

Name: _____ Date: _____ Pd: _____

Unit 10 Formative Assessment – Astronomy

The Universe:

1. Indicate the age of the Universe: _____

The age of the Earth: _____

2. Identify *two (2)* pieces of evidence that support the Big Bang Theory:

A:

B:

3. The Nebular Hypothesis deals directly with the formation of:

4. Put a checkmark next to each Terrestrial Planets that were formed in the same manner as the Earth.

<input type="checkbox"/> Mercury	<input type="checkbox"/> Mars
<input type="checkbox"/> Neptune	<input type="checkbox"/> Jupiter
<input type="checkbox"/> Venus	<input type="checkbox"/> Uranus
<input type="checkbox"/> Saturn	

5. Place the following in order of SIZE in our universe. Begin by labeling largest with a 1.

<input type="checkbox"/> Solar System
<input type="checkbox"/> Universe
<input type="checkbox"/> Milky Way
<input type="checkbox"/> Earth

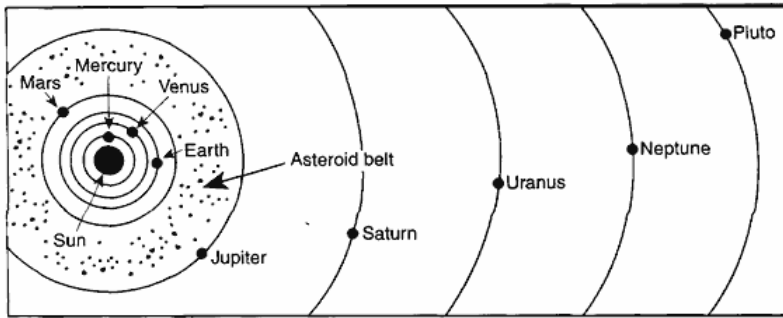
6. What does a *red shift* in the light of distant galaxies suggest about the universe?

Motions & Solar System:

7. The force between the Earth and moon that is responsible for the tides is

- Gravity
- Current
- Electromagnetic Radiation
- Precession

8. The actual orbit of the planets in our solar system is:



(Not drawn to scale)

- a. Elliptical with the earth at one foci
- b. Elliptical with the sun at one foci
- c. Circular with the sun at the center
- d. Circular with the earth at the center

9. Mercury is farthest from the Sun at a point called the

- a. Aphelion
- b. Perihelion
- c. Nutation
- d. Barycenter

10. If the tilt of the Earth's axis is decreased from 23.5° to 5.5° , what would happen to Raleigh's summer temperatures?

- a. They would increase dramatically
- b. They would decrease dramatically
- c. The annual seasonal fluctuation would be smaller
- d. The annual seasonal fluctuation would be larger

11. Illustrate AND describe each of the following:

Precession

Nutation

Barycenter

12. What change would occur if the revolution time of Mars increased?

- a. The Martian year would be longer
- b. The Martian day would be longer
- c. The Martian day and year would be the same
- d. There would be no difference in the time of a day or year

13. The notion that the Sun is at the center of our solar system, and all other planets revolve around it is

based on the _____ model.

14. The age of the solar system: _____

The Sun (Stars):

15. The Sun's source of energy is

- a. Nuclear fusion
- b. Nuclear fission
- c. Photosynthesis
- d. Chemical burning

16. Energy is transferred from the sun to the Earth through

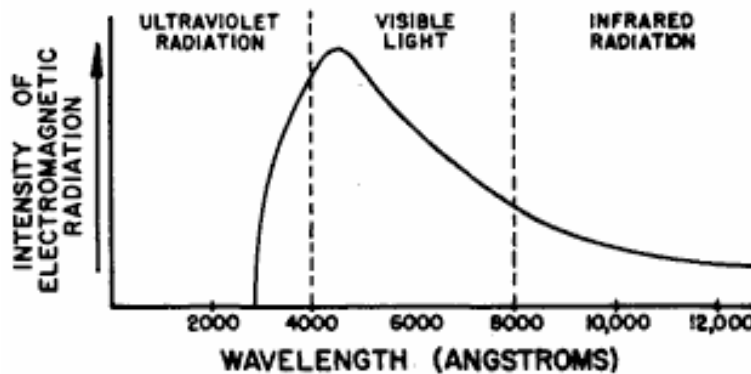
- a. Electromagnetic waves (radiation)
- b. Red shifts
- c. Density currents
- d. Molecular collisions

17. List three (3) ways in which Earth is protected from Sun's radiation:

A:

B:

C:



18. What statement is best supported by the graph above?

- a. Maximum intensity of radiation given off is in the visible spectrum
- b. Maximum intensity of radiation given off is in the infrared spectrum
- c. Maximum intensity of radiation given off is in the ultraviolet spectrum
- d. Maximum intensity of radiation is the same despite wavelength range

19. Which of the following forms of solar radiation are completely blocked from reaching the Earth's surface?

- a. X-rays
- b. Ultraviolet Light
- c. Radio Waves
- d. Microwaves

Earth & Moon:

20. Which of the following best describes Earth's shape?

- a. Sphere with a slight bulge along the equator
- b. Sphere with a bulge in the Northern Hemisphere
- c. Ellipse with a slight bulge along the prime meridian
- d. Ellipse with a bulge near the poles

21. Describe AND diagram a solar eclipse.

22. Describe AND diagram a lunar eclipse.

23. The _____ has the greatest impact on Earth's ocean tides because it is
_____ (*closer/farther*) to Earth than the Sun.

Kepler's Laws:

24. Describe AND diagram Kepler's 1st Law of Planetary Motion.

25. Describe AND diagram Kepler's 2nd Law of Planetary Motion.

26. Describe AND diagram Kepler's 3rd Law of Planetary Motion.