Name: _____



Date: _____ Grade: _____

# *Integrated Physics & Chemistry*

## CHAPTER 11 TEST

*Congratulations on completing this chapter!* ***Answer the following questions to test your understanding of the material. When you finish, hand in your test to your teacher for a final grade. Each answer is worth 2 points.***

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**Fill in the blank or circle True or False**

1. _____ is the most abundant element in the atmosphere.

2. Oxygen is one of the four most abundant elements in the: _____.
   (a) hemisphere (b) hydrosphere (c) lithosphere (d) troposphere

3. Oxygen is one of the three most abundant _____ in the Earth's crust.

4. Rocks taken from different places in the Earth's crust are likely to be chemically: _____.
   (a) identical (b) different (c) similar in shape and structure (d) inert

5. The formula for silicon dioxide is: _____.
   (a) $SiO$ (b) $CO_2$ (c) $N_2O_2$ (d) $SiO_2$

6. The second most abundant element in the atmosphere and the most abundant element in the hydrosphere and lithosphere is _____.

7. Rocks that split into layers are most likely to be: _____.
   (a) sedimentary rocks (c) magma
   (b) igneous (d) metamorphic rocks

8. The sedimentary rock that often contains oil is: _____.
   (a) conglomerate (b) shale (c) coal (d) sandstone

9. Metamorphic rocks are sedimentary or igneous rocks that have been changed by: _____.
   (a) heat or pressure (c) nuclear reactions
   (b) lightning (d) weathering

10. Basalt is an igneous rock that: _____.
    (a) is filled with pores caused by gas bubbles
    (b) cools slowly to form columns such as the Devil's Tower in Wyoming
    (c) produces table salt
    (d) is also known as conglomerate

11. Metamorphic rocks are sedimentary or igneous rocks that have been changed by: _____.
    (a) heat or pressure (b) lightning (c) nuclear reactions (d) strong winds

12. The primary way that new crust is produced is by: _____.
    (a) extended baking (c) accumulation of sedimentary rock
    (b) glacial action (d) igneous rock from lava and ash

13. The action of _____ is an example of weathering by living things.

14. In wet climates, the most effective weathering action is from: _____.
    (a) glaciers (b) marine life (c) ultraviolet radiation (d) water

15. _____ is active in both weathering and erosion.

16. The second most abundant element in the Earth's crust is: _____.
    (a) aluminum (b) argon (c) iron (d) silicon

17. The three ingredients that go into the production of ordinary window glass are limestone, soda ash and: _____.
    (a) aluminum (b) sand (c) sodium hydroxide (d) carbon

18. The four factors that make a gemstone valuable are: how it is presented, its beauty, hardness and _____.

19. Artificial heart valves are made of: _____.
    (a) quartz (b) ruby crystals (c) aluminum (d) silicones

20. Gems made of silicate minerals do not exist in nature.
    (a) True or (b) False

21. A gem without flaws is most likely: _____.
    (a) nonexistent (c) an imitation gem
    (b) a synthetic gem (d) made by coral or oysters

22. Most periodic tables have a zigzag line that separates the metals from the: _____.
    (a) gases (b) noble gases (c) liquid elements (d) nonmetals

23. The chemical symbol for aluminum is _____.

24. Gallium, indium and thallium are so rare and have so few uses that they do not have chemical symbols.
    (a) True or (b) False

25. _____ can produce both mild acids and mild bases.

26. _____ is an ore of aluminum.

27. _____ is used in high voltage cross-country electrical transmission lines.

28. Aluminum _____ is used to purify water.

29. An endothermic reaction _____ energy.
(a) absorbs (b) releases (c) exerts (d) retrieves

30. An endothermic reaction causes a test tube to feel: _____.
(a) warm (b) cool (c) very, very hot (d) moist

31. Burning is an example of an _____ reaction.

32. Burning is a type of chemical reaction known as: _____.
(a) degenerative conversion (c) oxidation
(b) catalytic conversion (d) reduction

33. During a chemical reaction, _____ may gain electrons, lose electrons and share electrons.

34. To increase the speed of a reaction, the surface area should be: _____.
(a) polished (b) decreased (c) increased (d) the same

35. Concentration, surface area, temperature, pressure, and the presence of a _____ or inhibitor can affect the rate of a chemical reaction.

36. For an object with a regular shape and uniform density, the center of gravity is located at the _____ center of the object.

37. The center of _____ of an object can lie outside the object.

38. If a body has stable equilibrium, when it is disturbed it will: _____.
(a) constantly change position (c) roll about like a ball on a flat table
(b) flip over on its top (d) return to its original position

39. The chemicals in a rechargeable battery undergo a _____ reaction.

40. At _____, both the forward and reverse chemical reactions continue at the same rate.

41. The three ways to control the direction of a reaction are by varying the concentration, pressure and: _____.
(a) gravitational force (c) steering
(b) Haber constant (d) temperature

42. Organic chemistry is the study of _____ compounds.

43. An example of inorganic chemistry is the study of: _____.
(a) carbohydrates (b) coal (c) rocks and minerals (d) inorgans

**Circle the letter of the statement that gives the best meaning of each Life Principle:**

44. *"Character and reputation are easier kept than recovered."*
    (a) Recovered character and reputation should be kept with care.
    (b) Recovered character and reputation is easier to keep if we learn from our mistakes.
    (c) Keeping your character and reputation in the first place is easier than rebuilding it later.

45. "*A disagreeable responsibility left unfinished continually grows more unpleasant and more difficult to ignore."*
    (a) Unpleasant, unfinished responsibilities become more difficult and disagreeable with the passing of time.
    (b) Unpleasant responsibilities are more difficult to ignore as they grow.
    (c) Coming back to a distasteful chore after a time causes it to grow more pleasant.

46. "*If you want to win a man to your cause, first convince him that you are his sincere friend."*
    (a) Persuading someone to take your side in a matter requires much convincing.
    (b) A sincere friend can win a person to your cause.
    (c) Being very friendly to a person is the best way to enlist him (or her) in your cause.

47. "*Quality is never an accident; it is always the result of intelligent efforts."*
    (a) When intelligent efforts are missing, there is never an accident.
    (b) Quality does not just happen—someone intelligent must make it happen.
    (c) Intelligent efforts are not accidental.

48. *"Darkness cannot drive out darkness; only light can do that. Hate cannot drive out hate; only love can do that."*
    (a) Darkness and hate are much the same; therefore they cannot drive out each other out.
    (b) The Law of Reciprocals is at work—opposites cancel each other out.
    (c) Light and love are better than darkness and hate.

49. *"If God had issued an eleventh commandment, it would be: 'Thou shalt have balance'."*
    (a) Although it is easier to go to extremes, we should always strive for balance.
    (b) Although difficult, we should strive to balance the eleventh commandment.
    (c) Life would be more balanced with an eleventh commandment.

50. *"If you are patient in one moment of anger, you will avoid one hundred days of sorrow."*
    (a) The ratio of patience to sorrow is 1 to 100.
    (b) Anger robs you of patience for up to one hundred days.
    (c) Being patient when you could be angry can save you much grief in the long run.