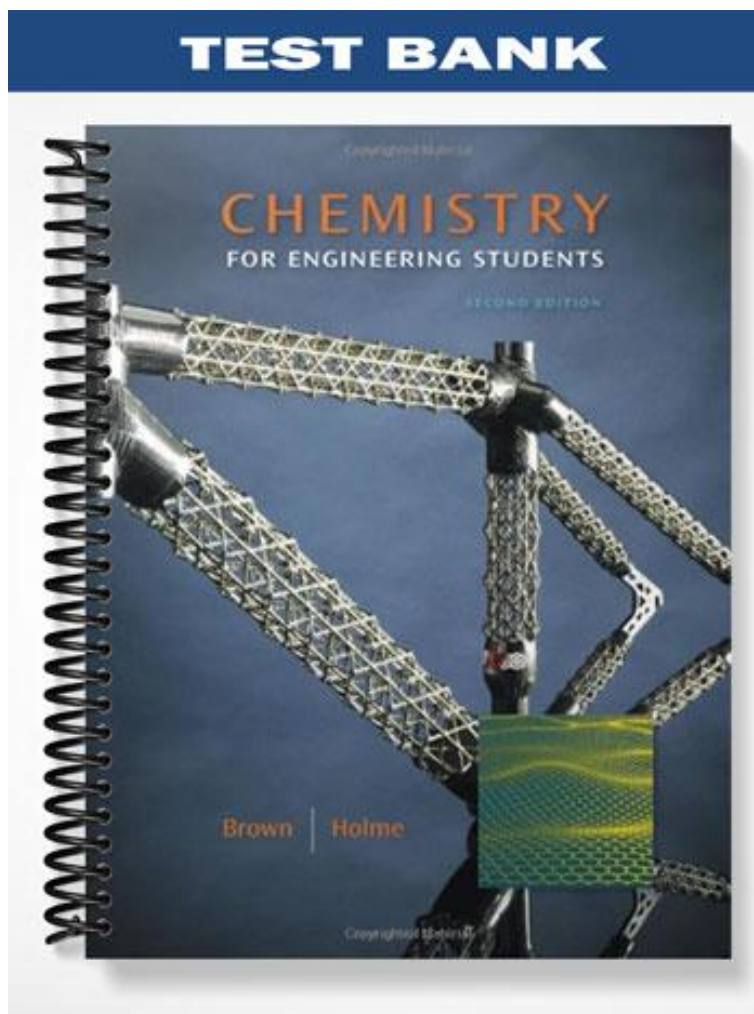


TEST BANK



Chapter 2--Atoms and Molecules

Student: _____

1. All polymers form rigid solids at standard temperature and pressure.

True False

2. The nucleus is comprised of the atom's neutrons and protons.

True False

3. Cations are particles with fewer electrons than protons.

True False

4. A horizontal row of elements on the periodic table is referred to as a family.

True False

5. The correct systematic name of V_2O_5 is divanadium pentoxide.

True False

6. The correct systematic name of $AlCl_3$ is aluminum trichloride.

True False

7. The chemical symbol for nitrite is NO_2^{1-} .

True False

8. Elements in a periodic family tend to react in similar fashion.

True False

9. Free radicals such as $\text{Cl}\cdot$ tend to be very reactive.

True False

10. Gallium, arsenic, and silicon are used as metalloids in the semiconductor industry.

True False

11. $\text{CH}_3\text{-O-CH}_3$ is an example of an alcohol

True False

12. Pentane has a five carbon atom skeleton

True False

13. The average mass of an atom is determined by

A. taking a weighted average of all isotopic masses

B. averaging the masses of each isotope

C. taking a weighted average of all stable isotopic masses

D. adding the isotopic masses and dividing by the number of isotopes

14. Ions of opposite charges attract one another. This attraction is governed by:

A. Calbert's Law

B. Henry's Law

C. Franklin's Law

D. Coulomb's Law

15. The most dense elements tend to be found in:

A. Period 2

B. Period 6

C. Period 5

D. Period 4

16. The Group II metals (Be, Mg, Ca, Sr, and Ba) are commonly referred to as the:

A. alkali metals

B. alkaline earth metals

C. halogen metals

D. lanthanide metals

17. The Group I metals (Li, Na, K, Rb, and Cs) are commonly referred to as the:

- A. alkali metals
- B. alkaline earth metals
- C. halogen metals
- D. lanthanide metals

