

Chapter 8—Chemistry

MULTIPLE CHOICE

- ____ chemistry is the study of substances containing carbon.
 - Organic
 - Inorganic
 - Life-based
 - Biologic
- Minerals are ____ substances.
 - carbon-based
 - cell-based
 - living
 - inorganic
- ____ is/are anything that occupies space and has physical and chemical properties.
 - Organic substances
 - Inorganic substances
 - Matter
 - Energy
- A(n) ____ cannot chemically be separated into simpler substances.
 - atom
 - molecule
 - matter
 - element
- Atoms are ____.
 - the basic building blocks of all matter
 - the smallest units in a living thing
 - the smallest units in a non-living thing
 - also called compounds
- Chemical combinations of ____ of different elements are compound molecules.
 - electrons
 - two or more atoms
 - three molecules
 - organic matter
- As steam, ____ is in its gas state.
 - oxygen
 - carbon
 - water
 - hydrogen
- ____ properties include melting and boiling points.
 - Chemical
 - Matter
 - Physical
 - Elemental
- Chemical changes in the hair can be created with ____ because the chemical reaction of oxidation takes place.
 - permanent haircolor
 - blow-drying
 - shampooing
 - styling products
- An example of a ____ is aluminum foil.
 - salt
 - liquid
 - pure substance
 - gas
- ____ is an example of a compound.
 - Aluminum foil
 - Sodium chloride
 - Copper
 - Iron
- Compounds are classified as acids, salts, ____, and bases.
 - elements
 - atoms
 - solutions
 - oxides

13. A(n) ____ is any element combined with oxygen.
- a. base
 - b. inorganic compound
 - c. oxide
 - d. organic compound
14. A physical mixture is a combination of ____ substances united physically and in any proportions.
- a. exactly two
 - b. exactly three
 - c. two or more
 - d. five or more
15. An example of a ____ mixture is concrete.
- a. physical
 - b. carbon
 - c. elemental
 - d. chemical
16. The percentage of the human body that is composed of ____ is 65 percent.
- a. bone
 - b. water
 - c. muscle
 - d. skin
17. The ____ used in the manufacture of cosmetics is/are processed by distilling.
- a. minerals
 - b. matter
 - c. water
 - d. elements
18. Soft water comes from ____ or is chemically softened.
- a. underground
 - b. the tap
 - c. a spring
 - d. rainwater
19. Hard water can be softened by ____ or by the use of sodium carbonate.
- a. distillation
 - b. adding sodium chloride
 - c. adding an acid
 - d. boiling
20. The ____ of a substance measures its acidity and alkalinity.
- a. melting point
 - b. boiling point
 - c. pH
 - d. hardness
21. An atom or molecule that ____ is called an ion.
- a. is in a gaseous state
 - b. is in a solid state
 - c. is made from water
 - d. carries an electrical charge
22. Only ____ solutions have pH.
- a. liquid
 - b. aqueous
 - c. gaseous
 - d. soft
23. Pure water has a(n) ____ pH.
- a. acidic
 - b. alkaline
 - c. neutral
 - d. None of the answers are correct.
24. The pH of hair and skin is an average of ____.
- a. 5.0
 - b. 6.0
 - c. 7.0
 - d. 8.0
25. Solutions with a pH ____ contract and harden the hair.
- a. below 4.0
 - b. below 7.0
 - c. above 7.0
 - d. above 12.0
26. ____ have a pH above 7.0 and soften and swell the hair.
- a. Acids
 - b. Alkalis
 - c. Compounds
 - d. Liquids

27. When mixing acids and alkalis, ____ neutralize each other.
- more acids than alkalis
 - more alkalis than acids
 - equal proportions
 - None of the answers are correct.
28. In the chemical reaction called ____, an element or compound combines with oxygen.
- carbonization
 - reduction
 - oxidation
 - redox
29. Chemical reactions that give off ____ are called exothermic.
- heat
 - smell
 - light
 - oxygen
30. A substance from which ____ has been removed is a reduced substance.
- hydrogen
 - nitrogen
 - carbon
 - oxygen
31. ____ are referred to redox reactions.
- Chemical changes
 - Oxidation and reduction
 - Acid and alkali neutralization reactions
 - Water and pH changes
32. Dissolving a ____ in another substance produces a solution.
- liquid
 - solid
 - gas
 - All answers are correct.
33. A ____ is a substance that is dissolved in another substance.
- solution
 - solvent
 - solute
 - liquid
34. Substances that are ____ are easy to mix together.
- soluble
 - miscible
 - redox
 - reduced
35. The mixtures called ____ are not usually transparent.
- suspensions
 - solutes
 - dilute solutions
 - saturated solutions
36. An example of an emulsion is ____.
- salad dressing
 - water
 - mayonnaise
 - glycerin
37. ____ are held together by an emulsifying agent called a surfactant.
- Dilute solutions
 - Emulsions
 - Suspensions
 - Concentrated solutions
38. ____ are made by mixing plant oils or animal fats with alkaline substances.
- Salad dressings
 - Soaps
 - Solutions
 - Surfactants
39. ____ are usually water-based.
- Glycerins
 - Deodorant soaps
 - Cleansing lotions
 - Cleansing creams
40. ____ remove superfluous hair by dissolving it at the skin line.
- Acids
 - Shaving soaps
 - Deodorant soaps
 - Depilatories

41. The ingredient in moisturizing creams that _____ is called a humectant.
- a. creates a barrier to keep the natural water and oil in skin tissues
 - b. provides a pleasant smell
 - c. aids in absorption
 - d. creates a non-greasy feel
42. A hydrogen peroxide solution is used as a bleaching agent for the hair in solutions of _____ volume.
- a. 4 to 10
 - b. 15 to 30
 - c. 20 to 40
 - d. 40 to 50
43. _____ is a colorless gas composed of hydrogen and nitrogen.
- a. Air
 - b. Carbon dioxide
 - c. Ammonia
 - d. Oxygen
44. _____ are a special type of oil that do not cause comedones.
- a. Mineral oils
 - b. Walnut oils
 - c. Silicones
 - d. Olive oils