

CLASS-10-PS- CHEMISTRY - IMPORTANT QUESTIONS - for MARCH-2015

02. CHEMICAL REACTIONS AND EQUATIONS

1 MARK Questions:

1. Why does respiration considered as an exothermic reaction?
2. $\text{MnO}_2 + 4 \text{HCl} \rightarrow \text{MnCl}_2 + 2 \text{H}_2\text{O} + \text{Cl}_2$
Which is oxidized and which is reduced in this reaction? nagamurthy.weebly.com
3. Explain rancidity?
4. Why do we apply paint on iron articles?
5. What is the use of keeping food in air tight containers?
6. Name the reactions taking place in the presence of sunlight?
7. What happened when an iron nail is dipped for some time into Coppers sulphate aqueous solution?

2 MARKS Questions:

8. What changes occur during a chemical change?
9. Balance the following chemical equations?
 - a) $\text{NaOH} + \text{H}_2\text{SO}_4 \rightarrow \text{Na}_2\text{SO}_4 + \text{H}_2\text{O}$
 - b) $\text{Hg}(\text{NO}_3)_2 + \text{KI} \rightarrow \text{HgI}_2 + \text{KNO}_3$
 - c) $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
 - d) $\text{KClO}_3 \rightarrow \text{KCl} + \text{O}_2$
 - e) $\text{C}_3\text{H}_8 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
10. Write the balanced chemical equations for the following reactions.
 - a) Zinc+Silver nitrate→Zinc nitrate+Silver
 - b) Aluminium+Copper chloride→
Aluminium chloride+Copper
 - c) Hydrogen+Chlorine→Hydrogen chloride
 - d) Ammonium nitrate → Nitrogen +
Oxygen + Water
11. What do you mean by precipitate reaction?
12. Define Oxidation and reduction. Give one example for each.
13. What do you mean by corrosion? How can you prevent it?
14. A shiny brown coloured element 'X' on heating in air becomes black in colour. Can you predict the Element 'X' and the black coloured substance formed? How do you support your predictions?

4 MARKS Questions:

15. How many types of chemical reactions are there? Name them. Explain each with one example.

16. How can you perform an experiment to show the chemical double displacement in your class room?

17. (i) What information do we know from a chemical equation?

- (ii) How much quantity of aluminium is required to get 1120 Kg of iron?

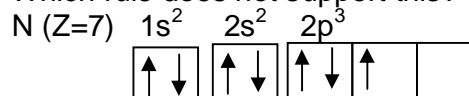
08. STRUCTURE OF ATOM

1 MARK Questions:

1. Write the electronic configurations of chromium and copper.
2. What is emission spectrum?
3. What is absorption spectrum.
4. Write plank's equation. Name the terms in it.
5. State pauli's principle.
6. What is electronic configuration?
7. Define stationary orbit.

2 MARKS Questions:

8. Rainbow is an example for continuous spectrum – explain.
9. What is $n l^x$ method? How it is useful?
10. Following orbital diagram shows the electron configuration of nitrogen atom. Which rule does not support this?



11. What information does the electronic configuration of an atom provide?
12. State and explain Hund's rule.
13. Draw a neat diagram that shows the filling order of atomic orbitals.
14. How many 'm' values are possible for $L=3$?

4 MARKS Questions:

15. Explain Aufbau's principle with example
16. Write the important features in Bohr's atomic model. Write the defects in it.
17. Explain the significance of Quantum numbers in predicting the positions of an electron in an atom.

5 MARKS Questions:

18. Draw the diagrams of five d-orbitals.
19. Draw the diagrams of s and p orbitals.
20. Draw the diagram of electro magnetic spectrum.

09. CLASSIFICATION OF ELEMENTS

1 MARK Questions:

1. State Newland's Octave rule.
2. Define valency.
3. Define electron affinity.
4. Define electro negativity.
5. Which is the short period in Modern periodic table?
6. What are Lanthanides and Actinides?
7. What is the general electronic configuration of inert gases?

