Name: _____

Date: _____ Grade: _____

Integrated Physics & Chemistry

CHAPTER 8 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.***

1. Analysis of organic compounds shows that they contain hydrogen, oxygen, nitrogen and: _____.
   (a) chlorine (b) gold (c) carbon (d) sodium

2. According to the modern definition, an organic compound is one that contains: _____.
   (a) carbons (c) the organs of living things
   (b) organisms (d) chemicals

3. The element that forms the greatest number of different compounds is: _____.
   (a) gold (b) carbon (c) hydrogen (d) nitrogen

4. A compound that contains only carbon and hydrogen is a(n): _____.
   (a) catalyst (b) carbon hydride (c) hydrocarbon (d) alcohol

5. The simplest hydrocarbon is: _____.
   (a) ethylene (b) formaldehyde (c) butane (d) methane

6. Isomers with the same chemical formula can have different chemical and _____ properties.

7. In a saturated hydrocarbon, all of the carbon bonds are _____.

8. A molecule made of several connected ethylene molecules is: _____.
   (a) monoethylene (b) polyethylene (c) biethylene (d) tricycline

9. Motor fuel, heating oil and coal all contain: _____.
   (a) carbon (b) nitrogen (c) chlorine (d) oxygen

10. An organic compound always contains: _____.
    (a) carbon (b) hydrogen (c) oregano (d) oxygen

11. The word petroleum means: _____.
    (a) brown gold (b) crude oil (c) rock oil (d) shale

12. The one with the longest, heaviest molecule is: _____.
    (a) asphalt (b) fuel oil (c) gasoline (d) natural gas

13. The formula for benzene is _____.

14. The benzene molecule has the shape of a(n): _____.
    (a) isomer with numerous side chains (c) ring
    (b) long chain (d) rectangle

15. A synthetic compound is made in the _____.

16. The sting of bees, wasps and the bites of ants all contain an organic _____.

17. _____ acid gives sour milk its sour taste.

18. Ether is an organic compound containing two hydrocarbon chains with a(n) _____ atom between them.
    (a) carbon (b) hydrogen (c) ether (d) oxygen

19. The word plastic means: _____.
    (a) brittle (c) flexible
    (b) capable of being molded (d) elastic

20. A plastic that hardens permanently when it cools and does not become soft when reheated is a: _____.
    (a) thermoplastic (c) thermosetting plastic
    (b) hydrothermos plastic (d) hydroplastic setting

21. Because the bonds in the molecules of polyethylene are single, it is chemically: _____.
    (a) active (b) inert (c) volatile (d) wrong

22. Methyl alcohol is also known as: _____.
    (a) grain alcohol (b) wood alcohol (c) methylene (d) gasohol

23. Ethyl alcohol is mixed with gasoline to produce _____.

24. Louis Pasteur found that fermentation is caused by: _____.
    (a) gentle heating (c) bacteria
    (b) sugar that has been denatured (d) yeast cells

25. Gentle heating to kill microorganisms that cause foods to spoil is known as: _____.
    (a) cracking (b) denaturing (c) pasteurization (d) boiling

26. The amount of gasoline derived from a barrel of crude oil can be increased by: _____.
    (a) analysis (b) driving less (c) cracking (d) substitution

27. Isomers such as ethyl alcohol and dimethyl either have the same _____ formulas.

28. The formula for glucose is _____.

29. The primary purpose of insulin is to: _____.
    (a) digest cellulose
    (b) increase the rate the heart beats
    (c) keep a person alert
    (d) regulate the amount of blood sugar

30. Sucrose is also known as: _____.
    (a) essential sugar
    (b) glucose
    (c) table sugar and cane sugar
    (d) glucose and maltose

31. _____ is essential for life.

32. Nitrogen can be removed from the atmosphere and put in compounds that plants can use by lightning and: _____.
    (a) leaves of plants
    (b) nitric acid
    (c) thunder
    (d) nitrogen-fixing bacteria

33. Chemicals, whether natural or synthetic, that restore minerals to the soil are _____.

34. Rayon and nylon are _____ fibers.
    (a) natural (b) synthetic (c) mineral (d) plant

35. Scurvy is a: _____.
    (a) bacterial infection
    (b) checker game
    (c) vitamin deficiency disease
    (d) a mystery disease with no known cure

36. The word vitamin is from a Latin word meaning _____.

37. Vitamins generally are catalysts that help _____ do their work in the body.

38. The four most common elements in proteins are carbon, oxygen, hydrogen and: _____.
    (a) aluminum (b) neon (c) sodium (d) nitrogen

39. The spiral shape of many protein molecules is known as a _____.

40. Protein is a large molecule of _____ _____ that are joined together.

41. The primary use of protein is to: _____.
    (a) generate energy
    (b) grow and repair tissue
    (c) absorb carbon dioxide
    (d) burn fat

42. A virus is composed of all _____.

43. The person who has had one case of a childhood disease such as mumps or measles usually becomes _____ to it.

44. The odor of rotten eggs is due to: _____.
    (a) hydrocarbon chains
    (b) skunk odor similarity
    (c) hydrogen sulfide
    (d) mercury in the bird's system

45. An _____ is taken to counter the harmful effects of a poison.

Circle the letter of the statement which gives the best meaning for each Life Principle.

46. *"The person who moves a mountain begins by moving away small stones."*
    (a) Mountain moving is a slow business.
    (b) Mountains should only be moved a few stones at a time due to the danger involved.
    (c) Mountains are like problems—we have to keep chipping away at them, a little at a time, until they are removed.

47. *"Right is right, even if everyone is against it; and wrong is wrong, even if everyone is for it."*
    (a) Right and wrong are not determined by majority rule.
    (b) Right and wrong are relative issues—a thing may be right for one person but wrong for someone else.
    (c) Right and wrong are solely determined by the judicial system of one's own country.

48. *"The most important of my discoveries has been suggested to me by my failures."*
    (a) Failures have a way of talking us into making important discoveries.
    (b) We can sometimes learn more from our failures than from our successes.
    (c) Failure is an important discovery to suggest to researchers.

49. *"Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world."*
    (a) If knowledge is limited and not as important as imagination, I do not need to pursue an education.
    (b) Imagination can enable me to go anywhere in the world I want to go without worrying about how much knowledge I have.
    (c) Knowledge is limited—it is merely an accumulation of what is already known. Imagination to investigate the unknown is unlimited and can result in new discoveries, inventions and knowledge the world over.

50. *"Our doubts are traitors and make us lose the good we oft' might win by fearing to attempt."*
    (a) Fear and doubt often cause us not to attempt, and thereby lose, good things we could have had.
    (b) Traitors seldom attempt good things for fear of losing them.
    (c) By doubting traitors, we often lose the good we might have won.