that it would be visible even during the day.
  - not visible with the unaided eye.
  - very far from Earth.
  - very close to Earth.
- \_\_\_\_\_ 16. The \_\_\_\_ of an object depends on the diameter of the object and the distance to the object.
- apparent brightness
  - apparent magnitude
  - zenith
  - angular diameter
  - color
- \_\_\_\_\_ 17. If you are standing at the Earth's North Pole, which of the following would be located at the zenith?
- The nadir
  - The star Vega
  - The celestial equator
  - The north celestial pole
- \_\_\_\_\_ 18. Stars in the same constellation
- probably formed at the same time.
  - must be part of the same cluster of stars in space.
  - must have been discovered at about the same time at the same location in space.
  - may actually be very different distances away from the observer and from each other.

- \_\_\_\_\_ 19. During the month of June the north celestial pole points towards Polaris but during the month of December it points
- just north of Polaris.
  - just south of Polaris.
  - towards the star Vega.
  - towards the star Thuban.
  - still towards Polaris.
- \_\_\_\_\_ 20. If the Earth's period of rotation doubled, but the period of revolution stayed the same
- the night would be twice as long.
  - the night would be half as long.
  - the year would be half as long.
  - the year would be twice as long.
  - the length of the day would be unchanged
- \_\_\_\_\_ 21. The sun moves
- about one degree westward each day.
  - about one degree eastward each day.
  - about 360 degrees westward each day.
  - about 360 degrees eastward each day.
  - along the celestial equator.
- \_\_\_\_\_ 22. The sun is on the celestial equator at the times of the
- vernal equinox and the summer solstice.
  - autumnal equinox and the vernal equinox.
  - summer solstice and the winter solstice.
  - autumnal equinox and the winter solstice.
  - sun is on the ecliptic and is never on the celestial equator.
- \_\_\_\_\_ 23. A(n) \_\_\_\_\_ is a set of beliefs that appears to be based on scientific ideas, but which fails to obey the most basic rules of science.
- theory
  - hypothesis
  - pseudoscience
  - allegory
  - scientific model
- \_\_\_\_\_ 24. The Big Dipper is
- a circumpolar constellation for southern hemisphere observers.
  - always on an observer's zenith.
  - an asterism.
  - only visible from the southern hemisphere.
  - a constellation.

Name: \_\_\_\_\_

ID: A

**Essay**

25. Explain why people who live close to the equator do not experience major changes in the seasons.