

SARGODHA BOARD

GRADE 9

CHEMISTRY

2019 GROUP 1

MCQ'S

i) Colour of flame of sodium is:

(Mark 1)

A. Violet

B. Brick red

C. Golden yellow

D. White

Answer:

B. Brick red

ii) One amu (atomic mass unit) is equivalent to:

(Mark 1)

A. 1.66×10^{-24} mg

B. 1.66×10^{-24} g

C. 1.66×10^{-24} kg

D. 1.66×10^{-23} g

Answer:

B. 1.66×10^{-24} g

iii) Which one of the following shell consist of three sub-shells: (Mark 1)

A. O Shell

B. N Shell

C. L Shell

D. M Shell

Answer:

D. M Shell

iv) 6th and 7th period of long form of periodic table are called: (Mark 1)

A. Short periods

B. Long periods

C. Very long periods

D. Normal periods

Answer:

C. Very long periods

v) First ionization energy of sodium atom is: (Mark 1)

A. +496 kJmol⁻¹

B. +498 kJmol⁻¹

C. +696 kJmol⁻¹

D. +698 kJmol⁻¹

Answer:

A. +496 kJmol⁻¹

**vi) A bond pair in covalent molecules usually has:
(Mark 1)**

- A. One electron
- B. Two electrons
- C. Three electrons
- D. Four electrons

Answer:

- B. Two electrons

**vii) How many covalent bonds does C_2H_2 molecule have:
(Mark 1)**

- A. 2
- B. 3
- C. 4
- D. 5

Answer:

- D. 5

**viii) Which of the following is crystalline solid:
(Mark 1)**

- A. Diamond
- B. Plastic
- C. Rubber
- D. Glass

Answer:

- A. Diamond

ix) Mist is an example of solution:

(Mark 1)

A. Liquid in gas

B. Gas in liquid

C. Solid in gas

D. Gas in solid

Answer:

A. Liquid in gas

x) Tyndall effect is shown by:

(Mark 1)

A. Sugar solution

B. Paints

C. Jelly

D. Chalk solution

Answer:

C. Jelly

xi) The oxidation number of chlorine in KClO_3 is:

(Mark 1)

A. +5

B. +6

C. +7

D. +8

Answer:

A. +5

**xii) Formation of water from hydrogen and oxygen is:
(Mark 1)**

- A. Redox reaction
- B. Acid-base reaction
- C. Neutralization
- D. Decomposition

Answer:

- A. Redox reaction

SHORT QUESTIONS

Q.2 i) Define Biochemistry.

(Marks 2)

Q.2 ii) Define atomic number and mass number.

(Marks 2)

Q.2 iii) Define atom and ion.

(Marks 2)

Q.2 iv) For what purpose U-235 is used?

(Marks 2)

Q.2 v) What are the defects of Rutherford's atomic model?

(Marks 2)

Q.2 vi) What is the difference between electron affinity and electro-negativity?

(Marks 2)

**Q.2 vii) Give the trend of ionization energy in a period.
Also, give reason.**

(Marks 2)

**Q.2 viii) What is the difference between Mendeleev's
Periodic law and modern periodic law?**

(Marks 2)

Q.3 i) Why does ice float on water?

(Marks 2)

Q.3 ii) Why does a Covalent bond become Polar?

(Marks 2)

Q.3 iii) Give any two characteristics of ionic compounds.

(Marks 2)

**Q.3 iv) Why are the densities of gases lower than that of
liquids?**

(Marks 2)

Q.3 v) Define the term allotropy with example.

(Marks 2)

Q.3 vi) What do you mean by volume / mass% ?

(Marks 2)

**Q.3 vii) How will you test whether given solution is a
colloidal solution or not?**

(Marks 2)

**Q.3 viii) What do you mean "Like dissolve like" Given an
example.**

(Marks 2)

Q.4 i) Differentiate between strong electrolyte and weak electrolyte.

(Marks 2)

Q.4 ii) What happens at cathode and anode in a galvanic cell? (Marks 2)

Q.4 iii) How galvanizing of iron sheets is done?

(Marks 2)

Q.4 iv) Write down the reaction occurring on cathode and anode during the electrolysis of water.

(Marks 2)

Q.4 v) Why is magnesium harder than sodium?

(Marks 2)

Q.4 vi) Why the ionization energy of alkaline earth metals is higher than alkali metals?

(Marks 2)

Q.4 vii) Why the ionization energy of sodium is less than magnesium?

(Marks 2)

Q.4 viii) Write down the chemical reactions of chlorine with hot and cold aqueous solutions of sodium hydroxide.

(Marks 2)

LONG QUESTIONS

Q.5 a) Write down any five postulates of Bohr's atomic model. (Marks 5)

Q.5 b) Write down any four differences between molecule and molecular ion.

(Marks 4)

Q.6 a) Define ionic bond also write the four properties of Ionic compounds.

(Marks 5)

Q.6 b) Define diffusion and describe the effect of any three factors on it.

(Marks 4)

Q.7 a) Define electroplating. Explain electroplating of chromium in detail.

(Marks 5)

Q.7 b) Give any four characteristics of a solution.