2 MARKS Questions:

8. Write a brief notes about Doberner's triad
 9. Explain how the elements are classified into s, p, d and f- block elements in the periodic table and give the advantage of this kind of classification.
 10. Write down the characteristics of the elements having atomic number 17.
 - (a) Electronic configuration
 - (b) Period and group number
 - (c) No. of valence electrons
 - (d) Valency nagamurthy.weebly.com
 11. s - block and p - block elements except 18th group elements are sometimes called as 'Representative elements' based on their abundant availability in the nature. Is it justified? Why?
 12. On the basis of atomic numbers predict to which block the elements with atomic number 9, 37, 46 and 64 belongs to?
 13. An element X belongs to 3rd period and group 2 of the periodic table. State
 - (a) The no. of valence electrons
 - (b) The valency
 - (c) Whether it is metal or a nonmetal.
 14. Comment on the position of hydrogen in periodic table.
- ### **4 MARKS Questions:**
15. Define the modern periodic Law. Discuss the construction of the long form of the periodic table.
 16. Write Mendeleef's periodic law. Write the important features in Mendeleef's periodic table. What are its limitations?
 17. What is a periodic property? How do the following properties change in a group and period? Explain.
 - (a) Atomic radius
 - (b) Ionization energy
 - (c) Electron affinity
 - (d) Electro negativity.
 18. Define ionization energy. What are the affecting factors of ionization energy?

10. CHEMICAL BONDING

1 MARK Questions:

1. What is octet rule?
2. Define ionic bond ?
3. Draw the shape of water (H₂O) molecule?
4. Explain the difference between the valence electrons and the covalency of an element.
5. Why do only valence electrons involve in bond formation?
6. Represent the molecule H₂O using Lewis notation.
7. Represent the following atoms using Lewis notation:
 - (a) beryllium
 - (b) calcium

2 MARKS Questions:

8. Draw the shape of ammonia and methane molecules.
 9. Write the differences between the properties of ionic and covalent compounds.
 10. Explain the formation of sodium chloride on the basis of the concept of electron transfer from one atom to another atom.
 11. Predict the reasons for low melting point for covalent compounds when compared with ionic compound.
 12. Draw simple diagrams to show how electrons are arranged in the following molecules:
 - (a) Water (H₂O)
 - (b) Bromine (Br₂)
 13. How Lewis dot structure helps in understanding bond formation between atoms?
 14. List the factors that determine the type of bond that will be formed between two atoms?
- ### **4 MARKS Questions:**
15. Explain the formation of N₂ molecule using valence bond theory. (Diagram)
 16. Explain the formation of O₂ molecule using valence bond theory. (Diagram)
 17. What is hybridisation? Explain the formation of BeCl₂ molecule with a neat diagram.
 18. What is hybridisation? Explain the formation of BF₃ molecule with a neat diagram.
 19. How many types of hybrid orbitals are formed between s and p orbitals? Explain.

04. ACIDS AND BASES

1 MARK Questions:

1. What happens when an acid or base is mixed with water?
2. Why does tooth decay start when the pH of mouth is lower than 5.5.
3. Plaster of Paris should be stored in moisture-proof container. Explain. Why?
4. Define olfactory indicators. Name them.
5. What happened when turmeric is added to lime? nagamurthy.weebly.com
6. What happened when Methyl orange is added to soap solution?
7. What is a neutralization reaction? Give one examples?

2 MARKS Questions:

8. Acid should be added to water but not water to the acid. why?
9. Fresh milk has a pH of 6. Explain why the pH changes as it turns into curd?
10. What is meant by "water of crystallization" of a substance?
11. What is baking powder? How does it make the cake soft and spongy?
12. Give two important uses of washing soda and baking soda.
13. How does the flow of acid rain into a river make the survival of aquatic life in a river difficult?
14. Why pickles and sour substances are not stored in brass and copper vessels?

4 MARKS Questions:

15. Define the following. Give one example for each. (a) strong acid (b) strong base (c) weak acid (d) weak base
16. Write any four chemical properties of acids and bases.
17. Observe the following table.

Item	P ^H	Item	P ^H
Milk	6.6	Blood	7.4
Lemon juice	2.2	Baking soda	8.2
Gastric juice	1.2	Distilled water	7

- (i) Which human body fluid is alkaline?
- (ii) Choose the acidic food items?
- (iii) Which is used as antacid?
- (iv) Which is neutral substance?

5 MARKS Questions:

18. Draw a neat diagram showing acid solution in water conducts electricity.
19. Draw the diagram showing the reaction between a metal and an acid to liberate hydrogen gas.

