

MAXIMUM PROBABILITY QUESTIONS LIST FROM CHEMISTRY FOR SSC MARCH 2017

Name of the lesson	AS-1 (Differences)	AS-1 (Understanding/Explanations/....)
<b>2. Chemical Reactions and Equations</b>	1. Differences between chemical decomposition and displacement reactions. 2. Differences between chemical displacement and double displacement reactions. 3. Differences between oxidation and reduction	1. Corrosion of metals – change in colours 2. Balancing chemical equations 3. Precipitate reactions – Photo chemical reactions 4. Rancidity
<b>4. Acids, Bases and Salts</b>	1. Difference between the properties of Acids and Bases	1. Olfactory indicators 2. Baking soda, Washing soda, POP, Gypsum - formulae 3. Neutralisation reaction 4. Dilution of acids and bases 5. P <sup>H</sup> effect on tooth decay 6. Distilled water does not conduct electricity. Why ?
<b>8. Structure of Atom</b>	1. Differences between Quantum numbers( $n, l, m_l, m_s$ ) 2. Differences between orbit and orbital	1. Spectrum – Electromagnetic wave 2. Planck's equation – Planck's constant 3. Rainbow – continuous spectrum 4. Aufbau Rule explanation with example 5. Hund's rule explanation with example 6. Pauli's law
<b>9. Classification of Elements</b>	1. Difference between Ionisation energy and Electron Affinity	1. Changes in groups and periods (i) Atomic radius (ii) Ionisation energy (iii) Electro negativity (iv) Metallic nature 2. Properties of modern periodic table 3. Defects in Mendeleef's periodic table
<b>10. Chemical Bonding</b>	1. Differences between Ionic compounds and covalent compounds 2. Differences between Anion and cation 3. Differences between valence electrons and valency 4. Difference between Ionic bond and covalent bond	1. Valence electrons only participate in chemical bonds. Why ? 2. Formation of BF <sub>3</sub> molecule by Hybridisation concept 3. Formation of BeCl <sub>2</sub> molecule by Hybridisation concept 4. Formation of NaCl and CaCl <sub>2</sub> molecules
<b>13. Principles of Metallurgy</b>	1. Difference between calcination and roasting 2. Differences between slag and gangue 3. Differences between ore and mineral	1. Concentration methods of ores 2. Write some oxide ores 3. Smelting
<b>14. Carbon and its compounds</b>	1. Differences between addition reactions and substitution reactions 2. Differences between Alkanes, Alkenes and Alkynes 3. Differences between Esterification and saponification	1. Cleansing action of soap 2. Homologous series - properties 3. Formation of miscelle 4. Ethanol preparation from Ethane

