

### 6<sup>th</sup> Grade Science 2<sup>nd</sup> Semester Final Exam

Directions: Bubble in the best answer to each question on your answer document. Do NOT write on this exam.

1. Which one of the following does NOT describe weather?
  - a.) the force of wind through the trees
  - b.) whether it is raining or not
  - c.) ~~the amount of water pollution in a lake~~
  - d.) how many clouds there are in the sky
2. What is the air above the earth's surface mostly made of?
  - a.) Nothing except clouds
  - b.) ~~gases such as nitrogen, oxygen, and water vapor~~
  - c.) pollution from cars and machines
  - d.) none of the above
3. Which one of the following statements about the earth's atmosphere is TRUE?
  - a.) The temperature increases as you get closer to the sun.
  - b.) The air pressure increases as you go up in the atmosphere.
  - c.) ~~The atmosphere has different temperatures and pressures at different altitudes until it reaches space.~~
  - d.) None of the above
4. Which one of the following powers the earth's water cycle?
  - a.) ~~energy from the Sun~~
  - b.) clouds colliding together
  - c.) salts dissolved in water
  - d.) the freezing and melting of water
5. Most of the water on the earth is found in which of the following locations?
  - a.) ~~oceans~~
  - b.) the atmosphere
  - c.) groundwater
  - d.) lakes and rivers
6. What word best completes the following sentence?  
 Ocean currents affect climates because they transfer \_\_\_\_\_ from one part of the world to another.
  - a.) salt
  - b.) sunlight
  - c.) ~~heat~~
  - d.) water

Use the table below to answer question 7-8.

	Winter	Spring	Summer	Fall
Place A	20 cm	24 cm	21 cm	20 cm
Place B	0 cm	42 cm	6 cm	5 cm
Place C	2 cm	1 cm	1 cm	2 cm
Place D	35 cm	40 cm	39 cm	37 cm

7. Which place has the driest climate?
  - a.) Place A
  - b.) Place B
  - c.) ~~Place C~~
  - d.) Place D
8. Which place has the wettest climate?
  - a.) Place A
  - b.) Place B
  - c.) Place C
  - d.) ~~Place D~~
9. The process of water changing from a liquid to a gas is known as
  - a.) ~~evaporation~~
  - b.) condensation
  - c.) precipitation
  - d.) accumulation
10. The process of a water vapor changing back into a liquid is known as
  - a.) evaporation
  - b.) condensation
  - c.) ~~precipitation~~
  - d.) accumulation
11. Which of the following is one day on Earth?
  - a.) Earth orbiting the Sun 1 time
  - b.) the Sun orbiting Earth 1 time
  - c.) ~~Earth spinning on its axis 1 time~~
  - d.) the Sun spinning on its axis 1 time

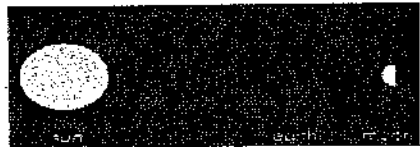
12. A planet has a shorter day than Earth does. Which of the following explains why?  
 a.) it is closer to the Sun  
 b.) It has no moon.  
 c.) It takes less time to revolve  
 d.) ~~It takes less time to rotate on its axis~~
13. Which of the following causes ocean tides?  
 a.) Earth's revolution around the Sun  
 b.) Earth's magnetic field  
 c.) ~~the gravitational pull between Earth, the Sun, and the moon~~  
 d.) changes in the atmosphere
14. About how long does one cycle of the Moon's phases last?  
 a.) a year  
 b.) ~~a month~~  
 c.) two weeks  
 d.) a day
15. The phases of the Moon are caused by which of the following?  
 a.) Earth's orbit around the Sun  
 b.) Earth's rotation on its axis  
 c.) ~~the Moon's orbit around the Earth~~  
 d.) Earth's shadow falling on the Moon
16. Earth's tilt causes \_\_\_\_\_  
 a.) ~~more daylight hours in summer~~  
 b.) a bulge at the equator  
 c.) a longer year every fourth year  
 d.) the phases of the Moon

Use the diagram below to answer questions 17-19.

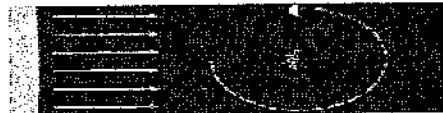
A.



B.



C.