18. Which of the following are examples of transition metals:

- A. Fe and Zn
- B. Sb and I
- C. Pm and Gd
- D. Al and Ga

19. Which of the following elements are lanthanides?

- A. Ti and Cr
- B. U and Np
- C. Sm and Er
- D. Kr and Xe

20. Which pair of elements can be classified as noble gases?

- A. H and He
- B. Na and K
- C. Kr and Ar
- D. N and O

21. Uranium, plutonium, and neptunium are classified as:

- A. alkali metals
- B. alkaline earth metals
- C. lanthanides
- D. actinides

22. Alkaline earth metal cations carry a charge of:

- A. 1+
- B. 2+
- C. 2-
- D. 1-

23. CaCl_2 is an example of a(n):

- A. covalent compound
- B. formula unit
- C. molecular compound
- D. organic acid

24. The correct molecular formula for potassium nitrate is:

- A. PN_3
- B. PNO_2
- C. KN_3
- D. KNO_3

25. The correct molecular formula for ammonium chloride is:

- A. NH_3Cl
- B. AmCl
- C. NH_4Cl
- D. AmCl_2

26. The correct molecular formula for strontium chloride is:

- A. SrCl_2
- B. StCl_2
- C. SrClO_2
- D. SrCl

27. The correct molecular formula for iron(II)bromide is:

- A. FeBr_3
- B. FeBr_2
- C. I_2Br_2
- D. IBr_3

28. The correct molecular formula of dinitrogen pentoxide is:

- A. N_2O_5
- B. $(\text{NO}_5)_2$
- C. 2NO_5
- D. $\text{N}_2\text{P}_5\text{O}$

29. The correct molecular formula of rubidium chloride is:

- A. RuCl_2
- B. RbCl_2
- C. RuCl
- D. RbCl

30. The molecular formula of calcium phosphate is:

- A. Ca_3P_2
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- C. $\text{Ca}_3(\text{PO}_4)_2$
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31. The correct molecular formula of tin(IV)oxide is:

- A. TiO_2
- B. SnO_2
- C. SnO_4
- D. TiO_4

32. The systematic (IUPAC) name of MgI_2 is:

- A. manganese iodide
- B. manganese diiodide
- C. magnesium iodide
- D. magnesium (II) iodide

33. The systematic (IUPAC) name of $\text{Sr}(\text{NO}_2)_2$ is:

- A. strontium nitrate
- B. strontium dinitrate
- C. strontium nitrate
- D. strontium nitrite

34. The systematic (IUPAC) name of CuO is:

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- B. copper (II) oxide
- C. copper oxide
- D. copper (II) hydroxide

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- A. sodium perchlorate
- B. sodium chlorate
- C. sodium hypochlorate
- D. sodium chloride tetraoxide

36. Consider the ^{203}Hg . How many neutrons are present in this nuclide?

- A. 203
- B. 80
- C. 283
- D. 123

37. How many electrons are present in a $^{40}\text{Ca}^{2+}$ species?

- A. 40
- B. 38
- C. 20
- D. 18

38. Which species contains 16 protons?

- A. ^{16}O
- B. ^{19}F
- C. ^{35}S
- D. ^{32}P

39. If an ion contains 33 protons, 39 neutrons, and 34 electrons, the ion is:

- A. $^{73}\text{Se}^{1-}$
- B. $^{72}\text{As}^{1-}$
- C. $^{67}\text{Y}^{1+}$
- D. $^{73}\text{Se}^{1+}$

40. Consider ^{235}U . How many protons are present in this nuclide?

- A. 143
- B. 235
- C. 92
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41. When electrons are shared between pairs of atoms rather than donated from one atom to another or mobile across an entire lattice, a(n) _____ bond is present.

42. The atomic number of an atom is the number of _____ in that particular atom.

43. The ratio of isotopes for a given element can be measured instrumentally using a(n)

_____.

44. The _____ provides a ratio of atoms in a compound.

45. _____ are nuclei having the same number of protons but different numbers of neutrons.

Chapter 2--Atoms and Molecules **Key**

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FALSE

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Isotopes