

SAT Chemistry Practice Test 36

1. The element that is most active chemically

- A. Fluorine
- B. Chlorine
- C. Bromine
- D. Iodine
- E. Astatine

2. The element with the smallest ionic radius

- A. Fluorine
- B. Chlorine
- C. Bromine
- D. Iodine
- E. Astatine

3. The element with the lowest first ionization potential

- A. Fluorine
- B. Chlorine
- C. Bromine
- D. Iodine
- E. Astatine

4. The element that first shows some visible metallic properties at room temperature

- A. Fluorine
- B. Chlorine
- C. Bromine
- D. Iodine
- E. Astatine

5. Contains up to 10 electrons.

- A. 1s
- B. 2s

C. 3s

D. 3p

E. 3d

6. Contains one pair of electrons in the ground-state electron configuration of the lithium atom.

A. 1s

B. 2s

C. 3s

D. 3p

E. 3d

7. Is exactly one-half filled in the ground-state electron configuration of the phosphorus atom.

A. 1s

B. 2s

C. 3s

D. 3p

E. 3d

8. Proposes basic postulates concerning elements and atoms

A. Avogadro's number

B. $P_1V_1 = P_2V_2$

C. $V_1T_2 = V_2T_1$

D. Dalton's Theory

E. Gay-Lussac's Law

9. Proposes a relationship between the combining volumes of gases with respect to the reactants and gaseous products

A. Avogadro's number

B. $P_1V_1 = P_2V_2$

C. $V_1T_2 = V_2T_1$

D. Dalton's Theory

E. Gay-Lussac's Law

10. Proposes a temperature-volume relationship of gases

A. Avogadro's number

B. $P_1V_1 = P_2V_2$

C. $V_1T_2 = V_2T_1$

D. Dalton's Theory

E. Gay-Lussac's Law

11. Proposes a concept regarding the number of particles in a mole

A. Avogadro's number

B. $P_1V_1 = P_2V_2$

C. $V_1T_2 = V_2T_1$

D. Dalton's Theory

E. Gay-Lussac's Law

12. Proposes a volume-pressure relationship of gases

A. Avogadro's number

B. $P_1V_1 = P_2V_2$

C. $V_1T_2 = V_2T_1$

D. Dalton's Theory

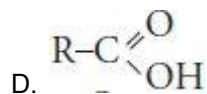
E. Gay-Lussac's Law

13. The organic structure designation that includes the functional group of an aldehyde(* Alkyl group that is not necessarily the same as R)

A. R-OH

B. R-O-R*

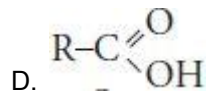
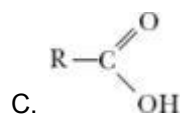
C. R-CHO



14. The organic structure designation that includes the functional group of an acid(* Alkyl group that is not necessarily the same as R)

A. R-OH

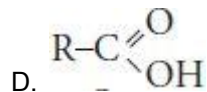
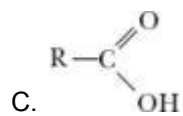
B. R-O-R*



15. The organic structure designation that includes the functional group of an ester(* Alkyl group that is not necessarily the same as R)

A. R-OH

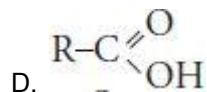
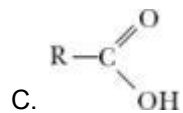
B. R-O-R*



16. The organic structure designation that includes the functional group of an ether(* Alkyl group that is not necessarily the same as R)

A. R-OH

B. R-O-R*



17. The expression that can be used to designate a linear nonpolar molecule that contains polar bonds

A. H₂(g)

- B. $\text{CO}_2(\text{g})$
- C. $2\text{N}_2\text{O}(\text{g})$
- D. $2\text{NaCl}(\text{aq})$
- E. $\text{H}_2\text{SO}_4(\text{dilute aq})$

18. The expression that can be used to designate 2 moles of atoms

- A. $\text{H}_2(\text{g})$
- B. $\text{CO}_2(\text{g})$
- C. $2\text{N}_2\text{O}(\text{g})$
- D. $2\text{NaCl}(\text{aq})$
- E. $\text{H}_2\text{SO}_4(\text{dilute aq})$

19. The expression that can be used to designate 3 moles of atoms

- A. $\text{H}_2(\text{g})$
- B. $\text{CO}_2(\text{g})$
- C. $2\text{N}_2\text{O}(\text{g})$
- D. $2\text{NaCl}(\text{aq})$
- E. $\text{H}_2\text{SO}_4(\text{dilute aq})$

20. The expression that can be used to designate a maximum of 3 moles of ions

- A. $\text{H}_2(\text{g})$
- B. $\text{CO}_2(\text{g})$
- C. $2\text{N}_2\text{O}(\text{g})$
- D. $2\text{NaCl}(\text{aq})$
- E. $\text{H}_2\text{SO}_4(\text{dilute aq})$

21. The expression that can be used to designate 6 moles of atoms

- A. $\text{H}_2(\text{g})$
- B. $\text{CO}_2(\text{g})$
- C. $2\text{N}_2\text{O}(\text{g})$
- D. $2\text{NaCl}(\text{aq})$
- E. $\text{H}_2\text{SO}_4(\text{dilute aq})$

22. Question below refers to the following pairs of substances:

Are isotopes

- A. NH_3 and N_2H_4
- B. ^{16}O and ^{17}O
- C. NH_4Cl and NH_4NO_3
- D. CH_3OCH_3 and $\text{CH}_3\text{CH}_2\text{OH}$
- E. O_2 and O_3

23. Question below refers to the following pairs of substances:

Have both ionic and covalent bonds

- A. NH_3 and N_2H_4
- B. ^{16}O and ^{17}O
- C. NH_4Cl and NH_4NO_3
- D. CH_3OCH_3 and $\text{CH}_3\text{CH}_2\text{OH}$
- E. O_2 and O_3

24. Question below refers to the following pairs of substances:

All allotropes

- A. NH_3 and N_2H_4
- B. ^{16}O and ^{17}O
- C. NH_4Cl and NH_4NO_3
- D. CH_3OCH_3 and $\text{CH}_3\text{CH}_2\text{OH}$
- E. O_2 and O_3