17. Which diagram(s) above best represent(s) the position of the Moon, during a quarter moon?  
 a.) A  
 b.) B  
 c.) ~~C~~  
 d.) none of the above
18. Which diagram(s) above show(s) the Moon during a full moon?  
 a.) A  
 b.) ~~B~~  
 c.) C  
 d.) none of the above
19. Which diagram(s) above best represent(s) the position of the Moon during a New Moon?  
 a.) ~~A~~  
 b.) B  
 c.) C  
 d.) none of the above
20. If Earth revolved more slowly in its orbit, which of the following would be likely to result?  
 a.) ~~a longer year~~  
 b.) ~~a longer winter~~  
 c.) a longer average day length  
 d.) both A & B
21. When the lighted portion of the moon seems to get smaller as each night passes, a \_\_\_\_\_ moon is in the night sky.  
 a.) red  
 b.) ~~waning~~  
 c.) waxing  
 d.) New

22. When the lighted portion of the Moon seems to get larger as each night passes, a \_\_\_\_\_ moon is in the night sky.  
 a.) red  
 c.) waxing  
 b.) waning  
 d.) New
23. Earth is the only planet in the Solar System that has \_\_\_\_\_.  
 a.) an atmosphere  
 c.) volcanoes  
 b.) oceans  
 d.) mountains
24. What is the Solar System made of?  
 a.) stars only  
 c.) the Sun, planets, and moon  
 b.) the Sun and planets  
 d.) the Sun, planets, Moon, and other small bodies
25. Which of the following holds us to Earth's surface?  
 a.) Earth's rotation around its axis  
 c.) gravity  
 b.) Earth's revolution around the Sun  
 d.) air pressure
26. Of the following, which is largest?  
 a.) The Sun  
 c.) The Solar System  
 b.) the Milky Way  
 d.) Jupiter
27. The \_\_\_\_\_ Model of the Solar System states that the Earth is at the center and that everything revolves around it.  
 a.) Big Bang  
 c.) Heliocentric  
 b.) Geocentric  
 d.) Galilean
28. The \_\_\_\_\_ Model of the Solar System states that the Sun is at the center and that all planets revolve around it.  
 a.) Big Bang  
 c.) Heliocentric  
 b.) Geocentric  
 d.) Galilean
29. \_\_\_\_\_ is the current theory of how the Universe formed.  
 a.) Big Bang  
 c.) Heliocentric  
 b.) Geocentric  
 d.) Galilean
30. The terrestrial planets differ from the gas giants in that they  
 a.) are rocky and earthlike  
 c.) rotate much faster  
 b.) are larger  
 d.) revolve much slower
31. \_\_\_\_\_ is unique because it rotates sideways on its axis.  
 a.) Jupiter  
 c.) Neptune  
 b.) Uranus  
 d.) Saturn
32. \_\_\_\_\_ controls the movement of all objects in space.  
 a.) the Sun  
 c.) the Universe  
 b.) the Milky Way  
 d.) gravity
33. The changing appearances of the moon from Earth are known as Moon \_\_\_\_\_.  
 a. Crescents  
 c. Quarters  
 b. Phases  
 d. Gibbous
34. When the Moon's shadow falls on Earth, temporarily blocking out the sunlight.  
 a. Full Moon  
 b. New Moon  
 c. Lunar Eclipse  
 d. Solar Eclipse
35. A waxing moon phase in which  $\frac{1}{2}$  of the lighted portion of the moon can be seen from Earth.  
 a. Waning Crescent  
 c. Full  
 b. Quarter  
 d. Waxing Gibbous

36. As the mass of an object increases, its gravitational pull \_\_\_\_\_.
- Stays the same
  - Increases and then decreases
  - decreases
  - increases
37. As the distance between two objects increases, the gravitational pull between the objects \_\_\_\_\_.
- Stays the same
  - Increases then decreases
  - decreases
  - increases
38. Which of the following planets is not a terrestrial planet?
- Mercury
  - Mars
  - Earth
  - Pluto ?
39. All of the gas giants have ring systems.
- True
  - False
40. The smallest rocks in space are called
- meteors
  - meteoroids
  - asteroids
  - comets
41. A \_\_\_\_\_ eclipse occurs when the Earth is between the Sun and moon.
- Annular
  - Solar
  - Lunar
  - all of the above
42. Which of the following planets has extreme temperatures due to a runaway greenhouse effect?
- Mercury
  - Venus
  - Earth
  - Mars
43. Early astronomers believed that the Earth was the center of the Universe. This theory is called the
- Big Bang Theory
  - Heliocentric Model
  - Geocentric Model
  - Laws of Gravity
44. Copernicus discovered that everything in our solar system revolved around the Sun NOT Earth. This theory is called the
- Big Bang Theory
  - Heliocentric Model
  - Geocentric Model
  - Laws of Gravity
45. Between what two planets is the asteroid belt located?
- Mars and Saturn
  - Earth and Mars
  - Jupiter and Saturn
  - Mars and Jupiter
46. Most weather occurs in which layer of the atmosphere?
- ~~Stratosphere~~
  - Troposphere
  - Mesosphere
  - Thermosphere
47. The ozone layer is located in which layer of the atmosphere?
- Stratosphere
  - Troposphere
  - Mesosphere
  - Thermosphere
48. Which is the correct order of atmospheric layers beginning at the surface and increasing in altitude?
- Stratosphere, Mesosphere, Troposphere, Thermosphere
  - Mesosphere, Troposphere, Thermosphere, Stratosphere
  - Troposphere, Mesosphere, Stratosphere, Thermosphere
  - Troposphere, Stratosphere, Mesosphere, Thermosphere
49. Which gas is the second most abundant gas in the atmosphere?
- Nitrogen
  - Oxygen
  - Argon
  - Water Vapor
50. What is the atmosphere?
- Layers of Nitrogen
  - Layers of Oxygen
  - a collection of gases surrounding Earth
  - Space

