SREE SARAVANA NIKETAN MATRIC HR SEC SCHOOL- NERINJIPETTAI,ERODE.

CHEMISTRY UNIT WISE IMPORTANT QUESTIONS(**BOOK BACK & INTERIOR**) **2 & 3 MARKS ONLY**

UNIT-1 **Basic Concepts of Chemistry and Chemical Calculations**	UNIT-2 **Quantum Mechanical Model of Atom**	UNIT-3 **Periodic Classification Of Elements**
1. Define relative atomic mass. 2. Understand by the term mole. 3. Define equivalent mass. 4. What do you understand by the term oxidation number. 5. Distinguish between oxidation and reduction. (Just do it for the calculation regarding :mole calculation eg cal.no of moles in 9g of ethane) 6. What is Avogadro number. 7. What is limiting reagent. 8. What is gram equivalent mass. 9. Calculate relative atomic mass of H.	1. Information about the shape, energy, orientation and size of orbitals? 2. How many orbitals are possible for n =4? 3. Consider the following electronic arrangements for the d^5 configuration. (refer Qn.No.30) 4. State and explain pauli's exclusion principle. 5. Define orbital? what are the n and l values for 3px and 4dx2-y2 electron? 6. Define Aufbau principle 7. Give the electronic configuration of Mn2+ and Cr3+ 8. He+ (g) → He2+ (g) + e- 9. The ionisation energy for the H atom in its ground state is - 13.6 ev atom-1. 10. What is the de Broglie wave length of an electron, which is accelerated from the rest, through a potential difference of 100V? 11. Refer Qn No:51 12. Heisenberg uncertainty principle 13. Conclusion of Rutherford α-ray scattering experiment. 14. Study four quantum numbers each one will be 2marks.	1. Define modern periodic law. 2. What are isoelectronic ions? Give examples. 3. What is effective nuclear charge ? 4. Define electronegativity. 5. In what period and group will an element with Z = 118 will be present? 6. Give the general electronic configuration of lanthanides and actinides? 7. Why halogens act as oxidising agents? 8. Explain the diagonal relationship. 9. Notes on Triads and periods. 10. Define periodic law.

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UNIT-4
Hydrogen

1. What is water-gas shift reaction ?
2. What are isotopes? Write the names of isotopes of hydrogen.
3. Give the uses of heavy water.
4. Explain the exchange reactions of deuterium.
5. How do you convert parahydrogen into ortho hydrogen ?
6. Mention the uses of deuterium.
7. Refer Qn No:41 and 42.
8. Compare the structures of H_2O and H_2O_2.
9. Note Inter and Intramolecular Hydrogen Bond.
10. Preparation of Tritium
11. Uses of H_2O_2.
12. Short notes on Ortho and Para hydrogen.
13. Any two uses of hydrogen.

UNIT-5
Alkali and Alkaline Earth Metals

1. Why sodium hydroxide is much more water soluble than chloride?
2. Explain what to meant by efflorescence;
3. alkali metal (x) forms a hydrated sulphate, X_2SO_4. $10H_2O$. Is the metal more likely to be sodium (or) potassium.
4. Mention the uses of plaster of paris.
5. Refer Qn.No 32.
6. Beryllium halides are Covalent whereas magnesium halides are ionic why?
7. Why alkaline earth metals are harder than alkali metals.
8. How is plaster of paris prepared?
9. Give the uses of gypsum.
10. Lithium exhibit anomalous properties why?
11. Give uses of washing soda.
12. What is dead burnt plaster?
13. Milk of lime.

UNIT-6
Gaseous State

1. State Boyle's law.
2. State Charles law.
3. Applications of Gay Lusaac' law
4. In what way real gases differ from ideal gases.
5. Distinguish between diffusion and effusion.
6. Would it be easier to drink water with a straw on the top of Mount Everest?
7. Why airplanes cabins are pressurized.
8. What is absolute zero.
9. State Grahams law of diffusion
10. Daltons law of partial pressure
11. Three characteristics of gases.

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UNIT-7
Thermodynamics

1. State the first law of thermodynamics.
2. Define Hess's law of constant heat summation.
3. Explain intensive properties with two examples
4. **Refer Qn.No.29.**
5. What is the usual definition of entropy? What is the unit of entropy? Page.no.210.
6. Define is Gibb's free energy.
7. Define enthalpy of combustion.
8. Define molar heat capacity. Give its unit.
9. Define the calorific value of food. What is the unit of calorific value?
10. Define enthalpy of neutralization.
11. What is lattice energy?
12. What are state and path functions? Give two examples.
13. Give Kelvin statement of second law of thermodynamics.
14. Note on extensive and intensive properties
15. Why Cp is always greater than Cv?
16. Give some eg. Of spontaneous process.

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