



BLESSING TUITION & TUTORIAL CENTRE

ISO CERTIFIED 9001 : 2015

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XI Std CHEMISTRY PUBLIC EXAM QUESTIONS COLLECTION

UNIT-1

1. Calculate the equivalent mass of H_2SO_4 .(March/2019)
 2. Calculate Oxidation number of oxygen in H_2O_2 (March/2019)
 3. A Compound having the empirical formula $\text{C}_6\text{H}_6\text{O}$ has the vapour density 47. Find its Molecular formula.(March/2019)
 4. What do you understand by the term Mole ? (June/2019)& (June/2023)
 5. What are auto redox reactions ? Give an example .(June/2019)
 6. Define basicity. Find the basicity of ortho-phosphoric acid.(Sept/2020)
 7. Calculate the empirical and molecular formula of a compound containing 76.6% carbon, 6.38% of hydrogen and rest oxygen. Its vapour density is 47.(Sept/2020), (Sept/2022)
 8. What is the empirical formula of the following ?(Sept/2021)
a) Fructose ($\text{C}_6\text{H}_{12}\text{O}_6$) b) Caffeine ($\text{C}_8\text{H}_{10}\text{N}_4\text{O}_2$)
 9. Distinguish between oxidation and reduction.(Sept/2021)
 10. Define Gram equivalent mass(May/2022)
 11. Calculate the oxidation number of underlined elements.a) $\underline{\text{C}}\text{O}_2$ b) $\text{H}_2\underline{\text{S}}\text{O}_4$ (May/2022)
 12. What is meant by limiting reagents?(Sept/2022)
 13. Distinguish between Oxidation – Reduction(Apr/2022)
 14. Balance the following equations by Oxidation Number Method.(Apr/2022)
i) $\text{KMnO}_4 + \text{Na}_2\text{SO}_3 \rightarrow \text{MnO}_2 + \text{Na}_2\text{SO}_4 + \text{KOH}$ ii) $\text{Cu} + \text{HNO}_3 \rightarrow \text{Cu}(\text{NO}_3)_2 + \text{NO}_2 + \text{H}_2\text{O}$
 15. A compound on analysis gave Na = 14.31%, S = 6.22%, O = 69.5%. Calculate the molecular formula of the compound, if all the hydrogen in the compound is present in combination with Oxygen as Water of Crystallisation. (Molecular mass of the compound is 322) (Apr/2022)
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1. State and explain Pauli's Exclusion Principle.(March/2019),(Apr/2022)
 2. Write the de-Broglie equation(March/2019)
 3. Calculate the orbital angular momentum for 'd' and 'f' orbital.(June/2019)
 4. Define orbital .what are the n and l values for $3p_x$ and $4d_{x^2-y^2}$ electron ?(June/2019)
 5. Calculate the uncertainty in the position of an electron, if the uncertainty in its velocity is $5.7 \times 10^5 \text{ ms}^{-1}$ (June/2019)
 6. In degenerate orbitals, why do the completely filled and half filled configurations are more stable than the partially filled configuration ?(Sept/2020)
 7. State Heisenberg's Uncertainty Principle.(Sept/2020), (Sept/2022)&(Apr/2022)
 8. Calculate the total number of angular nodes and radial nodes present in 3d and 4f orbitals.(Sept/2020)
 9. State Aufbau principle.(Sept/2021)
 10. What is Exchange energy ?(Sept/2021)
 11. Write a note on principal quantum number.(Sept/2021)
 12. Calculate the maximum number of electrons that can be accommodated in L shell.(May/2022)
 13. How many orbitals are possible for $n = 4$?(May/2022)



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14. Write the electronic configuration and orbital diagram for Nitrogen(May/2022)
15. Describe about magnetic quantum number(Sept/2022)
16. Give the electronic configuration of Mn^{2+} and Cr^{3+} (Sept/2022)
17. Write short notes on Principal Quantum number. (June/2023)
18. Define Orbital. (June/2023)
19. Write short note on i) Magnetic Quantum Number ii) Azimuthal Quantum Number(June/2023)

UNIT-3

1. Define – Valency(March/2019)
2. Explain diagonal relationship. (March/2019)
3. State and explain Dobereiner's "Triad"(March/2019)
4. Ionization potential of Nitrogen is greater than that of Oxygen. Explain by giving appropriate reason.(June/2019)
5. Give the general electronic configuration of Lanthanides and Actinides. (June/2019)
6. Derive Ionic radius using Pauling's method.(Sept/2020),(May/2022)
7. Explain why the electron affinity of Be and N is almost zero. (Sept/2020)
8. Define Electronegativity. State the trends in the variation of the character in group and period.(Sept/2021)
9. Define Atomic radius.(Sept/2021)
10. Explain diagonal relationship.(Sept/2021)&(Apr/2022),
11. Define electron affinity.(May/2022)
12. How will you determine the ionic character in covalent bond using electronegativity values?(May/2022)
13. Compare the ionization energy of Beryllium and Boron(Sept/2022)
14. What are f-block elements?(Sept/2022)
15. State the trends in the variation of electronegativity in group and periods(Sept/2022)
16. State Modern Periodic Law.(Apr/2022)
17. Explain the fact that the second ionization potential is always higher than first ionization potential. (June/2023)
18. Calculate the effective nuclear charge on 4s electron and 3d electron in Scandium. (June/2023)

UNIT-4

1. Is Tritium prepared?(March/2019)& (June/2023)
2. Complete the following equation. $N_2O_2 + ? \rightleftharpoons Na_2SO_4 + H_2O_2$ (March/2019)
3. What is syngas? How is it prepared?(June/2019)
4. Why is hydrogen peroxide stored in plastic containers, not in glass containers?(June/2019)
5. Write the exchange reactions of Deuterium.(Sept/2020)
6. How do you convert para hydrogen into ortho hydrogen?(Sept/2020),(Sept/2021),(Apr/2022)
7. Write the laboratory method of preparation of Hydrogen.(Sept/2020)
8. Mention the three types of covalent hydrides.(May/2022)
9. Give an example for ionic hydride and covalent hydride(Sept/2022)
10. What are isotopes? Write the names of isotopes of Hydrogen(Apr/2022)
11. What are the uses of heavy water? (June/2023)
12. What is the water-gas shift reaction? (June/2023)