

NEET Sample Paper 1 PDF for Class 11 (Chemistry)

1. A mixture of gases contains H_2 and O_2 gases in the ratio of 1 : 4 (w/w). What is the molar ratio of two gases in the mixture?

- (1) 1 : 2 (2) 4 : 1
(3) 2 : 2 (4) 2 : 3

2. The maximum number of molecules is present in;

- (1) 5 g of O_2 gas
(2) 1.5 g of H_2 gas
(3) 5 L of N_2 gas at STP
(4) 15 L of H_2 gas at STP

3. The species Ar, K^+ and Ca^{2+} contain the same number of electrons. In which order do their radii increase?

- (1) $K^+ < Ar < Ca^{2+}$
(2) $Ar < K^+ < Ca^{2+}$
(3) $Ca^{2+} < Ar < K^+$
(4) $Ca^{2+} < K^+ < Ar$

4. An amount of 0.3 mole of $SrCl_2$ is mixed with 0.2 mole of K_3PO_4 . The maximum moles of KCl which may form is;

- (1) 0.6 (2) 0.5
(3) 0.3 (4) 0.1

5. The electronic configuration of the element with highest electron affinity is;

- (1) $3s^2 3p^5$
(2) $2s^2 2p^3$
(3) $2s^2 2p^5$
(4) $2s^2 2p^2$

6. Which of the following has the biggest radius?

- (1) (2) Mg^{2+}
- (3) Na^+
- (4) Li^+

7. Bohr's radius for the H-atom ($n = 1$) is approximately 0.53 \AA . The radius of the first excited state ($n = 2$) orbit is;

- (1) 0.13 \AA (2) 106 \AA
- (3) 4.77 \AA (4) 2.12 \AA

8. The number of radial nodes, nodal planes for an orbital with $n = 4$; $l = 1$ is;

- (1) 3, 1 (2) 2, 1
- (3) 2, 0 (4) 4, 0

9. 26.8 gm of $\text{Na}_2\text{SO}_4 \cdot n\text{H}_2\text{O}$ contains 12.6 g of water. The value of n is;

- (1) 1 (2) 10
- (3) 6 (4) 7

10. Which of the following species has a linear shape?

- (1) NO_2
- (2) SO_2
- (3) NO_2
- (4) O_3

11. In a periodic table, the basic character of oxides:

- (1) increases from left to right and decreases from top to bottom.
- (2) decreases from right to left and increases from top to bottom.
- (3) decreases from left to right and increases from top to bottom.
- (4) decreases from left to right and increases from

bottom to top.

12. Thermodynamically, most stable form of carbon is;

- (1) diamond (2) graphite
- (3) peat (4) coal

13. The linear structure is assumed by;

- (1) SnCl₂
- (2) NCO⁻
- (3) CS₂
- (4) Both (2) and (3)

14. Amongst NaCl, MgCl₂, AlCl₃, in which compound the percentage ionic character in the bonds is lowest?

- (1) AlCl₃ (2) MgCl₂
- (3) NaCl (4) Both (2) and (3)

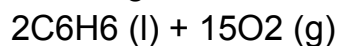
15. Which of the following compounds has the maximum s-character in its central atom?

- (1) CH₄
- (2) XeO₃
- (3) BCl₃
- (4) NO₂

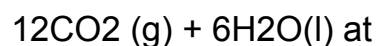
16. Which of the following represents the correct order of increasing electron gain enthalpy with negative sign for the elements O, S, F and Cl?

- (1) Cl < F < O < S (2) O < S < F < Cl
- (3) F < S < O < Cl (4) S < O < Cl < F

17. The difference between heats of reaction at constant pressure and constant volume of the following reaction would be;



→



25°C in kJ is;

(1) – 7.43 (2) + 3.72

(3) –3.72 (4) + 7.43

18. Statement-I: Bond angle of BF₃ and NF₃ are different.

Statement-II: BF₃ and NF₃ are having different shape.

