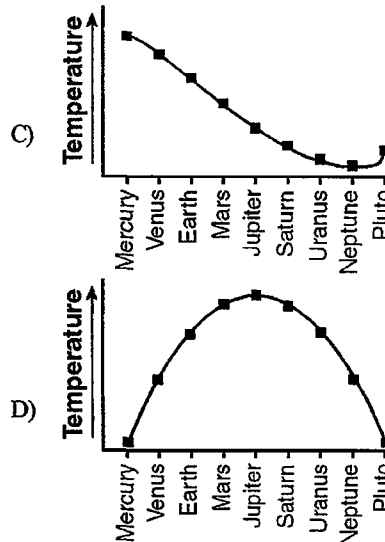
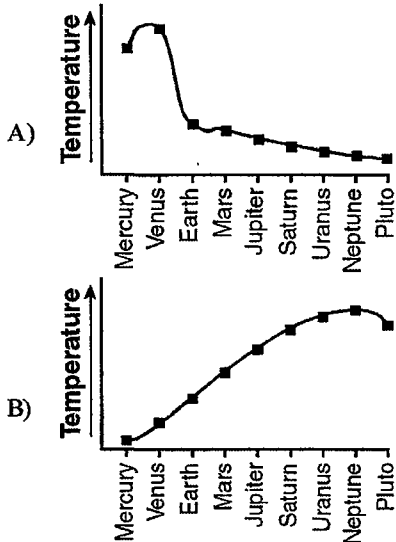
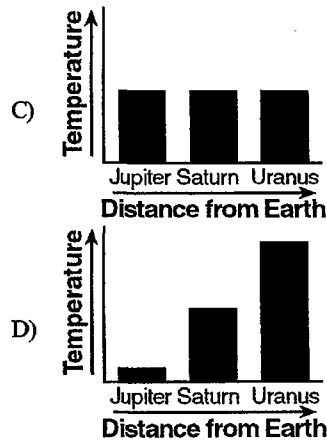
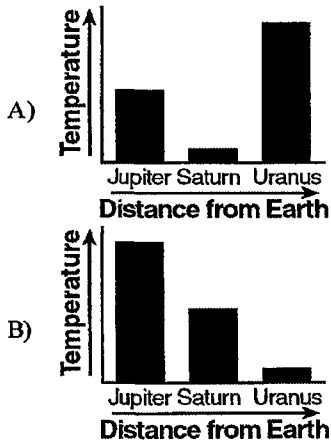


Name: _____

- 1) Which statement *best* describes the geocentric model of our solar system?
 - A) All planets revolve around the Sun.
 - B) The Earth is located at the center of the model.
 - C) All planets except the Earth revolve around the Sun.
 - D) The Sun is located at the center of the model.
- 2) Which graph *best* illustrates the average temperatures of the planets in the solar system?



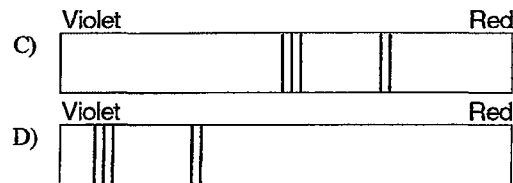
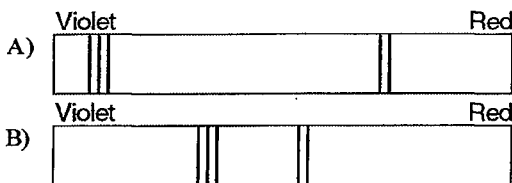
- 3) Planetary temperatures were recorded by the Voyager I space probe as it traveled from the Earth past the outer planets Jupiter, Saturn, and Uranus before leaving the solar system. Which graph *best* represents the relationship between the temperature of the planets and their distance from the Earth?



- 4) The diagram below represents a standard darkline spectrum for an element. The spectral lines of this element are observed in light from a distant galaxy.



