

FAISALABAD BOARD

GRADE 9

CHEMISTRY

2018 GROUP 1

Lesson 1 of 32

Section-A (MCQs)

i) At what temperature the volume of a gas will be zero? (Mark 1)

A. 273 K

B. 173 K

C. 73 K

D. 273 °C

Answer:

A. 273 K

ii) The example of false solution or colloidal solution is: (Mark 1)

A. paints

B. starch

C. sugar in water

D. salt in water

Answer:

A. paints

iii) Which solution is liquid in solid? (Mark 1)

A. sugar in water

B. butter

C. salt in water

D. fog

Answer:

B. butter

iv) The conversion of H₂S to Sulphur is: $\text{H}_2\text{S} + \text{Cl}_2 \rightarrow \text{S} + 2\text{HCl}$ (Mark 1)

A. reduction

B. oxidation

C. redox

D. addition

Answer:

B. oxidation

v) The oxidation number of chlorine in KClO₃ is: (K = +1, O = -2) (Mark 1)

A. +3

B. +4

C. +5

D. +6

Answer:

C. +5

vi) Which metal is not affected by mineral acids and alkalis? (Mark 1)

A. Fe

B. Zn

C. Au

D. Na

Answer:

C. Au

vii) The molar mass of CO₂ is:

(Mark 1)

A. 34 amu

B. 40 amu

C. 44 amu

D. 50 amu

Answer:

C. 44 amu

viii) Which shell consists of four sub shells?

(Mark 1)

A. O shell

B. N shell

C. L shell

D. M shell

Answer:

B. N shell

ix) The base of modern periodic table is:

(Mark 1)

A. atomic mass

B. atomic number

C. number of neutrons

D. atomic radius

Answer:

A. atomic mass

x) The general electronic configuration of halogen family is: (Mark 1)

A. ns^2

B. $ns^2 np^2$

C. $ns^2 np^4$

D. $ns^2 np^5$

Answer:

D. $ns^2 np^5$

xi) In which molecule polar covalent bond exists? (Mark 1)

A. H_2

B. Cl_2

C. HCl

D. N_2

Answer:

C. HCl

xii) In the diagram the dotted line shows: (Mark 1)

A. hydrogen bonding B. ionic bond C. covalent bond D. metallic bond Answer: A. hydrogen bonding

A. hydrogen bonding

B. ionic bond

C. covalent bond

D. metallic bond

Answer:

A. hydrogen bonding

- Q.2 i) Give the scope of biochemistry. (Marks 2)
- Q.2 ii) Define empirical formula with an example. (Marks 2)
- Q.2 iii) How does homogeneous mixture differ from heterogeneous mixture?
(Marks 2)
- Q.2 iv) Define isotopes. Also give isotopes of chlorine. (Marks 2)
- Q.2 v) State plum pudding theory. (Marks 2)
- Q.2 vi) Why are noble gases not reactive? (Marks 2)
- Q.2 vii) Why shielding effect of electrons make cation formation easy?
(Marks 2)
- Q.2 viii) Give the trend of ionization energy in a period. (Marks 2)
- Q.3 i) Why do the electrons move freely in metals? (Marks 2)
- Q.3 ii) Why does a dipole develop in a molecule? (Marks 2)
- Q.3 iii) What type of attractive forces exist between HCl molecules?
(Marks 2)
- Q.3 iv) Write difference between evaporation and condensation.
(Marks 2)
- Q.3 v) Define allotropy and give an example. (Marks 2)
- Q.3 vi) What is meant by aqueous solution? (Marks 2)
- Q.3 vii) What is suspension? Give an example. (Marks 2)
- Q.3 viii) Write two examples of solid into solid solution. (Marks 2)
- Q.4 i) Define strong electrolyte and give example. (Marks 2)
- Q.4 ii) Why steel is plated with nickel before electroplating of chromium?
(Marks 2)
- Q.4 iii) In Nelson cell which product and by-products are produced?
(Marks 2)
- Q.4 iv) Define oxidizing agent. (Marks 2)

Q.4 v) Write any two uses of sodium metal. (Marks 2)

Q.4 vi) Write any two chemical properties of non-metals. (Marks 2)

Q.4 vii) Show the reactions of Cl_2 and NaOH in cold and hot conditions by chemical equations. (Marks 2)

Q.4 viii) Write the properties of silver metal. (Marks 2)

Q.5 a) How Rutherford discovered that atom has nucleus located at the center of atom? (Marks 5)

Q.5 b) Describe the importance of chemistry in daily life. (Marks 4)

Q.6 a) Define metallic bond and explain it. (Marks 5)

