SAMSKAARA ACADEMY

Continuous Comprehensive Evaluation II – JULY 2024

GRADE: VII **DURATION:** 2 hours

DATE: 23.09.2024 **SUBJECT:CHEMISTRY** **MAXMARKS:** 80

SECTION A
(Answer all questions)

Question 1:

A. Choose the correct answers to the questions from the given options: **(10)**

1. Which method is used to separate the components of crude petroleum?
   (a) Distillation
   (b) Crystallisation
   (c) Chromatography
   (d) Fractional distillation
2. A mixture of sand and ammonium chloride can be separated by:
   (a) Filtration
   (b) Distillation
   (c) Sublimation
   (d) Crystallisation
3. Melting of ice into water is a
   (a) Chemical change
   (b) Physical change
   (c) Irreversible change
   (d) Periodic change
4. Which of the following is not a man-made change?
   (a) Cultivation
   (b) Shedding of leaves
   (c) Deforestation
   (d) Construction of dams

5. Which of the following is a metalloid?
   (a) Sodium
   (b) Silicon
   (c) Potassium
   (d) Oxygen
6. The symbol of chlorine
   (a) C
   (b) Ch
   (c) Cl
   (d) Co
7. The symbol represents
   (a) one molecule of an element
   (b) One ion of an element
   (c) One atom of an element
   (d) Mass number of an element
8. Common salt can be obtained from sea water by
   (a) Sublimation
   (b) Filtration
   (c) Evaporation
   (d) Sieving
9. Which technique is used to separate a homogenous mixture of two liquids?
   (a) Evaporation
   (b)Distillation
   (c) Fractional distillation
   (d) Separating funnel
10. A basic radical that has a net positive charge on it
   (a) Atom
   (b) Molecule
   (c) Anion
   (d) Cation

Question 2:

A. Fill in the blanks with appropriate terms: **(5)**

1. Process when a substance changes from liquid to gaseous state below its boiling point is called _____. (evaporation / boiling)
2. Formation of iron oxide is called _____. (rusting / burning)
3. _____ is made up of two or more pure substances. (mixture / compound)
4. An oxygen atom combines with another oxygen atom to form _____ (molecule / mixture)
5. The moving substance in chromatography is called _____ (mobile phase / stationary phase).

B. Write Trueor false: **(5)**

1. Iodine can be separated from sand by sublimation.
2. Boiling of frying an egg is an irreversible change.
3. Stone occupies space.
4. An alloy is an example of a mixture.
5. Chlorine is a divalent element.

C. Choose the odd one out. Give reasons for the choice. **(5)**

1. Natrium, ferrum, cuprum, argon.
2. Fe, Hg, Cu, Ca.
3. Cu, MgO, Al, He.
4. Iodine, camphor, sugar, ammonium chloride.
5. Salt solution, sugar solution, honey, smoke.

D. Match the following **(5)**

1.	Pure substance	-	filtration
2.	Homogeneous mixture	-	salt
3.	Heterogeneous mixture	-	sublimation
4.	Sieving is a type of	-	coffee
5.	Ammonium chloride and salt mixture	-	mixed cereal bowl

E. Name the technique that you would use to separate the following mixture: **(5)**

1. Chalk + Water
2. Chloroform (bp 61°C) and ethyl alcohol (bp 78.8°C)
3. Cream from milk
4. Pigments of a flower
5. Kerosene oil and water

(5)

F. Give examples for:

1. A polyatomic ion with charge of -2
2. Anion with valency -1
3. An element having valency +3
4. A divalent element
5. A basic radical

SECTION-B

(Attempt any four questions from this section)

Question3:

(A) Seema says that rusting of an iron screw is an irreversible change, while Reema says that it is a reversible change. Who do you think is correct and why? **(2)**

(B) An element A has valency 1 and an element B has valency 3. What would be the formula Of the compound formed by A and B is metal? **(2)**