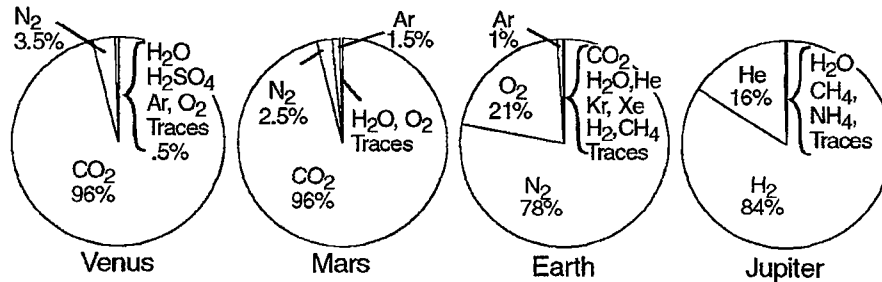
Which diagram represents these spectral lines?



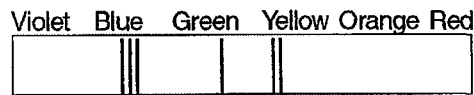
- 5) The presence of which atmospheric gas causes the high temperature of Venus?
 A) hydrogen (H₂)
 B) carbon dioxide (CO₂)
 C) oxygen (O₂)
 D) nitrogen (N₂)

Questions 6 and 7 refer to the following:

The graphs below show the composition of the atmospheres of Venus, Mars, Earth, and Jupiter.



- 6) Which gas is present in the atmospheres of Venus, Earth, and Mars, but is *not* present in the atmosphere of Jupiter?
 A) argon (Ar) B) water vapor (H₂O) C) methane (CH₄) D) hydrogen (H₂)
- 7) Which planet has an atmosphere composed primarily of CO₂ and a period of rotation *greater* than its period of revolution?
 A) Mars B) Earth C) Venus D) Mercury
- 8) A belt of asteroids is located an average distance of 503 million kilometers from the Sun. Between which two planets is this belt located?
 A) Mars and Earth B) Jupiter and Saturn C) Saturn and Uranus D) Mars and Jupiter
- 9) According to current data, the Earth is apparently the only planet in our solar system that has
 A) liquid water on its surface C) an axis of rotation
 B) an orbiting moon D) atmospheric gases
- 10) Compared to the distances between the planets of our solar system, the distances between stars are usually
 A) much less B) much greater C) about the same
- 11) Which planet's orbital shape would be most similar to Jupiter's orbital shape?
 A) Venus B) Uranus C) Mercury D) Pluto
- 12) Impact craters are more obvious on the Moon and Mercury than on Earth because
 A) Earth is younger than Mercury or the Moon
 B) meteorites have not struck Earth
 C) all meteorites burn up in Earth's atmosphere
 D) weathering processes on Earth have removed most craters
- 13) The diagram below shows the standard dark-line spectrum for an element. The spectral lines of the same element are observed in light from four distant galaxies.

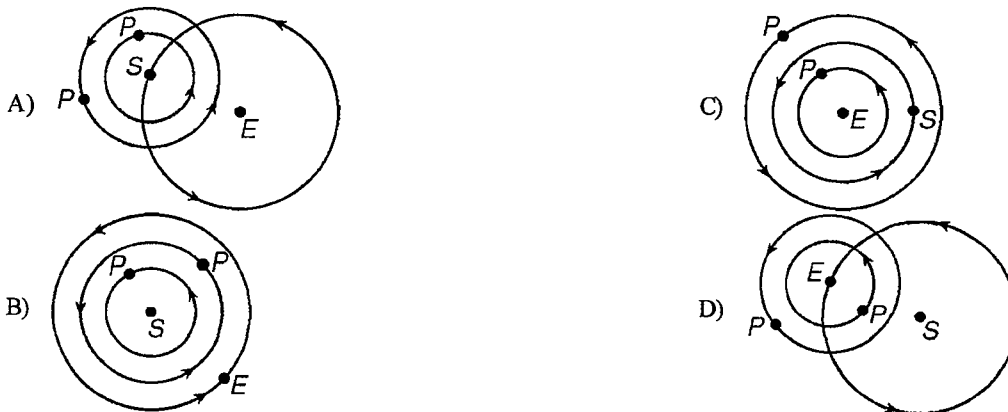


Which spectral lines most likely represent the galaxy *farthest* from the Earth?

