Chap 9 and10 review

Name_____

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

1) Which internal heat source still generates heat within the terrestrial worlds today? 1) _____
A) heat of accretion
B) heat from radioactive decay
C) heat from convection
D) heat from differentiation

2) Which of the following is the reason for the solar day being longer than a sidereal day? 2) _____
A) the combined effect of the rotation of Earth and its orbit about the Sun
B) the tilt of Earth's axis
C) Earth year being a non–integer number of Earth days
D) the non–circular orbit of Earth around the Sun
E) precession of Earth's axis

3) The amount of time between successive passes of the star Sirius across the meridian is 3) _____
A) 23 hours 56 minutes.
B) 24 hours.
C) 365.25 days.
D) 12 years.
E) 26,000 years.

4) Which of the following best describes the lunar *maria*? 4) _____
A) densely cratered regions on the Moon
B) mountainous regions on the Moon
C) frozen oceans of liquid water on the Moon
D) relatively smooth, flat plains on the Moon

5) The lunar month is longer than the sidereal month because 5) _____
A) the Moon completes the cycle of lunar phases before it completes a full orbit around Earth.
B) the Moon orbits Earth faster than Earth orbits the Sun.
C) the Moon orbits Earth faster than Earth rotates.
D) the Moon has to complete more than one full orbit around Earth to complete the cycle of lunar phases.
E) the lunar month is based on the Moon's orbit, while the sidereal month is based on Earth's orbit.

6) Why is the sky blue (on Earth)? 6) _____
A) because molecules scatter blue light more effectively than red light
B) because deep space is blue in color
C) because molecules scatter red light more effectively than blue light
D) because the Sun emits mostly blue light

7) What do we mean by a *runaway greenhouse effect*? 7) _____
A) a greenhouse effect that keeps getting stronger until all of a planet's greenhouse gases are in its atmosphere
B) a greenhouse effect that starts on a planet but later disappears as gases are lost to space
C) a process that heats a planet like a greenhouse effect, but that involves a completely different mechanism of heating that doesn't actually involve greenhouse gases
D) a greenhouse effect that heats a planet so much that its surface rock melts

8) A terrestrial world's *lithosphere* is _____. 8) _____
A) a thin layer of rock that lies between the mantle and crust
B) a layer of hot, molten rock encompassing the core and part of the mantle
C) the interior region in which the planet's magnetic field is generated
D) a layer of relatively strong, rigid rock, encompassing the crust and part of the mantle

9) What do we mean when we say that the terrestrial worlds underwent *differentiation*? 9) _____
A) They lost interior heat to outer space.
B) The five terrestrial worlds all started similarly but ended up looking quite different.
C) Their surfaces show a variety of different geological features resulting from different geological processes.
D) When their interiors were molten, denser materials sank toward their centers and lighter materials rose toward their surfaces.

10) The average length of a solar day is 10) _____
A) 23 hours 56 minutes.
B) 365.25 days.
C) 12 years.
D) 24 hours.
E) 26,000 years.

11) *Olympus Mons* is _____. 11) _____
A) a huge stratovolcano on Venus
B) a huge shield volcano on Mars
C) a great canyon on Mars
D) a large lava plain on the Moon

12) Which of the following correctly lists the terrestrial worlds in order from the thickest atmosphere to the thinnest atmosphere? (Note: Mercury and the Moon are considered together in this question.) 12) _____
A) Venus, Earth, Mars, Moon/Mercury
B) Earth, Venus, Mars, Moon/Mercury
C) Venus, Mars, Moon/Mercury, Earth
D) Mars, Venus, Earth, Moon/Mercury

13) From center to surface, which of the following correctly lists the interior layers of a terrestrial world? 13) _____
A) mantle, core, crust
B) core, mantle, crust
C) mantle, crust, core
D) core, crust, lithosphere

14) Most of the Moon's surface is densely covered with craters, but we find relatively few craters within the *lunar maria*. What can we conclude? 14) _____
A) Erosion affects the *maria* more than it affects other regions of the Moon.
B) The regions of the *maria* were hit by fewer impacts than the densely cratered regions.
C) The *maria* formed after the heavy bombardment ended.
D) The *maria* formed within the past 1 billion years.

15) The processes responsible for virtually all surface geology are _____. 15) _____

A) accretion, differentiation, and radioactive decay
B) eruptions, lava flows, and outgassing
C) impact cratering, volcanisms, tectonics, and erosion
D) convection, conduction, and radiation

16) Suppose that Earth's atmosphere had no greenhouse gases. Then Earth's average surface temperature would be _____. 16) _____

A) well below the freezing point of water
B) slightly warmer, but still well below the boiling point of water
C) about the same as it is now
D) slightly cooler, but still above freezing

Answer Key
Testname: UNTITLED1

1) B
2) A
3) A
4) D
5) D
6) A
7) A
8) D
9) D
10) D
11) B
12) A
13) B
14) C
15) C
16) A