

### Grouping Materials and their Separation

#### Practice Exercise

- To describe how much matter is there in something, we use the term:  
(a) Weight (b) Length  
(c) Mass (d) Volume  
(e) None of these
- Which of the following statements is correct?  
(a) An object will float on the surface of water when its density is less than that of water in which it is placed.  
(b) An object will float when its density is more than that of water in which it is placed.  
(c) Both (a) and (b) are correct  
(d) Both (a) and (b) are incorrect  
(e) None of these
- Which among the following is an element?  
(a) Water (b) Sugar  
(c) Hydrogen (d) Washing soda  
(e) None of these
- Which of the following is not a matter?  
(a) Water (b) Heat  
(c) Air (d) Plant  
(e) None of these
- Which of the following is not soluble with water?  
(a) Copper sulphate  
(b) Alcohol  
(c) Wax  
(d) Potassium permanganate  
(e) None of these
- Which of the following statements is correct?  
(a) Mass of an object varies at different places.  
(b) Weight of an object varies at different places.  
(c) Both mass and weight remains constant.  
(d) Both mass and weight varies at different places.  
(e) None of these
- Which of the following gases does not dissolve in water?  
(a) Oxygen (b) Carbon dioxide  
(c) Methane (d) Ammonia  
(e) None of these
- Hand picking method is effective in:  
(a) Gaseous mixture (b) Solid mixture  
(c) Liquid mixture (d) All the above  
(e) None of these
- Which of the following is essential for performing winnowing?  
(a) Soil (b) Wind  
(c) Water (d) All the above  
(e) None of these
- Density of an object refers to:  
(a) Product of mass and volume.  
(b) Addition of mass and volume.  
(c) Mass per unit temperature.  
(d) Mass per unit volume.  
(e) None of these
- A basket containing the following materials:  
i. Iron sheet ii. Glass tumbler  
iii. Tissue paper iv. Lens of spectacles  
Which of the above material is transparent?  
(a) i and ii (b) ii and iv  
(c) ii and iii (d) i and iv  
(e) None of these
- Match the following:

Column A		Column B	
(i)	Metals	(A)	Dull appearance
(ii)	Ground glass	(B)	Transparent
(iii)	Wood	(C)	Lustrous
(iv)	Alcohol	(D)	Translucent

- (i-D), (ii-C), (iii-A), (iv-B)
- (i-A), (ii-D), (iii-B), (iv-C)
- (i-C), (ii-D), (iii-A), (iv-B)
- (i-B), (ii-C), (iii-D), (iv-A)
- None of these

- 13.** Which among the following is lighter than liquid water?  
 (a) Copper (b) Glass  
 (c) Ice (d) Iron  
 (e) None of these
- 14.** Which of the following is not a compound?  
 (a) Water (b) Sand  
 (c) Sodium (d) Washing soda  
 (e) None of these
- 15.** Which of the following is composed of carbon, hydrogen and oxygen?  
 (a) Water (b) Washing soda  
 (c) Vinegar (d) Common salt  
 (e) None of these
- 16.** Which one among the following materials will not float on the surface of water?  
 (a) Saw-dust (b) Ice  
 (c) Petrol (d) Silver  
 (e) None of these
- 17.** The basic unit that makes up all matter.  
 (a) Substance (b) Element  
 (c) Atom (d) Compound  
 (e) None of these
- 18.** Which of the following is not a property of wood?  
 (a) Hardness (b) Dull appearance  
 (c) Lustrous (d) Opaqueness  
 (e) None of these
- 19.** The difference in the taste of different compounds is because:  
 (a) They have different colours.  
 (b) Their molecules are different from each other.  
 (c) Their molecules are same.  
 (d) All the above  
 (e) None of these
- 20.** Which of the following is not an element?  
 (a) Oxygen (b) Zinc  
 (c) Mercury (d) Sand  
 (e) None of these
- 21.** Which among the following statements is not correct for the separation of substances?  
 (a) It is used for removing undesirable constituents.  
 (b) It is used to remove harmful components.  
 (c) It is used to obtain undesirable constituents.  
 (d) It is done for obtaining the pure substances.  
 (e) None of these
- 22.** Which of the following methods is used to separate soluble impurities?  
 (a) Decantation (b) Sedimentation  
 (c) Evaporation (d) Filtration  
 (e) None of these
- 23.** Filtered tea is an example of:  
 (a) Element  
 (b) Homogeneous mixture  
 (c) Heterogeneous mixture  
 (d) Soluble impurity  
 (e) None of these
- 24.** While preparing pulao, Ragini found some husk was mixed with the raw rice. By using which of the following methods she can separate husk from rice?  
 (a) Threshing (b) Winnowing  
 (c) Filtration (d) Sieving  
 (e) None of these
- 25.** Petrol and kerosene can be separated by the process of:  
 (a) Filtration (b) Winnowing  
 (c) Sieving (d) Distillation  
 (e) None of these
- 26.** While rinsing rice in the kitchen with water, before cooking, which process is used generally to separate rice from water?  
 (a) Decantation (b) Filtration  
 (c) Winnowing (d) Evaporation  
 (e) None of these
- 27.** A \_\_\_\_\_ is used to separate small stones from sand.  
 (a) Glass (b) Winnowing fan  
 (c) Beaker (d) Sieve  
 (e) None of these