(C) What is an element? Give any two characteristics. **(3)**

(D) Write the chemical formula for the following:

1. Calcium carbonate
2. Potassium chloride
3. Ammonia

(3)

Question 4:

(A) State the principle underlying the following separation techniques: **(3)**

1. Fractional distillation
2. Filtration

3. Use of separating funnel

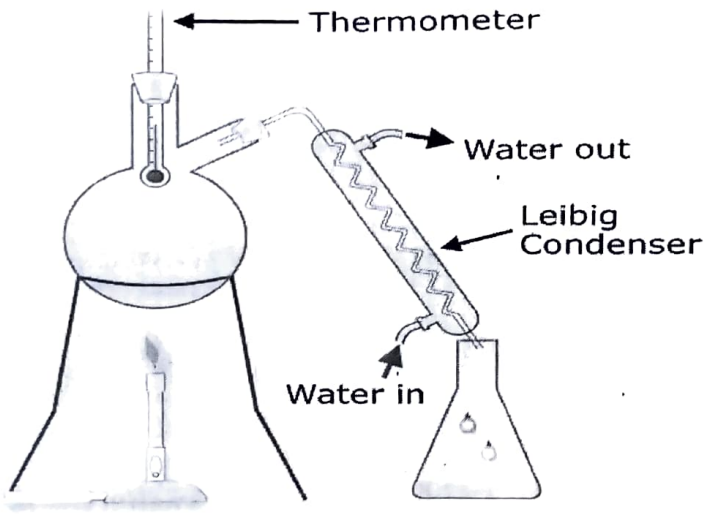
B) Classify the following under elements, compounds, mixture: **(4)**

1. Honey	2. Gold jewellery	3. Sulphur dioxide	4. Blood
5. Platinum	6. Saliva	7. Copper sulphate	8. Nitrogen

(C) Distinguish between evaporation and distillation with examples **(3)**

Question 5:

(A) Diagram based question.



1. Name the two processes involved in the above technique.
2. What is the name of the above technique of separation?
3. What is the advantage of this technique over evaporation?
4. What kind of mixtures are separated using this technique? **(4)**

(B) Give reasons for the following **(3)**

1. Muddy water is a heterogeneous mixture.
2. Bursting of crackers is an exothermic change.
3. Molecules in a gas can move around freely in any direction.

(C) A change can be desirable at one time or undesirable at another time. Justify this statement with example. **(3)**

Question 6:

(A) Draw the symbols of mercury, gold, Carbon and platinum as proposed by Dalton. **(2)**

(B) Write the symbols of the elements of the following: **(2)**

1. Gold
2. Tungton
3. Potassium
4. Chlorine

(C) Give two reasons for the need to separate mixtures. **(2)**

(D) Draw the diagram of separating funnel with labelling and give two example of mixture used to separated by this method. **(3)**

(E) How would you obtain pure water from seawater? **(1)**

Question 7:

(A) Define sedimentaion. **(2)**

(B) Match the compounds with their chemical formula: **(4)**

1. Copper II chloride - $CaSO_4$
2. Calcium sulphide - ZnO
3. Calcium sulphate - $CuCl_2$
4. Zinc oxide - CaS

(C) State why addition of sodium chloride to water is considered as physical change, while addition of dilute sulphuric acid to iron is considered as chemical change. **(2)**

(D) Name the type of change in the following examples. **(2)**

1. Tarnishing of copper 2. Landslide

Question 8:

(A) Name the following: **(2)**

1. A change in which the chemical composition of the substance remains the same.
2. Mixture with uniform composition.

(B) What will happen bar magnet is brought close to iron sulphide? Give reason for answer. **(2)**

(C) Define **(2)**

1. Cation
2. Anion

(D) Give one example for each of the following types of mixtures. **(4)**

1. Solid-liquid heterogeneous mixture
2. immisible liquids
3. Liquid-gas homogeneous mixtue
4. Solid-solid homogeneous mixture