- A)
- B)
- C)
- D)

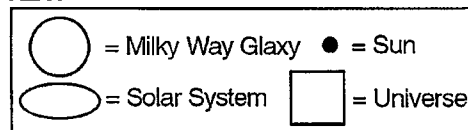
- 14) Why do rock samples brought back from the Moon show no signs of chemical weathering?
 A) Temperatures on the Moon are very hot. C) Temperatures on the Moon are very cold.
 B) The Moon has no atmosphere. D) The Moon has no gravity.
- 15) Rock samples brought back from the Moon show absolutely no evidence of chemical weathering. This is most likely due to
 A) lack of biological activity on the Moon C) large quantities of water in the lunar "seas"
 B) extremely low surface temperatures on the Moon D) the lack of an atmosphere on the Moon
- 16) Which diagram *best* represents a heliocentric model of a portion of the solar system? [Diagrams are not drawn to scale.]

KEY: E = Earth; P = Planet; S = Sun



- 17) In which type of model are the Sun, other stars, and the Moon in orbit around the Earth?
 A) heliocentric model B) tetrahedral model C) geocentric model D) concentric model
- 18) The surface of Venus is much hotter than would be expected, considering its distance from the Sun. Which statement *best* explains this condition?
 A) The clouds of Venus are highly reflective.
 B) Venus has a slow rate of rotation.
 C) The atmosphere of Venus contains a high percentage of carbon dioxide.
 D) Venus has many active volcanoes.
- 19) On which planet do large amounts of water exist in all three states of matter?
 A) Venus B) Mars C) Earth D) Saturn
- 20) Earth and our solar system are
 A) older than the universe B) the same age as the universe C) younger than the universe
- 21) The symbols below represent the Milky Way galaxy, the solar system, the Sun, and the universe.

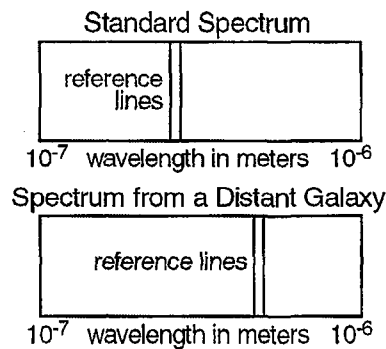
KEY:



Which arrangement of symbols is most accurate?



- 22) According to the *Earth Science Reference Tables*, three planets known as gas giants because of their large size and low density are
- A) Jupiter, Saturn, and Uranus
 B) Venus, Neptune, and Jupiter
 C) Venus, Uranus, and Jupiter
 D) Jupiter, Saturn, and Venus
- 23) Which statement *best* describes how galaxies generally move?
- A) Galaxies do not move.
 B) Galaxies move away from one another.
 C) Galaxies move randomly.
 D) Galaxies move toward one another.
- 24) Background radiation detected in space is believed to be evidence that
- A) the Universe is contracting
 B) the Universe began with a primeval explosion
 C) all matter in the Universe is stationary
 D) galaxies are evenly spaced throughout the Universe
- 25) If the average distance from a satellite to the Earth is decreased, the period of revolution of the satellite will
- A) remain the same
 B) decrease
 C) increase
- 26) The diagram below shows reference lines on a standard spectrum and a spectrum from a distant galaxy moving away from Earth.



- If the spectral lines produced by the light from a distant galaxy are
- A) shifted toward the blue, the galaxy is moving away from us
 B) shifted toward the red, the galaxy is moving towards us.
 C) shifted toward the blue, the galaxy is stationary
 D) are shifted toward the red, the galaxy is moving away from us
- 27) In what way are the planets Mars, Mercury, and Earth similar?
- A) They have the same period of revolution.
 B) They have elliptical orbits with the Sun at one focus.
 C) They exert the same gravitational force on each other.
 D) They are perfect spheres.
- 28) In which group are the parts listed in order from oldest to youngest?
- A) universe, Milky Way, solar system
 B) solar system, Milky Way, universe
 C) universe, solar system, Milky Way
 D) Milky Way, solar system, universe
- 29) A comparison of the age of the Earth obtained from radioactive dating and the age of the universe based on galactic Doppler shifts suggests that
- A) the Earth was formed after the universe began
 B) the Earth is immeasurably older than the universe
 C) the two dating methods contradict one another
 D) the Earth is about the same age as the universe
- 30) The average temperature of the planets
- A) depends only on the chemical composition of the atmosphere of each planet
 B) decreases with greater distance from the Sun
 C) increases with greater distance from the Sun
 D) has no relationship to the distance from the Sun

