

Exam

Name \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) A solar eclipse can only happen during a \_\_\_\_\_  
A) perihelion passage of the Sun.  
B) new moon.  
C) solstice.  
D) full moon.  
E) first quarter moon.
- 2) If Scorpius is now prominent in the summer sky, in 13,000 years it will be best seen \_\_\_\_\_  
A) in the winter sky.  
B) It will not be visible then at all. All of its stars will have vanished by then.  
C) at the same season; the heavens do not change.  
D) in the spring sky.  
E) in the autumn.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 3) Latitude and right ascension are coordinate systems used to find objects on the celestial sphere. \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 4) What are constellations? \_\_\_\_\_  
A) Groups of stars making an apparent pattern in the celestial sphere.  
B) Ancient story boards, useless to modern astronomers.  
C) Groups of galaxies gravitationally bound and close together in the sky.  
D) Groups of stars gravitationally bound and appearing close together in the sky.  
E) Apparent groupings of stars and planets visible on a given evening.
- 5) The interval from new Moon to first quarter is about a(n) \_\_\_\_\_  
A) month.                      B) day.                      C) year.                      D) week.                      E) hour.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 6) From Earth, the Sun and Moon have about the same angular diameter. \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 7) In an annular eclipse, \_\_\_\_\_  
A) the Sun is totally blocked by the Moon.  
B) the Sun is partially blocked by the Earth.  
C) the Sun appears as a thin, bright ring.  
D) the Moon appears as a thin, bright ring.  
E) the Moon is totally blocked by the Earth.

8) The synodic month is 8) \_\_\_\_\_  
A) about two days shorter than the sidereal month.  
B) based on the Moon's position relative to the stars.  
C) caused by both the Earth's and Moon's rotations.  
D) the basis of the year we use in our modern calendar.  
E) 29.5 days.

9) In general, what is true of the alpha star in a constellation? 9) \_\_\_\_\_  
A) It is the westernmost star in the constellation.  
B) It is the brightest star in the constellation.  
C) It is the easternmost star in the constellation.  
D) It is the star that is closest to Earth.  
E) It is the reddest star in the constellation.

10) The 26,000 year cycle that changes the poles and equinoxes is called 10) \_\_\_\_\_  
A) a retrograde loop.  
B) the Earth's rotation.  
C) revolution.  
D) regression.  
E) precession.

11) The twelve constellations the solar system bodies move through are the 11) \_\_\_\_\_  
A) nodes of the ecliptic.  
B) stages of heaven.  
C) equatorial constellations.  
D) signs of the zodiac.  
E) galactic equator.

12) The greatest distance above or below the ecliptic the Moon can move is 12) \_\_\_\_\_  
A) 29.5 degrees.  
B) 23.5 degrees.  
C) 30 degrees.  
D) 5.2 degrees.  
E) 27.3 degrees.

13) A star with a declination of +60.0 degrees will be 13) \_\_\_\_\_  
A) south of the celestial equator.  
B) west of the vernal equinox.  
C) north of the celestial equator.  
D) east of the vernal equinox.  
E) None of these answers are correct.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

14) There are 3,600 arc seconds in a degree. 14) \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 15) What will occur when the full moon is on the ecliptic? 15) \_\_\_\_\_  
A) a total lunar eclipse  
B) an annular lunar eclipse  
C) a partial lunar eclipse if the Moon is at perigee  
D) a total solar eclipse  
E) a partial solar eclipse
- 16) That Polaris will not always be the pole star is due to 16) \_\_\_\_\_  
A) the Moon following the ecliptic, instead of the equator.  
B) the Earth's revolution being slightly less than exactly 365.25 days.  
C) precession shifting the celestial pole.  
D) the sidereal day being shorter than the solar day.  
E) the Solar winds blowing the Earth farther away from the Sun.
- 17) You note that a particular star is directly overhead. It will be directly overhead again in 17) \_\_\_\_\_  
A) 23 hours 56 minutes.  
B) 12 hours.  
C) 24 hours.  
D) 1 hour.  
E) 24 hours 4 minutes.
- 18) The time for the Moon to orbit Earth, relative to the stars is 18) \_\_\_\_\_  
A) about 7 days.  
B) 18 years, 11.3 days.  
C) 27.3 days.  
D) 23 hours, 56 minutes.  
E) 29.5 days.
- 19) The star Wolf 1061 has a parallax of 2.34 arc seconds, while the star Ross 652 has a parallax of 1.70 arc seconds. What can you correctly conclude? 19) \_\_\_\_\_  
A) Wolf 1061 is closer to Earth than Ross 652.  
B) Wolf 1061 must have a larger proper motion than Ross 652.  
C) Both stars are outside the Milky Way galaxy.  
D) Ross 652 must have a larger proper motion than Wolf 1061.  
E) Ross 652 is closer to Earth than Wolf 1061.
- 20) If the Moon appears half lit, and is getting smaller each day, its phase is 20) \_\_\_\_\_  
A) waxing crescent.  
B) first quarter.  
C) waning crescent.  
D) full.  
E) third quarter.
- 21) If new moon fell on March 2nd, what is the Moon's phase on March 12th? 21) \_\_\_\_\_  
A) waxing crescent  
B) first quarter  
C) waning crescent  
D) waxing gibbous  
E) full

- 22) When the Moon is directly opposite the Sun in the sky, its phase is 22) \_\_\_\_\_  
A) first or third quarter.  
B) full.  
C) waxing or waning crescent.  
D) new.  
E) waxing or waning gibbous.

- 23) The fact that the Earth has moved along its orbit in the time it took to rotate once is the reason for 23) \_\_\_\_\_  
A) precession.  
B) Earth's 23.5-degree tilt.  
C) the position of the Celestial Equator.  
D) seasons.  
E) the difference between solar and sidereal time.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 24) In the scientific method, it is not necessary to test your theory. 24) \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 25) If you are in the Moon's umbral shadow, then you are witnessing 25) \_\_\_\_\_  
A) a total solar eclipse.  
B) nighttime.  
C) some kind of lunar eclipse.  
D) a partial solar eclipse.  
E) a total lunar eclipse.

## Answer Key

Testname: A1-POST

- 1) B
- 2) A
- 3) FALSE
- 4) A
- 5) D
- 6) TRUE
- 7) C
- 8) E
- 9) B
- 10) E
- 11) D
- 12) D
- 13) C
- 14) TRUE
- 15) A
- 16) C
- 17) A
- 18) C
- 19) A
- 20) E
- 21) D
- 22) B
- 23) E
- 24) FALSE
- 25) A