Name of the lesson	AS-3 (Activities/Experiments – 4 Marks)	AS-5 (Diagrams/Figures – 4 Marks)
<b>2. Chemical Reactions and Equations</b>	1. Decomposition of Calcium carbonate 2. Decomposition of Lead nitrate 3. Decomposition of water (Electrolysis of water) 4. Displacement reaction by using Copper sulphate and Iron nails 5. Double displacement reaction by using Lead nitrate and Potassium Iodide	1. Decomposition of Calcium carbonate 2. Decomposition of Lead nitrate 3. Decomposition of water (Electrolysis of water) 4. Reduction of Copper oxide by sending Hydrogen
<b>4. Acids, Bases and Salts</b>	1. HCl reacts with Zinc granules to liberate Hydrogen gas. 2. HCl reacts with Carbonates/bi carbonates to liberate Carbon di oxide gas. 3. Electric conductivity of Acids/Bases 4. Water of crystallization	1. HCl reacts with Zinc pieces to liberate Hydrogen gas. 2. HCl reacts with Carbonates/bi carbonates to liberate Carbon di oxide gas. 3. Electric conductivity of Acids/Bases 4. Chloro Alkali Process 5. Water of crystallization
<b>8. Structure of Atom</b>	1. Heating of Cupric chloride / Strontium chloride/ Sodium chloride	1. Electromagnetic wave 2. Shapes of s, p, d – orbitals 3. Moeller diagram (Diagram that shows the order of energy of orbitals)
<b>9. Classification of Elements</b>	*****	*****
<b>10. Chemical Bonding</b>	*****	1. Luwis dot structures of $H_2O$ , $NH_3$ , $CH_4$ , $BF_3$ , $BeCl_2$ , $H_2$ , $F_2$ , $HCl$ , $O_2$ , $N_2$ 2. Structure of molecules with respect to Hybridisation $CH_4$ , $BF_3$ , $BeCl_2$ , $NH_3$ , $H_2O$ , $C_2H_4$ , $C_2H_2$
<b>13. Principles of Metallurgy</b>	1. Components that effect the rusting of Iron articles	1. Froth floatation 2. Magnetic separation 3. Blast furnace 4. Reverbaratory Furnace
<b>14. Carbon and its compounds</b>	*****	1. Structure of molecules with respect to Hybridisation $CH_4$ , $C_2H_4$ , $C_2H_2$ 2. Structures of Diamond and Graphite 3. Micelle 4. Soap molecule
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Name of the lesson	AS-2 (Questioning/Prediction)	AS-6 (Daily life uses)
<b>2. Chemical Reactions and Equations</b>	1. Write questions to prove $C + O_2 \rightarrow CO_2$ is a chemical combination reaction 2. Write questions to prove $H_2O \rightarrow 2H_2 + O_2$ is a chemical decomposition reaction 3. Write some questions on Rancidity 4. $Fe_2O_3 + 2Al \rightarrow 2Fe + Al_2O_3$ Ravi said this oxidation. Raghu said this is reduction. Whom do you support ?	1. What happened if the slices of potato kept in open air? Write a precaution. 2. Nitrogen filled in Potato chips flush bags. What is the use of Nitrogen ? 3. Write any two situations that you observe oxidation in daily life. 4. How do we preserve iron articles? Write four methods. 5. Why do we keep food articles in air tight containers?
<b>4. Acids, Bases and Salts</b>	1. Milk man adds Baking soda (Weak Base) in to milk. Can you guess the reason ? 2. Plaster of Paris kept in air tight bags. Can you guess the reason ?	1. Significance of $P^H$ in daily life 2. Name four acidic/basic substances which we use in our daily life. 3. Uses of Bleaching powder 4. Uses of Baking soda (Eating soda/ $NaHCO_3$ ) 5. Uses of washing soda ( $Na_2CO_3$ ) 6. Uses of Plaster of Paris (POP)
<b>8. Structure of Atom</b>	1. High energy level between K and L orbits. Predict. 2. Which rule is violated in the electronic configuration $1s^0 2s^2 2p^4$ ? Guess.	1. Uses of Electron configuration (What do we learn from electron configuration?)
<b>9. Classification of Elements</b>	1. Name One element having similar properties to that of Mg. How can you estimate ? 2. Guess the places of elements with atomic numbers 9 and 19 in modern periodic table. 3. Atomic number of X is 13 and Y is 17. Guess the formula of compound formed by X and Y.	1. Opinion on Hydrogen place in Modern Periodic table 2. Role of Electron configuration in the preparation of Modern periodic table 3. Role of place of element in Periodic table to remember the chemical properties.
<b>10. Chemical Bonding</b>	1. Ionic compounds have more melting points than covalent compounds. Guess any reason. 2. How bond energies and bond lengths of molecule helps us in predicting their chemical properties?	*****
<b>13. Principles of Metallurgy</b>	1. $Fe + CuSO_4 \rightarrow FeSO_4 + Cu$ But $Cu + FeSO_4$ is not possible. Guess the reason. (In the view of reactivity of metals)	1. Where do we use handpicking and washing methods in our daily life? Give examples. How do you correlate these examples with enrichment of ore?
<b>14. Carbon and its compounds</b>	1. Formula of X is $C_4H_{10}$ and Y is $C_{10}H_{20}$ . Guess which can participate in Addition reaction. 2. What happened if Sodium piece is dropped in Ethanol ? Predict the reason.	1. Uses of graphite 2. Role of Esters in daily life 3. Alcohol consumption – Effects – Precautions to aware

Name of the lesson	AS-4 (Information Skill)	
<b>2. Chemical Reactions and Equations</b>	1. $\text{Fe}_2\text{O}_3 + 2 \text{Al} \rightarrow 2 \text{Fe} + \text{Al}_2\text{O}_3$ Questions related to Oxidation, Type of reaction 2. $\text{H}_2\text{O} \rightarrow 2\text{H}_2 + \text{O}_2$ Questions related to Oxidation, Type of chemical Reaction, Reactants, Products, Moles of reactants and products, Mass of substances	
<b>4. Acids, Bases and Salts</b>	1. Table related to Reaction of acids, bases and neutrals with indicators like Blue litmus, red litmus, Methyl orange, Pheonolpthalene 2. Table related to $\text{P}^{\text{H}}$ values of different substances - Questions related to data 3. Table related to $\text{P}^{\text{H}}$ values of acids, bases, salts - Questions related to data	
<b>8. Structure of Atom</b>	1. Table related to Quantum numbers of different electrons 2. Data : Electron configuration of Atom – Questions related to Atomic number, Name of the element , Symbol , Valence electrons, Valency	
<b>9. Classification of Elements</b>	1. Data : Electron configuration of different elements – Questions related to group, Period, block, Metal/non metal, Formation of bonds 2. Data : Electron configuration of different elements – Questions related to Ionisation energy, Atomic radius, Electro negativity, Metallic nature	
<b>10. Chemical Bonding</b>	1. Table with Cations and anions. Write the formulae of Ionic compounds by Criss cross method 2. Table with Hybridisation and Bond angles and shapes of molecules	
<b>13. Principles of Metallurgy</b>	1. Minerals and ores formulae Questions related Types of ores, Concentration methods	
<b>14. Carbon and its compounds</b>	1. Table of Alkanes, Alkenes and Alkynes/Homologous series Questions related to Formulae, Guess, reactions	<div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;"> <p>NAGA MURTHY- 9441786635            Contact at : <a href="mailto:nagamurthysir@gmail.com">nagamurthysir@gmail.com</a>            Visit at : <a href="http://ignitephysics.weebly.com">ignitephysics.weebly.com</a></p> </div>