

Time : 1 hour 30 Minute

STD 9 Science
Chapter Based Test

Total Marks : 50

section A

* Choose the correct option from the given options

[7]

1. Rusting of an article made up of iron is called:
(A) Corrosion and it is a physical as well as chemical change. (B) Dissolution and it is a physical change. (C) Corrosion and it is a chemical change. (D) Dissolution and it is a chemical change.
2. Which of the following statements are true for pure substances?
i. Pure substances contain only one kind of particles.
ii. Pure substances may be compounds or mixtures.
iii. Pure substances have the same composition throughout.
iv. Pure substances can be exemplified by all elements other than nickel.
(A) (i) and (ii) (B) (i) and (iii) (C) (iii) and (iv) (D) (ii) and (iii)
3. Two chemical substances X and Y combine together to form a product P which contains both X and Y
 $X + Y \rightarrow P$
X and Y cannot be broken down into simpler substances by simple chemical reactions.
Which of the following statements concerning X, Y and P are correct?
i. P is a compound.
ii. X and Y are compound.
iii. X and Y are elements.
iv. P has a fixed composition.
(A) (i), (ii) and (iii) (B) (i), (ii) and (iv) (C) (ii), (iii) and (iv) (D) (i), (iii) and (iv)
4. The common characteristic of suspension and colloidal solution is:
(A) Both are heterogeneous. (B) The particles of both can pass through filter paper. (C) The particles of both are visible to naked eye. (D) The particles do not settle at the bottom under gravity.
5. Which one of the following is a suspension:
(A) Mud in water (B) Saltwater (C) Blood (D) None of these
6. Which one of the following is not a metalloid?
(A) Boron. (B) Silicon. (C) Gallium. (D) Germanium.
7. Which of the following is not an element?
(A) Graphite. (B) Germaniumcc. (C) Silica. (D) Silicon.

* Fill in the blank with correct answer

[4]

8. Fill in the blanks:

A mixture of two or more miscible liquids, for which the difference in the boiling points is less than 25K can be separated by the process called _____.

9. Fill in the following blanks with suitable words:
Immiscible liquids are separated by using a _____.
10. Fill in the following blanks with suitable words:
The three important metalloids are _____ and _____.
11. Fill in the following blanks:
Milk is a _____ solution but vinegar is a _____ solution.

*** Do as directed**

[3]

12. What is meant by saying that metals are lustrous?
13. Name the process by which common salt is obtained from sea-water
14. Name the property:
Which allows metals to be hammered into thin sheets.

section B

*** Answer the Questions in brief**

[10]

1. Define dispersion medium.
2. What is the difference between colloids and suspensions?
3. Can we separate alcohol dissolved in water by using a separating funnel? If yes, then describe the procedure. If not, explain.
4. Classify the following into elements and compounds:
- H₂O
 - He
 - Cl₂
 - CO
 - Co
5. How will you distinguish a colloid from a solution?

section C

*** Answer the Questions in detail**

[12]

1. What is a physical change? Give an example of physical change.
2. Mention the three characteristics of a mixture.
3. What is chromatography? State its two applications.
4. How will you separate a mixture of cooking oil (groundnut oil) and water?

section D

*** Answer the Questions in detail [5 marks each]**

[10]

1. What is fractional distillation? What is the use of fractionating column in fractional distillation?
2. How will you separate camphor, common salt and iron nails from their mixture?

Section E

* case study based question.

[4]

1. 100ml of water at room temperature of 25°C is taken in a beaker and a little of solid S is dissolved in it by stirring to obtain a solution X. More and more of solid S is added to the solution with constant stirring, while keeping the temperature of solution constant at 30°C . After some time it is observed that no more solid dissolves in water and at the same time some solid is also left undissolved at the bottom of the beaker. The contents of beaker are filtered through a filter paper to obtain solution Y in the form of a filtrate.
- What name is given to solutions like X?
 - What name is given to solution like Y?
 - What will you observe if the solution Y at 30°C is cooled down to 10°C by keeping the beaker in crushed ice? Why?
 - What term is used to denote the amount of solid dissolved in 100 grams of water in a solution like Y?

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