13. METALLURGY

1 MARK Questions:

1. What is smelting?
2. List three metals that are found in nature as Oxide ores.
3. List three metals that are found in nature in uncombined form.
4. Write the names of any two ores of iron?
5. Define gangue.
6. Define slag.
7. What do you understand about 22 carat gold?

2 MARKS Questions:

8. Write a note on dressing of ore in metallurgy?
9. All ore are minerals but all minerals are not ores. – explain.
10. Write short notes on froth floatation process?
11. When do we use magnetic separation method for concentration of an ore? Explain with an example?
12. What is the difference between roasting and calcinations? Give one example for each?
13. What is thermite process? Mention its applications in daily life?
14. Write a brief notes on alloys.

4 MARKS Questions:

15. Suggest an experiment to prove that the presence of air and water are essential for corrosion. Explain the procedure.
16. What is activity series? How it helps in extraction of metals?
17. Where do we use handpicking and washing methods in our daily life? Give examples. How do you correlate these examples with enrichment of ore?

5 MARKS Questions:

18. Draw the diagram showing Froth floatation
19. Draw the diagram showing Magnetic separation.
20. Draw a neat diagram of Reverboratory furnace and label it neatly?
21. Draw a neat labeled diagram of blast furnace.

14. CARBON COMPOUNDS

1 MARK Questions:

1. Name the carboxylic acid used as a preservative.
2. Write the chemical equation representing the reaction of preparation of ethanol from ethane.
3. Give the names of functional groups
(i) -CHO (ii) -C=O.
4. Why does carbon form compounds mainly by covalent bonding?
5. Explain how sodium ethoxide is obtained from ethanol? Give chemical equations. nagamurthy.weebly.com
6. What happens when a small piece of sodium is dropped into ethanol?
7. Give one example for combustion;

2 MARKS Questions:

8. What are the general molecular formulae of alkanes, alkenes and alkynes.
9. Explain with the help of a chemical equation, how an addition reaction is used in vegetable ghee industry.
10. Define homologous series of carbon compounds; Mention any two characteristics of homologous series.
11. Draw the electronic dot structure of ethane molecule.
12. Two carbon compounds A and B have molecular formula C_3H_8 and C_3H_6 respectively. Which one of the two is most likely to show addition? Justify your answer.
13. Suggest a test to find the hardness of water and explain the procedure.
14. Name the following carbon compounds.
(i) $CH_3-CH=CH=CH_2$
(ii) $CH_3-CHCl-CH=CH_2$

4 MARKS Questions:

15. Distinguish between esterification and saponification reactions of organic compounds.
16. Explain the cleansing action of soap.
17. How do you condemn the use of alcohol as a social practice.
18. What is allotropy? Write a brief notes on allotropy property of carbon.
19. Explain how sp^2 hybridisation is formed in ethylene molecule. Draw a neat diagram.

5 MARKS Questions:

20. Draw the structures of diamond molecule and graphite molecule.
21. Draw the diagram that shows the formation of ethyne (Acetylene) according to sp hybridization.

MY EXPECTATION – MAY NOT BE RELIABLE

MAXIMUM CHANCES

Chapter	5M	4M	2M	1M
2		4	2	1
4	5		2	1
8	5	4	2	1
9		4		1
10		4	2	
13	5		2	
14		4		1

MAXIMUM CHANCES FOR GOOD SCORE

Chapters 2, 8, 9, 10

May get 2 x 4 Marks = 8 Marks
2 x 2 Marks = 4 Marks
2 x 1 Marks = 2 Marks

Chapters 4, 8, 13

Diagram 1 x 5 Marks = 5 Marks
Bits 7 x ½ Mark = 3½ Marks
(Average)

If you get 2½ Marks from Physics part or from bit paper. (There is probability)

- Practice electronic configurations for 30 elements from H to Zn.
- Practice naming of hydrocarbons.

Total = 25 Marks

Only from Chemistry

50%
100%

The numbers that are underlined and bold are very important for slow learners.

Children are requested to not depend upon only important questions. After learn this questions, you may learn another questions also. It is your responsibility.



All the best

NAGA MURTHY- 9441786635
Contact at : nagamurthysir@gmail.com
Visit at : nagamurthy.weebly.com