

# KRISTU JYOTI VIDYA NIKETAN

CHETHIPUZHA, CHANGANASSERY – 686 104

First Term Examination – 2022 – 23

Class : VIII

CHEMISTRY

Time : 1h

Max. Marks : 40

Section - A

(Compulsory)

## Question 1

a) Choose the correct answers

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- A method used for separating two immiscible liquids.  
A- Distillation                                      B- Evaporation  
C- Fractional distillation                         D- Separating funnel
- Which of the following does **not** take place when iron is added to sulphuric acid?  
A- New substances formed                         B- Iron sulphate is formed  
C- Bubbles of hydrogen gas comes out         D-No changes is observed
- In which of the following the particles vibrate about their own position?  
A- Oxygen    B- Helium  
C- Kerosene    D- Gold
- The element having nine electrons is---  
A- Sodium    B- Neon  
C- Oxygen    D- Fluorine
- Which of the following mixtures can be separated by sublimation?  
A- Iodine and sand                                      B- Salt and sugar  
C- Sand and salt                                         D- Sugar and sulphur

b) Name the following

4

- A pure substance made up of two or more elements combined chemically in a fixed proportion.
- The method used to separate complex mixtures based on difference in adsorption of the solid on the surface of an adsorbent medium.

- iii. Atoms having same atomic number but different mass number.
- iv. The number of times one atom of an element is heavier than  $1/12^{\text{th}}$  the mass of an atom of carbon 12.

c) Give reason for the following 3

- i. Solids cannot be compressed but gases are highly compressible.
- ii. An atom is electrically neutral.
- iii. A mixture of sodium chloride and potassium chloride cannot be separated by sublimation.

d) Match the following 2

Column 1	Column 2
i. loss of energy	a. melting
ii. gain of energy	b. sublimation
iii. solid directly changes to gas	c. solidification
iv. it happens at the freezing point	d. liquefaction

e) Write the electronic configuration of the following atoms 3

- i. Boron(At no-5)
- ii. Argon(At no-18)
- iii. Magnesium(At no-12)

f) Copy and complete the table 3

Element	Electrons	Protons	Neutrons	Atomic no.	Mass no.
i. Carbon	6	-	6	-	-
ii. Aluminium	-	-	14	13	-

## Section B

Answer all questions

### Question 2

a) An element X is represented as  $X_{15}^{31}$

- i. Find its atomic number and mass number. 1
- ii. Find the number of electrons, protons and neutrons in it.  $1\frac{1}{2}$
- iii. Is it a metal or a nonmetal?  $\frac{1}{2}$
- iv. Which of the elements given below is an isotope of the above element?  
 $Y_{15}^{30}$  ,  $Z_{16}^{31}$  1

b) Draw the atomic orbital structure of the following 3

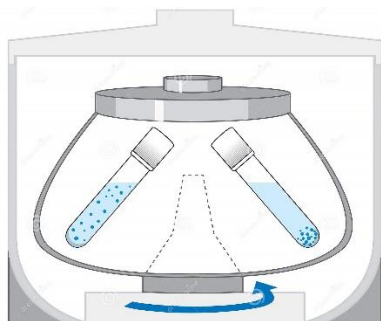
- i.  $Cl_{17}^{35}$
- ii.  $Si_{14}^{28}$

c) Answer the following questions

- i. Write the maximum number of electrons that can be accommodated in the **L-shell** and **M-shell**. 2
- ii. Why do atoms of elements undergo chemical reaction? 1

**Question 3**

a) Identify the following devices-  $1\frac{1}{2}$



b) How can we obtain water from salt water? Explain with the help of a diagram. 3

c) Name the method used for separation of the following mixtures. 4

- i. iron and copper
- ii. ammonium chloride and salt
- iii. petrol and water
- iv. cream from milk

d) Give an example of the following  $1\frac{1}{2}$

- i. A diatomic molecule
- ii. A yellow nonmetal
- iii. A liquid nonmetal

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