51. Why is the ozone layer important to life on Earth?
- It protects Earth from the Sun's harmful rays.
  - It traps in heat like a greenhouse so that Earth stays warm at night.
  - Both A & B
  - None of the above
52. What happens to air pressure in the atmosphere as you increase in altitude?
- It decreases
  - It increases and then decreases
  - It increases
  - It decreases and then increases
53. The Coriolis effect is caused by
- The Earth being round
  - The spinning of Earth
  - unequal heating of land and water
  - wind
54. Global winds are created as a result of
- The unequal heating of land and water
  - The unequal heating of Earth due to its spherical shape
  - The spinning of Earth
  - The atmosphere
55. Sea breezes and land breezes are created as a result of
- The unequal heating of land and water
  - The unequal heating of Earth to its spherical shape
  - The spinning of Earth
  - The atmosphere
56. Wind ALWAYS travels from areas of \_\_\_\_\_ pressure to areas of \_\_\_\_\_ pressure.
- High; low
  - Cold; hot
  - low; high
  - hot; cold
57. \_\_\_\_\_ wind always has a high pressure.
- Sea breeze
  - Warm
  - global
  - cold
58. \_\_\_\_\_ wind always has a low pressure.
- Sea breeze
  - Warm
  - land breeze
  - cold
59. Which area on Earth would have the lowest pressure?
- The north pole
  - The peak of a mountain
  - the South pole
  - the equator
60. Narrow belts of high-speed winds that blow in the upper Troposphere are called
- Sea breezes
  - Jet Streams
  - ~~Trade Winds~~ *Very*
  - Trade Winds
61. The \_\_\_\_\_ are the global winds that blow across the United States.
- Sea breezes
  - Jet Streams
  - Westerlies
  - Trade Winds
62. What is a large body of air that has the same properties as the area over which it formed called?
- Air mass
  - Station model
  - front
  - isotherm
63. At which type of front are thunderstorms most likely to occur due to large differences in air temperature and warm air that rises quickly?
- Warm
  - Cold
  - stationary
  - occluded
64. What is a large, swirling storm that forms over warm, tropical water called?
- Hurricane
  - Tornado
  - blizzard
  - hailstorm

65. Which of the following is a description of a tornado?
- A large, swirling, low-pressure system that forms over the Atlantic Ocean
  - A winter storm with winds at least 56 km/h and low visibility
  - ~~A violently rotating column of air in contact with the ground~~
  - A boundary between two air masses of different density, moisture, or temperature.
66. Which of the following is a description of a blizzard?
- A large, swirling, low-pressure system that forms over the Atlantic Ocean
  - ~~A winter storm with winds at least 56 km/h and low visibility~~
  - A violently rotating column of air in contact with the ground
  - A boundary between two air masses of different density, moisture, or temperature
67. Which of the following is a description of a hurricane?
- ~~A large, swirling, low-pressure system that forms over the Atlantic Ocean~~
  - A winter storm with winds at least 56 km/h and low visibility
  - A violently rotating column of air in contact with the ground
  - A boundary between two air masses of different density, moisture, or temperature.

SHORT ANSWER: Answer ON YOUR OWN PAPER!! You MUST answer ANY THREE of the following.

68. Diagram the layers of the atmosphere starting where we live and going up into space. Be sure to include one fact about each layer that distinguishes it from the others.

From Earth to Rising Altitudes

- Troposphere
- Stratosphere
- Mesosphere
- Thermosphere

69. Draw a diagram of the ocean floor. Label the features.

70. Write a paragraph that explains how water is distributed across the planet. Be sure to mention the percentages of water on earth, where the water is located, and the percentage of fresh water on the planet.

71. In a paragraph, explain why the earth will ALWAYS have global winds. Be sure to mention differences in temperature and pressure. EXPLAIN!!

72. In a paragraph, compare and contrast tornadoes, hurricanes, and thunderstorms.