Q.6 b) Define vapour pressure. What is the effect of temperature on it? (Marks 4)

Q.7 a) Discuss manufacturing of NaOH by Nelson's cell in detail. (Marks 5)

Q.7 b) Define solubility and explain the solubility of NaCl in water. (Marks 4)

FAISALABAD BOARD

GRADE 9

CHEMISTRY

2018 GROUP 2

Lesson 1 of 32

Section-A (MCQs)

i) Which pair has polar covalent bond? (Mark 1)

A. O_2 and Cl_2

B. H_2O and N_2

C. H₂O and C₂H₂

D. H₂O and HCl

Answer:

D. H₂O and HCl

ii) 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

iii) Tyndall effect is due to _____ beam of light. (Mark 1)

A. blockage of

B. non-scattering

C. scattering of

D. passing through

Answer:

C. scattering of

iv) 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

v) Which is not an electrolytic cell?

(Mark 1)

A. down's cell

B. galvanic cell

C. nelson's cell

D. half cell

Answer:

B. galvanic cell

vi) Sodium is extremely reactive metal but it does not react directly with:

(Mark 1)

A. nitrogen

B. hydrogen

C. carbon

D. phosphorus

Answer:

A. nitrogen

vii) Industrial chemistry deals with the manufacturing of compounds:

(Mark 1)

A. in the laboratory

B. on microscale

C. on commercial scale

D. on domestic scale

Answer:

C. on commercial scale

viii) Which is the most penetrating particle?

(Mark 1)

A. proton

B. electron

C. neutron

D. alpha particle

Answer:

C. neutron

ix) 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. electro-negativity

D. electron affinity

Answer:

D. electron affinity

x) Long form of periodic table was based upon the:

(Mark 1)

A. Mendeleev postulate

B. atomic number

C. atomic mass

D. mass number

Answer:

B. atomic number

xi) Covalent bond involves the:

(Mark 1)

A. donation of electrons

B. acceptance of electrons

C. sharing of electrons

D. repulsion of electrons

Answer:

C. sharing of electrons

xii) Which is an electron deficient molecule?

(Mark 1)

A. NH₃

B. BF₃

C. N₂

D. O₂

Answer:

B. BF₃

Q.2 i) Define element and give at least two examples.

(Marks 2)

Q.2 ii) Write the formula of sulphuric acid and sugar.

(Marks 2)

Q.2 iii) What is anion and how is it formed?

(Marks 2)

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

(Marks 2)

Q.2 v) Write the electronic configuration (in sub-shell) of sodium.

(Marks 2)

Q.2 vi) Define period and group in periodic table.

(Marks 2)

Q.2 vii) Which are long periods? How many elements are present in long periods?

(Marks 2)

Q.2 viii) Why ionization energy decreases in a group from top to bottom?
(Marks 2)

Q.3 i) What is single covalent bond? Explain with an example. (Marks 2)

Q.3 ii) Differentiate between lone pair and bond pair of electrons.

(Marks 2)

Q.3 iii) Define intermolecular forces and give an example also. (Marks 2)

Q.3 iv) Why the density of gases increase on cooling? (Marks 2)

Q.3 v) Define allotropy and give an example also. (Marks 2)

Q.3 vi) How will you prove that whether given solution is a colloidal solution or not?
(Marks 2)

Q.3 vii) Why benzene is insoluble in water? (Marks 2)

Q.3 viii) Define solvent and give an example also. (Marks 2)

Q.4 i) What is the difference between spontaneous and non-spontaneous reactions?
(Marks 2)

Q.4 ii) Define oxidizing agent with an example. (Marks 2)

Q.4 iii) Write two examples of weak electrolytes. (Marks 2)

Q.4 iv) Name the by-products produced in nelson's cell. (Marks 2)

Q.4 v) Write two physical properties of metals. (Marks 2)

Q.4 vi) Explain trend of electropositivity in group of periodic table.

(Marks 2)

Q.4 vii) Write two uses of sodium. (Marks 2)

Q.4 viii) What is the significance of water for survival of life? (Marks 2)

Q.5 a) What is Bohr's atomic theory? Give its postulates. (Marks 5)

Q.5 b) Write at least four differences between a compound and a mixture.
(Marks 4)

Q.6 a) What is dipole-dipole interaction? Explain with example of HCl.
(Marks 5)

Q.6 b) On what factors vapour pressure depends upon? Explain.
(Marks 4)

Q.7 a) How electrolytic refining of copper is carried out? Explain.
(Marks 5)

Q.7 b) Explain any four types of solution with examples. (Marks 4)