(1) Statement I and Statement II both are correct.

(2) Statement I is correct, but Statement II is incorrect.

(3) Statement I is incorrect, but Statement II is correct.

(4) Statement I and Statement II both are incorrect.

19. Statement-I: He and Be have similar outer shell electronic configuration of type ns²

Statement-II: He and Be are chemically inert.

(1) Statement I and Statement II both are correct.

(2) Statement I is correct, but Statement II is incorrect.

(3) Statement I is incorrect, but Statement II is correct.

(4) Statement I and Statement II both are incorrect.

20. Statement I: p-hydroxy benzoic acid has a lower B.P. than o-hydroxy benzoic acid

Statement II: o-hydroxy benzoic acid has intramolecular H-bonding.

(1) Statement I and Statement II both are correct.

(2) Statement I is correct, but Statement II is incorrect.

(3) Statement I is incorrect, but Statement II is correct.

(4) Statement I and Statement II both are incorrect.

21. On the addition of mineral acid to an aqueous solution of borax, which of the following compound is formed?

- (1) Boron hydride (2) Orthoboric acid
(3) Metaboric acid (4) Pyroboric acid

22. Assertion (A): pH of pure water increases with increase in temperature. Reason (R): Self ionization of water is an endothermic reaction.

- (1) Both Assertion (A) and Reason (R) are the true, and Reason (R) is a correct explanation of Assertion (A).
(2) Both Assertion (A) and Reason (R) are the true, but Reason (R) is not a correct explanation of Assertion (A).
(3) Assertion (A) is true, and Reason (R) is false.
(4) Assertion (A) is false, and Reason (R) is true.

23. Assertion (A): Group 1 elements are the largest in their horizontal periods in the periodic table (exclude noble gases).

Reason (R): The melting and boiling points of group 1 elements increases on moving down from Li to Cs.

- (1) Both Assertion (A) and Reason (R) are the true, and Reason (R) is a correct explanation of Assertion (A).
(2) Both Assertion (A) and Reason (R) are the true, but Reason (R) is not a correct explanation of Assertion (A).
(3) Assertion (A) is true, and Reason (R) is false.
(4) Assertion (A) is false, and Reason (R) is true.

24. Glass is soluble in:

- (1) HF (2) H₂SO₄
(3) HClO₄ (4) aqua-regia

25. Which of the following statement is incorrect:

- (1) At equilibrium, concentration of reactants must be equal to concentration of products.
- (2) Equilibrium can be attained in both homogenous and heterogenous reaction.
- (3) Approach to the equilibrium is fast in initial state but gradually it decreases.
- (4) Equilibrium is dynamic in nature.

26. Halogens in an organic compound can be detected by:

- (1) Duma's method
- (2) Carius method
- (3) Kjeldahl's method
- (4) Chromatography

27. Which is the most acidic among the following?

- (1) methane
- (2) acetylene
- (3) 1-butene
- (4) neo-pentane

47. Pyrolysis of alkanes is a _____.

- (1) nucleophilic addition reaction.
- (2) free radical substitution reaction.
- (3) electrophilic addition reaction.
- (4) free radical elimination reaction.

28. 32 gm of SO_x occupies 11.2 litre at S.T.P.

Assuming ideal gas nature, the value of x is;

- (1) 1 (2) 2
- (3) 3 (4) 4

29. 1 M NaCl and 1 M HCl are present in an aqueous solution. The solution is

- (1) not a buffer solution with $\text{pH} < 7$
- (2) not a buffer solution with $\text{pH} > 7$

- (3) a buffer solution with $\text{pH} < 7$
- (4) a buffer solution with $\text{pH} = 7$

30. HF has highest boiling point among hydrogen halides, because it has:

- (1) lowest ionic character.
- (2) lowest dissociation enthalpy.
- (3) strongest vander Waals interactions.
- (4) strongest hydrogen bonding.

