

ICSE Board
Class VIII Chemistry
Sample Paper – 3

Time: 2 hrs

Total Marks: 75

General Instructions:

1. *All questions are **compulsory**.*
2. *Questions 1 to 15 carry one mark each.*
3. *Questions in 2A and 2B carry one mark each.*
4. *Questions in 3A and 3B carry one mark each.*
5. *Question 4A and 4B carry five marks each.*
6. *Questions in 5A and 5B carry one mark each.*
7. *Questions in 6A and 6B carry one mark each.*
8. *Questions 7A and 7B carry five marks each.*

Question 1

Choose the correct answer out of the four available choices given under each question. [15]

1. The phenomenon of existence of a substance in various physical forms but the same chemical form is known as _____.
(a) Catenation
(b) Isomerism
(c) Polymerisation
(d) Allotropy
2. Alkali metals such as _____ and _____ are soft metals and can be cut easily with a knife.
(a) Lithium, aluminium
(b) Calcium, lithium
(c) Sodium, potassium
(d) Lead, zinc
3. Carbon has _____ unpaired electron(s) in its outermost shell.
(a) Four
(b) One
(c) Three
(d) Six

4. Which of the following is not a mixture?
- (a) Sulphur
 - (b) Gunpowder
 - (c) Sugar syrup
 - (d) Milk
5. Liquids have
- (a) less compressibility than solids
 - (b) more compressibility than gases
 - (c) more compressibility than solids
 - (d) the least compressibility among the three states of matter
6. Which of the following gases dissolves in rainwater and forms nitric acid?
- (a) Nitrogen dioxide
 - (b) Nitrogen trioxide
 - (c) Ammonia
 - (d) Nitride
7. When the temperature of water increases above 0°C up to 4°C , its density
- (a) decreases
 - (b) increases
 - (c) becomes zero
 - (d) remains unchanged
8. When an electric current is passed through acidulated water, _____ volume of hydrogen is formed at the cathode and _____ volume of oxygen is formed at the anode.
- (a) one, two
 - (b) one, three
 - (c) three, one
 - (d) two, one
9. _____ is the process of sterilisation of water by the addition of chlorine and acts as a treatment against bacterial infection.
- (a) Chlorination
 - (b) Precipitation
 - (c) Sedimentation
 - (d) Decantation

10. The valency of Cu in cupric chloride is.
- (a) 1
 - (b) 2
 - (c) 3
 - (d) 4
11. The formation of gas bubbles in a liquid during a reaction is called
- (a) Precipitate
 - (b) Effervescences
 - (c) Fumes
 - (d) Vapours
12. The phenomenon of the existence of a substance in various physical forms but the same chemical form is known as
- (a) Catenation
 - (b) Isomerism
 - (c) Polymerisation
 - (d) Allotropy
13. Graphite is made of layers of crystals, where each crystal is _____.
- (a) Tetrahedral cubical
 - (b) Cubical
 - (c) Hexagonal
 - (d) Spherical
14. Which element has symbol derived from its Latin name Argentum?
- (a) Gold
 - (b) Silver
 - (c) Aluminium
 - (d) Argon
15. Which of the following substances are bitter to taste?
- (a) Baking soda
 - (b) Lemons
 - (c) Oranges
 - (d) Tamarind

Question 2

(A) Give the molecular formula of the compounds: [5]

1. Common salt
2. Sand
3. Marble
4. Acetic acid
5. Aluminium oxide

(B) Fill in the blanks and rewrite the sentences: [5]

1. The unique ability of the carbon atom to combine with innumerable carbon atoms and atoms of other elements resulting in the formation of millions of organic compounds is called _____.
2. Alkalis are bases which are _____ in water.
3. If the outermost shell of an atom is filled, the valency is _____.
4. Metals are _____ because metals readily _____ electrons and form positively charged ions.
5. Hydrogen can be prepared in the laboratory by the reaction of zinc and _____.

Question 3

(A) State whether the following statements are true or false. Rewrite the false statement. [5]

1. Lignite is the third stage in the formation of coal.
2. Balanced chemical equation shows both the number of molecules and the number of atoms involved in the reaction.
3. Dehydration of carbohydrates is a physical change.
4. The mass of a proton is equal to that of a neutron.
5. Positively charged ions are called cations.

(B) Name the following: [5]

1. The subatomic particle with negative charge and negligible mass.
2. Protons and neutrons present in the nucleus.
3. The electrons present in the outermost shell.
4. The number of protons present in the nucleus of an atom.
5. Atoms of the same element with the same atomic number but different mass number.

Question 4

(A) Explain Modern Atomic Theory... [5]

(B) Explain catalyst and their actions? [5]

Question 5

(A) Draw the orbital diagrams representing the atomic structures of the following: [5]

1. Silicon
2. Neon
3. Copper
4. Calcium
5. Sodium

(B) Give one use of each of the following acids: [5]

1. Citric acid
2. Acetic acid
3. Tartaric acid
4. Boric acid
5. Carbonic acid

Question 6

(A) Define the following terms: [5]

1. chemical Bond
2. valency
3. Boiling point
4. Radicals
5. Mass number

(B) Match the column: [5]

Name	Symbol
Ammonium	Al^{3+}
Nitrite	NH_4^+
Aluminium	CO_3^{2-}
Carbonate	NO_2^-

Question 7

(A)

1. How can you prove that hydrogen burns in air to produce water? [3]

2. Differentiate between oxidation reaction and reduction reaction. [2]

(B)

1. Give reason: Although hydrogen is lighter than air, it is not collected by the downward displacement of air. [2]
2. What are protons, neutrons and electrons? [3]