(Marks 4)

SARGODHA BOARD

GRADE 9

CHEMISTRY

2019 GROUP 2

MCQ'S

i) Which of the following metal is heaviest?

(Mark 1)

A. Osmium

B. platinum

C. Uranium

D. Cesium

Answer:

A. Osmium

ii) The formula of Aluminium Sulphate is:

(Mark 1)

A. $\text{Al}_2(\text{SO}_4)_3$

B. Al_2SO_4

C. $\text{Al}(\text{SO}_4)_3$

D. $\text{Al}_3(\text{SO}_4)_3$

Answer:

A. $\text{Al}_2(\text{SO}_4)_3$

iii) The isotope C-12 is present in abundance of:

(Mark 1)

A. 99.7 %

B. 98.9 %

C. 97.6 %

D. 96.9 %

Answer:

B. 98.9 %

iv) d-block elements are also named as:

(Mark 1)

A. Alkali Metals

B. Halogens

C. Transition Metals

D. Alkaline Earth Metals

Answer:

C. Transition Metals

v) The amount of energy given out when an electron is added to an atom is called:

(Mark 1)

A. Lattice Energy

B. Ionization Energy

C. Electronegativity

D. Electron affinity

Answer:

D. Electron affinity

**vi) The example of Triple covalent bond is:
(Mark 1)**

A. N₂

B. H₂

C. O₂

D. HCl

Answer:

A. N₂

**vii) Atoms react with each other because:
(Mark 1)**

A. They are attracted to each other

B. They want to attain stability

C. They are short of electrons

D. They want to disperse

Answer:

B. They want to attain stability

**viii) The Density of gold is:
(Mark 1)**

A. 2.70 g/cm³

B. 7.86 g/cm³

C. 19.3 g/cm³

D. 4.88 g/cm³

Answer:

C. 19.3 g/cm³

ix) Molarity is the number of moles of solute dissolved in:
(Mark 1)

A. 1 Kg of Solution

B. 100 g of Solvent

C. 1 dm³ of Solvent

D. 1 dm³ of Solution

Answer:

D. 1 dm³ of Solution

x) Example of Aqueous solution is:
(Mark 1)

A. Sugar in water

B. Ether

C. Petrol

D. Benzene

Answer:

A. Sugar in water

xi) Which of the following is the mixture of Stainless steel:
(Mark 1)

A. Zn + Cr + Fe

B. Ni + Cr + Fe

C. Co + Cr + Fe

D. Co + Ni + Cr

Answer:

B. Ni + Cr + Fe

xii) The oxidation number of Sulphur in H_2SO_4 is:
(Mark 1)

A. +2

B. +4

C. +6

D. +7

Answer:

C. +6

SHORT QUESTIONS

Q.2 i) What is relative atomic mass? How is it related to gram?
(Marks 2)

Q.2 ii) Differentiate between molecular mass and formula mass.

(Marks 2)

Q.2 iii) Write two difference between ion and free radical.

(Marks 2)

Q.2 iv) Write two properties of Cathode rays.

(Marks 2)

Q.2 v) For what purpose U-235 is used?

(Marks 2)

Q.2 vi) Describe Newlands Law of octaves.

(Marks 2)

Q.2 vii) Why the elements of group 13 to group 18 are called p-block elements?

(Marks 2)

Q.2 viii) Give the reason for the increase of Electron affinity in Periods.

(Marks 2)

Q.3 i) What is a Triple Covalent Bond? Give an example.

(Marks 2)

Q.3 ii) Define Octet Rule.

(Marks 2)

Q.3 iii) Why does ice float on water?

(Marks 2)

Q.3 iv) What are amorphous solids? Give an example.

(Marks 2)

Q.3 v) State Charles's Law.

(Marks 2)

Q.3 vi) Define a Solution and give an example.

(Marks 2)

Q.3 vii) What do you mean by “like dissolves like”?

(Marks 2)

Q.3 viii) Differentiate between dilute solution and concentrated solution.

(Marks 2)

Q.4 i) Define the term oxidation on the basis of electronic concept with an example.

(Marks 2)

Q.4 ii) Find out the oxidation number of chlorine in KClO_3 . As O.N of K = +1 and O.N of O = -2.

(Marks 2)

Q.4 iii) Write down the names of types of electrochemical cells.

(Marks 2)

Q.4 iv) Write the redox reaction taking place during the electroplating of chromium?

(Marks 2)

Q.4 v) Write names of any two noble metals.

(Marks 2)

Q.4 vi) Describe the trends of electropositivity in a period and in a group.

(Marks 2)

Q.4 vii) Write any two uses of magnesium?

(Marks 2)

Q.4 viii) Give the reaction of magnesium with: O_2 and N_2 .

(Marks 2)

LONG QUESTIONS

Q.5 a) Give Postulates of Bohr's theory.

(Marks 5)

Q.5 b) Differentiate between molecules and molecular ion.

(Marks 4)

Q.6 a) What are ionic compounds? Write down four properties of Ionic compounds.

(Marks 5)

Q.6 b) Describe four factors which effect the diffusion of liquid.

(Marks 4)

Q.7 a) Define electrolysis and explain electrolysis of water in detail.

(Marks 5)

Q.7 b) Define Solubility and what is the general principle of Solubility. explain.

(Marks 4)