SNC 1D EXAM REVIEW Space Science

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

1. The word "planet" comes from the Greek word "planets" meaning
   a. star.  
   b. constellation.  
   c. zodiac.  
   d. wanderers.

2. Choose the planet that is completely different from the other three.
   a. Jupiter  
   b. Neptune  
   c. Mars  
   d. Saturn

3. The brightest planet seen in Earth’s skies is
   a. Mars.  
   b. Venus.  
   c. Jupiter.  
   d. Pluto.

4. In the mid-1500s, the Polish cleric Copernicus presented mathematical evidence for a different model of the universe. What was the most important change that Copernicus introduced?
   a. He replaced the Earth-centred universe with a Sun-centred solar system.  
   b. He replaced the Sun-centred solar system with an Earth-centred universe.  
   c. He was the first to use a telescope to support his new model.  
   d. He developed our present-day calendar.

5. The visible part of the Sun is called
   a. the chromosphere.  
   b. the corona.  
   c. the surface.  
   d. the photosphere.

6. What term is used to describe the actual amount of light given off by a star at a standard distance?
   a. the spectrum  
   b. the apparent magnitude  
   c. the absolute magnitude  
   d. the actual magnitude

7. What object is most likely the birthplace of stars?
   a. black hole  
   b. supernova  
   c. nebula  
   d. neutron star

8. Choose the most appropriate term for the study of the origin and changes of the universe.
   a. astronomy  
   b. astrology  
   c. cosmology  
   d. choreography

Short Answer

9. Arrange the following planets in order of size from smallest to largest: Jupiter, Earth, Mars, Mercury.

10. The temperature on Mercury ranges from 400 degrees C to —180 degrees C. Explain what causes this large variation in temperature.

11. Explain whether the Earth-centred or Sun-centred model of our solar system supports each of the following observations.
   a. The stars rise and set once a day.  
   b. The Sun appears to move through about one constellation a month.  
   c. Four large moons orbit the planet Jupiter.

12. Write each of the following measurements in scientific notation.
   a. 1 400 000 km  
   b. 12 000 km  
   c. 6 000 000 000 km

13. What are the two most common elements found on the Sun? What role do they play in the energy-production mechanism of the Sun?

14. Describe two pieces of evidence that support the Big Bang theory. Is this evidence direct or indirect? Explain.
MULTIPLE CHOICE

1. ANS: D  REF: UC  LOC: UBC1
2. ANS: C  REF: UC  LOC: UBC3
3. ANS: B  REF: UC  LOC: UBC3
4. ANS: A  REF: UC  LOC: UBC1
5. ANS: D  REF: UC  LOC: UBC6
6. ANS: C  REF: UC  LOC: UBC1
7. ANS: C  REF: UC  LOC: UBC7
8. ANS: C  REF: UC  LOC: UBC2

SHORT ANSWER

9. ANS:
Mercury, Mars, Earth, Jupiter.

   REF: UC  LOC: UBC3
10. ANS:
Mercury is close to the Sun, giving very hot daytime temperatures. Because of the lack of atmosphere, no heat
is trapped and the night side is exposed to the extreme cold of space.

   REF: UC  LOC: UBC3
11. ANS:
Both models support observations (a) and (b). The Earth-centred model does not support (c).

   REF: AS  LOC: UBC1
12. ANS:
   a. $1.4 \times 10^6$ km
   b. $1.2 \times 10^4$ km
   c. $6.0 \times 10^9$ km

   REF: UC  LOC: UBC1
13. ANS:
Hydrogen serves as the nuclear fuel and helium is the fusion product.

   REF: UC  LOC: UBC6
14. ANS:
Evidence: red shift and radiation represent the leftover glow from the initial explosion.

   REF: UC  LOC: UBC2