

Question 1:**Choose the correct multiple from (A), (B), (C) or (D).****[15]**

(i) The goal of alchemy was:

Statement 1: To transform base metals into gold.

Statement 2: To discover the Philosopher's Stone, a mythical substance.

Statement 3: To prepare the elixir of life, thought to grant immortality.

(A) Statement 1 is true.

(B) Statements 1 & 2 are true

(C) Statements 1, 2, & 3 are true.

(D) Statements 2 & 3 are true.

(ii) Qutab Minar, the 7-meter-high iron pillar in Delhi, is notable for its rust-resistant composition.

It is rust-resistant due to:

Statement 1: Iron with a high percentage of sulphur

Statement 2: Iron with a high percentage of phosphorus.

(A) Statement 1 is correct.

(B) Statement 2 is correct.

(C) Statements 1 & 2 are correct.

(D) None of these.

(iii) Fertilisers, insecticides, pesticides and fungicides. The odd one out agro-chemicals are:

(A) Fertilisers

(B) Insecticides

(C) Pesticides

(D) No one is odd, all are agro-chemicals.

(iv) D. D. T. is used to:

Statement 1: kill insects.

Statement 2: kill fungi.

(A) Statement 1 is correct.

(B) Statement 2 is correct.

(C) Both statements 1 & 2 are correct.

(D) No one is correct.

(v) "Heroin"- the term is related to:

(A) The lead female character in a film.

(B) An addictive drug.

(C) Both (A) & (B) are correct.

(D) Both (A), (B), & C are not correct.

(vi) Identify the apparatus marked in the figure:

1. The apparatus 'A' is:

(A) Funnel

(B) Thistle funnel

(C) inverted flask

(D) None of these.

2. The apparatus 'B' is:

(A) Round bottom flask

(B) Flat bottom flask

(C) Conical flask

(D) None of these.

3. The apparatus 'C' is:

(A) Bunsen burner

(B) Spirit lamp

(C) Kerosene lamp

(D) None of these.

4. The apparatus 'D' is:

(A) Glass rod

(B) Rubber tube

(C) Delivery glass tube

(D) None of these.

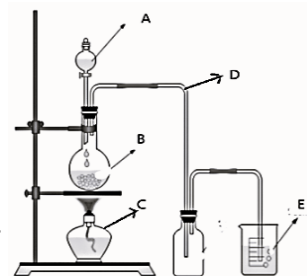
5. The apparatus 'E' is:

(A) Gas jar

(B) Beaker

(C) Test tube

(D) None of these.

(vii) Ramesh added 5 tablets of red ink to a glass of water. After some time, the water turns red. The process is:

(A) Miscible

(B) Diffusion

(C) Immiscible

(D) None of these.

(viii) A liquid X mixed with another liquid Y in any amount. The liquids X and Y are called _____ liquids:

(A) Miscible

(B) Immiscible

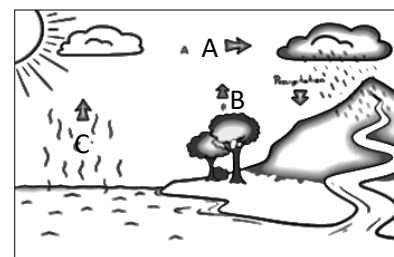
(C) Soluble

(D) None of these.

- (ix) LPG is odourless. The gas company add a substance to LPG to identify its leakage. The substance is:
 (A) Ethyl mercaptan (B) Methyl mercaptan (C) Neither (A) nor (B) (D) Either (A) or (B)
- (x) In an experiment, Padmini added an iron nail and a ball made up of thermocol to a glass of water. Padimini Observed that the iron nail sinks, whereas the thermocol ball floats on the water. So, she should conclude:
 (A) An iron nail is denser than a thermocol ball.
 (B) The Thermocol ball is less dense than water.
 (C) A Thermocol ball is denser than water.
 (D) An Iron nail is less dense than a thermocol ball.
- (xi) A liquid X does not mix with another liquid Y. What do you see if the liquid X is mixed with liquid Y?
 Observation 1: X and Y formed a separating layer.
 Observation 2: The denser liquid settles at the bottom, and the lighter liquid settles above it.
 (A) Observation 1 is correct. (B) Observation 2 is correct.
 (C) Both observations 1 & 2 are correct. (D) None of these.

Question 2:

- (i) A class 6 child drew a picture of the water cycle. Instead of writing the process in the picture He wrote A, B, and C. Answer the following questions related to the picture.



