

CHANGE OF STATE OF MATTER

6. When water at 0°C freezes to form ice at the same temperature of 0°C, then it:

- (a) Absorbs some heat
- (b) Releases some heat
- (c) Neither absorbs nor releases heat
- (d) Absorbs exactly $3.34 \times 10^5 \text{ J/kg}$ of heat

Answer: (b) Releases some heat

7. When heat is constantly supplied by a burner to boiling water, then the temperature of water during vaporisation :

- (a) Rises very slowly
- (b) Rises rapidly until steam is produced
- (c) First rises and then becomes constant
- (d) Does not rise at all

Answer: (d) Does not rise at all

8. Which one of the following set of phenomena would increase on raising the temperature?

- (a) Diffusion, evaporation, compression of gases
- (b) Evaporation, compression of gases, solubility
- (c) Evaporation, diffusion, expansion of gases
- (d) Evaporation, solubility, diffusion, compression of gases

Answer: (c) Evaporation, diffusion, expansion of gases

9. On converting 308 K, 329 K and 391 K to Celsius scale, the correct sequence of temperatures will be:

- (a) 33°C, 56°C and 118°C
- (b) 35°C, 56°C and 119°C
- (c) 35°C, 56°C and 118°C
- (d) 56°, 119°C and 35° C

Answer: (c) 35°C, 56°C and 118°C

10. Four students took separately the mixture of sand, common salt and ammonium chloride in beakers, added water, stirred the mixture well and then filtered. They reported their observations as shown below

Student

As residue

In the filtrate

I

II

III

IV

Ammonium chloride

Common salt, Sand

Sand, Ammonium chloride

Sand

Sand, Common salt

Ammonium chloride

Common salt

Ammonium chloride, Common salt

Who reported the observations in the correct order of the components as residue and in the filtrate?

(a) I

(b) IV

(c) III

(d) II

Answer: (b) IV

11. Which of the following phenomena always results in the cooling effect?

(a) Condensation

(b) Evaporation

(c) Sublimation

(d) None of these

Answer: (b) Evaporation

13. Which of the following causes the temperature of a substance to remain constant while it is undergoing a change in its state?

- (a) Latent heat
- (b) Lattice energy
- (c) Loss of heat
- (d) None of these

Answer: (a) Latent heat

14. Which of the following statement is correct?

- (a) Materials existing as liquids at room temperature have their melting and boiling points lower than that of room temperature.
- (b) The phenomenon involving the transition of a substance from solid to liquid state is called sublimation.
- (c) To convert a temperature on the Celsius scale to Kelvin scale, subtract 273 from the given temperature
- (d) The density of ice is less than that of water.

Answer: (d) The density of ice is less than that of water.

1.Which among the following is a physical change?

Burning of wood

Ripening of fruit

Cutting a log into small pieces

Cooking of food

ANSWER : Cutting a log into small pieces

Explanation :

2.The purification of salt is done by

filtration and crystallization

filtration and evaporation

sedimentation and decantation

sublimation and filtration

ANSWER : filtration and crystallization

Explanation :

3.In which type of change a new substance is formed?

Physical change

Chemical change

In both

In neither of these

ANSWER : Chemical change

Explanation :

4.Which of the following is not a chemical change?

Curdling of milk

Burning of coal

Digestion of food

Melting of ice

ANSWER : Melting of ice

5.By which method crystals of pure substances are obtained?

Filtration

Condensation

Crystallization

Freezing

ANSWER : Crystallization

1.A solid can change into liquid on heating. This process is called

melting

boiling

sublimation

evaporation

ANSWER : melting

Explanation :

3.In addition to the new products formed in a chemical change

heat is released or absorbed

sound may be produced

both (Opt1) and (Opt2)

reversible change occurs

ANSWER : both (Opt1) and (Opt2)

Explanation :

4. When vapours are allowed to cool, they condense to liquid state. This process is called

melting

boiling

condensation

freezing

ANSWER : condensation

Explanation :

5. Silver spoon becomes tarnished when exposed to air. It is due to the reaction of silver with

Water

Oxygen

Chlorine

Sulphur

ANSWER : Sulphur

Question 7. Camphor can be purified by:

- a) Distillation
- b) Filtration
- c) Sedimentation
- d) Sublimation

Question 8. Which one of the following will result in the formation of a mixture?