- 28.** Few steps are given below to separate salt from sand. Arrange the given steps in a correct sequence.  
 i. Decantation is done.  
 ii. Water is added to the mixture of sand and salt.  
 iii. Stir the mixture of salt, sand and water.  
 iv. Evaporation is done.  
 (a) i, ii, iii, iv (b) iii, iv, i, ii  
 (c) ii, iii, i, iv (d) ii, i, iv, iii  
 (e) None of these
- 29.** After harvesting of crops \_\_\_\_\_ is separated from grain by winnowing.  
 (a) Stalk (b) Chaff  
 (c) Water (d) Flour  
 (e) None of these
- 30.** Solubility of most of the solids with the increase in temperature.  
 (a) Decrease (b) Increase  
 (c) Remains the same (d) Is not affected  
 (e) None of these
- 31.** Which of the following processes is used to separate insoluble impurities?  
 (a) Evaporation (b) Distillation  
 (c) Filtration (d) Both (a) and (c)  
 (e) None of these
- 32.** Difference in \_\_\_\_\_, is utilized in the process of winnowing for the separation of two solids.  
 (a) Shape (b) Size  
 (c) Weight (d) Colour  
 (e) None of these
- 33.** The process which is used to increase the rate of sedimentation by helping the suspended particles to settle down rapidly is called:  
 (a) Threshing (b) Loading  
 (c) Filtration (d) Winnowing  
 (e) None of these
- 34.** Which of the following is not a kind of filter?  
 (a) Strainer (b) Wire-mesh  
 (c) Glass beaker (d) Muslin cloth  
 (e) None of these
- 35.** A mixture containing saw-dust and iron nails. Iron-nails can be separated from saw-dust by using:  
 (a) Filtration method  
 (b) Distillation method  
 (c) Magnetic separation  
 (d) Decantation method  
 (e) None of these
- 36.** The maximum amount of a substance which can be dissolved in 100 grams of water at a given temperature, is known as \_\_\_\_\_ of that substance.  
 (a) Solution (b) Solubility  
 (c) Availability (d) Deficiency  
 (e) None of these
- 37.** Water is known as universal solvent because:  
 (a) It is colourless.  
 (b) It dissolves many substances in it.  
 (c) It is odourless.  
 (d) It does not dissolve any substance in it.  
 (e) None of these
- 38.** Which process is used to separate butter from milk?  
 (a) Filtration (b) Loading  
 (c) Sieving (d) Churning  
 (e) None of these
- 39.** Which shape of filter paper is preferred for the process of filtration?  
 (a) Square shape (b) Cubical shape  
 (c) Rectangular shape (d) Conical shape  
 (e) None of these
- 40.** Metallic parts of a scooter from a heap of waste materials can be collected with the help of:  
 (a) Chlorine (b) Alum  
 (c) Electromagnet (d) Sand  
 (e) None of these

## Answer Key

<b>1. C</b>	<b>2. A</b>	<b>3. C</b>	<b>4. B</b>	<b>5. C</b>
<b>6. B</b>	<b>7. C</b>	<b>8. B</b>	<b>9. B</b>	<b>10. D</b>
<b>11. B</b>	<b>12. C</b>	<b>13. C</b>	<b>14. C</b>	<b>15. C</b>
<b>16. D</b>	<b>17. C</b>	<b>18. C</b>	<b>19. B</b>	<b>20. D</b>
<b>21. C</b>	<b>22. C</b>	<b>23. B</b>	<b>24. B</b>	<b>25. D</b>
<b>26. A</b>	<b>27. D</b>	<b>28. C</b>	<b>29. B</b>	<b>30. B</b>
<b>31. D</b>	<b>32. C</b>	<b>33. B</b>	<b>34. C</b>	<b>35. C</b>
<b>36. B</b>	<b>37. B</b>	<b>38. D</b>	<b>39. D</b>	<b>40. C</b>