- (a) Identify the process A. [5]
 (b) Identify the process B. What happens in this process?
 (c) Identify the process C. What happens in this process?
- (ii) Identify the following terms. [5]
 (a) The process in which a solid state converts to its vapour directly when the solid is heated.
 (b) The process by which matter changes from one state to another and back to the original state, without change in chemical composition.
 (c) The factor that is helpful to change the state of matter other than temperature.
 (d) The state of matter has one free surface.
 (e) It is the smallest unit of matter which is capable of independent existence.
- (iii) Fill in the blank: [5]
 (a) Food items like jams and pickles are protected by using _____.
 (b) _____ help increases the production of food.
 (c) _____ is used for grinding and crushing solid substances into powder.
 (d) Glass apparatus is made of _____ or _____.
- (iv) Odd one out with an appropriate reason. [5]
 (a) Round bottom flask, flat bottom flask, conical flask, measuring cylinder.
 (b) Test tube brush, test tube, test tube stand
 (c) Evaporation, vaporisation, boiling
 (d) Aspirin, Paracetamol, Bordeaux, penicillin
 (e) Vegetables, bread, jams, jelly
- (v) Match the items in Column A with their respective functions in Column B. [5]

Column A

- (a) Iron stand
- (b) Test tube
- (c) Funnel
- (d) Beaker
- (e) Glass rod

Column B

- 1. To boil chemicals.
- 2. To keep solutions.
- 3. To stir the solution.
- 4. To support the apparatus.
- 5. To transfer liquid.

Section B

(Attempt any **four** questions out of five)

Question 3:

- (i) (a) Draw a graduated gas jar. [2]
(b) State one use of the gas jar. [1]
- (ii) (a) What do you mean by miscible liquids? [1]
(b) Give two examples of miscible liquids. [2]
- (iii) (a) What do you mean by inter-conversion of states of matter? [1]
(b) Ice melting to water is not an example of the interconversion of the state of matter. Why? [1]
(c) Whether inter-conversion of the state of matter is a physical or a chemical change? Justify your answer. [2]

Question 4:

- (i) Name the scientists who discovered the following elements. [3]
(a) Oxygen (b) Nitrogen (c) Hydrogen
- (ii) Draw the following apparatus. [3]
(a) A thistle funnel (b) A glass funnel (c) A test tube
- (iii) Choose the correct word to make the statements true. [vapour, boil, air, water, melts, gas] [4]
When a candle is lit, first, candle wax (a) _____, then turns into (b) _____. The vapour reacts with (c) _____ to produce two new substances carbon dioxide and (d) _____.

Question 5:

- (i) X and Y are two particles of matter. You have to identify the state of matter. [3]
(a) The distance between X and Y is negligible.
(b) X and Y can move in any direction.
(c) The force of attraction between X and Y is maximum.
- (ii) State one use of the following apparatus. [3]
(a) Wire gauze (b) Tripod stand (c) Funnel
- (iii) Write the full form of: [4]
(a) L.P.G (b) D.D.T (c) T.N.T (d) R. D. X.

Question 6:

- (i) (a) What do you mean by Brownian motion? [1]
(b) Particles of which state of matter have Brownian motion? [1]
(c) State a reason why the particles of a solid don't have Brownian motion? [1]
- (ii) Give one example for each of the following. [3]
(a) Fungicides (b) Chemical warfare weapons (c) Fuels
- (iii) A description of some of the apparatus is given below. Identify the apparatus. [4]
(a) The apparatus X has an iron stand with 3 legs. What is X?
(b) Y is a container and a hand tool made of porcelain. What is Y?
(c) Z is a cone-shaped object with a stem at its narrow end and made of glass or plastic. What is Z?
(d) U is a rack made of wood or plastic. What is U?

Question 7:

- (i) State any three precautions to be taken in a chemistry laboratory. [3]
- (ii) State any three dark sides of chemistry. [3]
- (iii) (a) Pressure can change the state of matter. Give an example to prove that it is possible in 1 & 2 given below. [2]
 - 1. A solid is changed into a liquid due to the application of pressure.
 - 2. A liquid is changed into a vapour due to the application of pressure.
(b) A white solid X, when heated, turns into a vapour. The vapour cools and turns into a solid again. [2]
 - 1. Name the process.
 - 2. A child replaced the word 'vapour' with 'gas'. Will the statement be correct? Justify your answer.

*****ALL THE BEST*****