

NISCORT FATHER AGNEL SCHOOL

WORKSHEET

SUBJECT: CHEMISTRY

TOPIC: CH-2 (IS MATTER AROUND US PURE) (SEPARATION OF COMPOUNDS)

VERY SHORT ANSWER QUESTIONS

1. Which separation techniques will you apply for the separation of the following?
 - (i) Benzene (B.P. 80°C) from Toluene (B.P. 110°C)
 - (ii) Iodine from sand
 - (iii) Pigments from natural colours
 - (iv) Sugar from sand
 - (v) Carbon disulphide from alcohol
 - (vi) Butter from cream / water from wet clothes
 - (vii) Slag from molten iron
 - (viii) Salt from ammonium chloride
 - (ix) Sugar from its solution in water
 - (x) Fine mud particles suspended in water
 - (xi) Sodium chloride from its solution in water.
 - (xii) Small pieces of metal in the engine oil of a car.
 - (xiii) Oil from water.
 - (xiv) Tea leaves from tea.
 - (xv) Iron pins from sand.
 - (xvi) Wheat grains from husk.
 - (xvii) Fine mud particles suspended in water.

2. Name the method used for the separation of components of a mixture containing two miscible liquids having sufficient difference in their boiling points.

3. Classify the following into elements, compounds and mixture :-

(i) Lead	(ii) steel
(iii) granite	(iv) hydrogen peroxide
(v) salt solution	(vi) washing soda

4. Name the following:-

- (i) Two metalloids
- (ii) Two elements those are liquid at room temperature.

5. Classify the following into metals, non metals, metalloids.

Barium, Hydrogen, Silver, Helium, Bromine, Boron, Aluminium, Germanium

SHORT ANSWER QUESTIONS

6. Why is crystallisation technique better than simple evaporation technique?

7. While diluting a solution of salt in water, a student by mistake added acetone (boiling point 56°C). Which technique can be used to get back the acetone? Justify.

8. Is cutting of trees a chemical or a physical change? Explain.

9. A child wanted to separate the mixture of dyes constituting a sample of ink. He marked a line by the ink on the filter paper and placed the filter paper in a glass containing water. The filter paper was removed when the water moved near the top of the filter paper.

- (i) Name the technique used by the child
- (ii) What would you expect to see if the ink contains three different components?

LONG ANSWER QUESTIONS

10. Give the principle and application of the following methods of separations:-

- (i) Fractional Distillation
- (ii) Separating funnel

- (iii) Chromatography
- (iv) Evaporation
- (v) Centrifugation
- (vi) Sublimation

VALUE BASED QUESTION

11. A junior scientist in a leading dental cream manufacturing company discovers that the addition of a certain element to a dental cream can bring about a significant improvement in the quality of product in controlling tooth diseases. However she also discovers that the same element can result in one in a million cases of user, getting a deadly disease. The scientists reports her results in full in the Board's meetings. Assuming that you are the CEO of the company, answer the following questions:

- (i). Should the company go ahead with manufacturing the product without bothering about the ill effects of the product?
- (ii) How will you respond to the suggestion from a colleague that the company should do more research for reducing the ill effects before manufacturing the product?
- (iii). How will you respond to the suggestion from another colleague that the company should altogether ban the idea of manufacturing the product?
- (iv). Which values are promoted through this anecdote?

MCQ

12. Which of the following cannot be separated by the method of sublimation?
- a. Iodine b. common salt c. camphor d. ammonium chloride
13. Which of the following substance is used to protect woolen garments?
- a. Iodine b. naphthalene c. NH_4Cl d. none of these
14. Recovery of salt from salt solution in water can be done by
- a. Evaporation b. Distillation c. Filtration d. All of these
15. Filtration is used to separate
- a. One insoluble solid from another
 - b. An insoluble solid from liquid

- c. Two immiscible liquids
 - d. A solute from a solution
16. A mixture of sand and water can be separated completely by the process of
- a. Sublimation
 - b. Distillation
 - c. Filtration
 - d. All of these
17. Sublimation is
- a. exothermic process
 - b. endothermic process
 - c. neither endothermic nor exothermic
 - d. either endothermic nor exothermic
18. The colour of pure ammonium chloride powder is
- a. White
 - b. blue
 - c. green
 - d. red
19. The solvent which is used to dissolve sulphur powder:
- a. Alcohol
 - b. ether
 - c. carbon disulphide
 - d. water
20. Identify the solution among the following mixtures:
- a. Gun powder
 - b. soil
 - c. air
 - d. aerated water
21. When iron filings and sulphur powder are heated in a china dish at high temperature
- a. Yellow coloured iron sulphide is formed
 - b. No change is observed in the mixture
 - c. Black coloured FeS is formed
 - d. A mixture of iron and sulphur is obtained
22. When we start heating mixture of iron filings and sulphur powder
- a. Sulphur melts, iron doesn't
 - b. Iron melts, sulphur doesn't
 - c. Both iron and sulphur melts
 - d. None of these

23. The colour of sulphur is
- a. Yellow b. Black c. Colourless d. Blue
24. Dyes in water soluble markers may be separated by means of
- a. Evaporation b. distillation c. chromatography d. decantation
25. Which one of the following is a physical change?
- a. burning of magnesium b. sawing of wood
c. dissolution of sugar in water d. formation of a compound
26. Sand and gravel may be separated from each other using
- a. filter funnel b. Liebig condenser
c. Evaporating basin d. sieve
27. Oil and water may be separated using:
- a. chromatography b. filter funnel
c. Liebig condenser d. separating funnel
28. Which one of the separating techniques would be best used to separate soil and water?
- a. Filtration b. distillation
c. chromatography d. decantation
29. Petrol is obtained from petroleum by
- a. distillation b. fractional distillation
c. steam distillation d. distillation under reduced pressure
30. Which of the following methods is used to separate colours in food dyes?
- a. Sieving b. Evaporation
c. chromatography d. decantation
31. Carbon burns in oxygen to give carbon dioxide. The properties of carbon dioxide are
- a. similar to carbon
b. similar to oxygen

- c. totally different from both carbon and oxygen
- d. much similar to both carbon and oxygen

32. FeS is not attracted by magnet because

- a. it has lost the properties of its components
- b. it is not made up of iron
- c. it is mixture
- d. it is black in colour

33. What happens when CS₂ is added to FeS?

- a. it gets dissolved
- b. there is no effect
- c. sulphur of FeS gets dissolved
- d. SO₂ gas is evolved

34. What happens when dil HCl is added to FeS?

- a. A gas with smell of rotten eggs is formed
- b. A gas with smell of burning sulphur is formed
- c. Colourless, odourless gas is formed
- d. none of these

35. H₂S gas shouldn't be inhaled because

- a. it is poisonous, causes headache and dizziness
- b. it is non poisonous
- c. it is pleasant smelling
- d. it is greenish yellow in colour