- a) Crushing of a marble tile into small particles
- b) Breaking of ice cubes into small pieces
- c) Adding sodium metal to water
- d) Adding milk in water

Question 9. Purity of a solid substance can be checked by its:

- a) Boiling point

- b)Melting point
- c)Solubility in water
- d)Solubility in alcohol

Question 10.A mixture of ethanol and water can be separated by:

- a)Filtration
- b)Decantation
- c)Fractional distillation
- d)Sublimation

Question 11.Salt can be obtained from sea water by:

- a)Filtration
- b)Decantation
- c)Evaporation
- d)Sublimation

Question 12.A sample contains two substances and has uniform properties. The sample is:

- a)A compound
- b)A heterogeneous mixture
- c)An element
- d)A homogeneous mixture

Question 13.A mixture of ZnCl_2 and PbCl_2 can be separated by:

- a)Distillation
- b)Crystallization
- c)Sublimation
- d)Adding acetic acid

Question 14.A mixture of methyl alcohol and acetone can be separated by:

- a)Distillation
- b)Fractional distillation
- c)Steam distillation
- d)Distillation under reduced pressure

Question 15.Mixture of sand and sulphur may best be separated by:

- a)Fractional crystallization from aqueous solution
- b)Magnetic method
- c)Fractional distillation

d)Dissolving in CS_2 and filtering

Question 16.Which component of the mixture (Fe + S) reacts with dil. HCl and gives hydrogen gas?

- a)Sulphur
- b)Iron
- c)Both
- d)None

Question 17.Which of the following is considered to be a pure substance?

- a)Granite
- b)Sodium chloride
- c)Muddy water
- d)Milk of magnesia

Question 18.Physical properties of a mixture:

- a)Vary with the amount of substance
- b)Depend on the volume of the substance
- c)Depend on the organization of the substance
- d)Vary depending upon its components

Question 19.Compounds:

- a)Are the same as mixtures?
- b)Can be separated by their physical properties
- c)Contain only type of element
- d)Are different kinds of atoms chemically combined with each other?

Question 20.White gold is used in jewelry and contains two elements, gold and palladium. A jeweler has two different samples that are both identical in appearance and have a uniform composition throughout. What can be said about the samples?

- a)They are homogeneous mixtures and be classified as metallic alloys.
- b)The materials are heterogeneous mixtures and can be classified by their components.
- c)The samples have variable compositions and are classified as metallic solutions.
- d)The samples are heterogeneous mixtures that can be separated using magnetic properties.

Question 21.To prepare iron sulphide, by heating a mixture of iron filings and sulphur powder, we should use a:

- a)Copper dish

- b) Watch glass
- c) China dish
- d) Petri dish

Question 22. Which of the following is an example of a heterogeneous substance?

- a) Bottled water
- b) Table salt
- c) Pieces of copper
- d) Candle

Question 23. Which of the following is an example of a homogeneous substance?

- a) Granite
- b) Copper sulphate
- c) M& M candy
- d) Muddy water

Question 24. Which flow chart correctly describes a homogeneous material?

- a) Unknown - density - 3 layers
- b) Unknown – filtration – two substances
- c) Unknown – magnet – two substances
- d) Unknown – boiling – one temperature

Question 25. A student is given a mixture of iron filings and sulphur in the ratio 1 : 2 by weight. He was then asked to heat the mixture over a flame and to observe the color change. The student will observe that the mixture becomes:

- a) Black
- b) Grey
- c) Yellow
- d) Orange

Question 26. Filtration can be used to separate:

- a) Solids from solids
- b) Liquids from solids
- c) Liquids from liquids
- d) Liquids from gases

Question 27. One common method used to separate dyes is:

- a) Filtration
- b) Distillation

- c)Chromatography
- d)Conductivity

Question 28.Melting points can separate materials because:

- a)Substances melt at different temperatures
- b)Molecules vibrate rapidly when heated
- c)Heat causes molecules to disintegrate
- d)May substances fuse at the melting point

Question 29.Distillation is a good separation technique for:

- a)Solids
- b)Liquids
- c)Solid alloys
- d)Gases

Question 30.Solubility is a good separation technique for:

- a)Pure metals
- b)Noble gases
- c)Different salts
- d)Metallic alloys

Question 31.Magnetism is most beneficial for separating:

- a)Gases and non- metallic liquids
- b)Magnetic solids and solids such as sulfur
- c)Non- metallic solids and solids such as sulfur
- d)Non- magnetic solids from non- magnetic liquids

Question 32.Before the heating when iron filing mixed with sulphur. Is this reaction will show chemical change:

- a)Yes
- b)No
- c)Initially physical then chemical change
- d)Initially chemical then physical change

- 7.(d)
- 8.(d)
- 9.(b)
- 10.(c)
- 11.(c)
- 12.(d)

13.(b)
14.(b)
15.(d)
16.(b)
17.(b)
18.(d)
19.(d)
20.(a)
21.(c)
22.(d)
23.(b)
24.(d)
25.(a)
26.(b)
27.(c)
28.(a)
29.(b)
30.(c)
31.(b)
32.(b)