SNBP INTERNATIONAL& SR. SECONDARY SCHOOL, CHIKHALI, PUNE
Affiliation No. 1130703
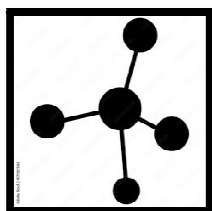**PT 3 2024-25**
ANS KEY

GRADE:V	SUBJECT: SCIENCE	DATE: 16. 12. 2024	TIME:2HRS	MARKS: 50

QI. Multiple choice questions:

(15Q X 1M = 15M)

1   Baking of a cake is a _____ change.

   a) Physical   b) reversible   c) chemical   d) irreversible

2   At sea-level, our _____ is the thickest.

   a) Rainfall   b) oxygen   c) atmosphere   d) soil

3   _____ is more efficient than a nail.

   a) Axle   b) plane   c) screw   d) wedge

4   Solute + Solvent ⟶ _____

   a) Liquid   b) gas   c) solution   d) solid

5   What is the amount of water vapour present in the air called?

   a) Pressure   b) space   c) air   d) humidity

6   _____ are the simplest of all machines.

   a) Pulley   b) wheel   c) screw   d) ramps

7   How is an oxygen molecule represented?

   a) O_3 b) O_4 c) O_2 d) O

8   _____ does not burn, it supports the combustion of other substances.

   a) Carbon dioxide   b) nitrogen   c) hydrogen   d) oxygen

9   In _____ class lever, the load is in between the fulcrum and effort.

   a) First   b) second   c) third   d) fourth

10 Identify the given picture:

   a) Atoms   b) molecules   c) matter   d) substance

11 Water can be purified using potassium permanganate or _____.

   a) Salt   b) sand   c) alum   d) vinegar

12 What is a rigid rod like structure that is fixed at the fulcrum called?

a) Axle   b) pulley   c) lever   d) wedge

13 _____ can change its form.

a) Oil   b) soil   c) matter   d) solute

14 Any substance that makes the water unfit for use is an _____.

a) Solution   b) impurity   c) sediment   d) filtrate

15 This is a complex machine.

a) Screw   b) computer   c) lever   d) wheel barrow

QII. Fill in the blanks:

(3Q X 1M = 3M)

1 A fixed pulley makes it easier to lift heavy weights by changing the direction of the force.

2 Atoms are the building blocks of matter.

3 Thermosphere layer has temperature as high as 2000^0C.

QIII. Write 'T' for true and 'F' for false:

(3Q X 1M = 3M)

1 When a solute is dissolved in a solution, a solvent is formed. - F

2 Air is not needed for burning. - F

3 Sewing machines use a wheel and axle arrangement. - T

QIV. Match the following:

(3Q X 1M = 3M)

'A'   'B'

1. Removes insoluble impurities   a. miscible liquid

2. axle   b. filtration

3. Alcohol   c. rod at the centre in a wheel

QV. Answer the following in one word:

(4Q X 1M = 4M)

1 Write one examples of third-class levers.

Ans Fishing rod, forceps, tweezers

2 Name any chemical change

Ans Burning of wax

3 Which gas is used in the process of photosynthesis?

Ans Carbon dioxide

4 Name any one method that are used to remove insoluble impurities.

Ans Filtration, Sedimentation

QVI. Answer the following questions in brief:

1 A glass breaks into smaller pieces. What kind of changes is it-physical or chemical? Why?

Ans It is a physical change as only the shape and size of the glass has been changed. The atomic bonds of the glass have not broken and new bonds have not been created.

2 Define a screw with two examples.

Ans An inclined plane wrapped around a cylinder or cone is called a <u>screw.</u>
<u>Examples-</u>The screw thread is used in bolts, revolving stools, bottle caps and a pen cap.
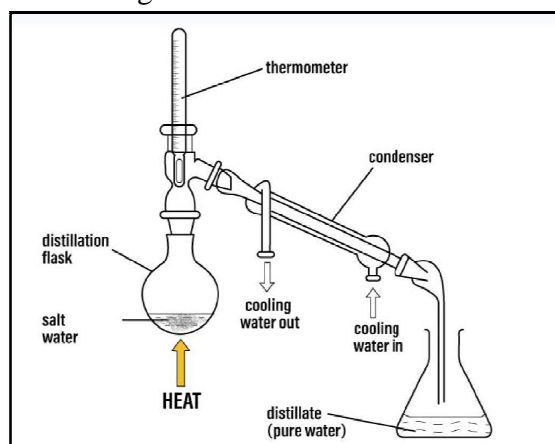
3 What is atmosphere?

Ans The Earth is surrounded by an envelope of air called the atmosphere. Multiple invisible gases come together to form the atmosphere.

QVII. Answer the following questions (any 2):

(2Q X 3M = 6M)

1 Draw a diagram of distillation.

Ans

2 There is a gas called laughing gas. Find out, which gas is it, and what are its effects?

Ans <u>Nitrous Oxide</u> is popularly known as laughing gas.
Varying on the amount of gas inhaled, the effects of the gas are:
• Feelings of euphoria, relaxation and calmness
• Dizziness, difficulty in thinking straight and fits of giggles or laughter

3 What is the composition of air?

Ans Multiple gases such as nitrogen, oxygen, carbon dioxide, argon, hydrogen, and ozone, get mixed together to form air. Air is composed of 78% Nitrogen and 21% Oxygen. Carbon dioxide, water vapour, argon, helium, dust particles, etc. make up the remaining 1% of the air. Their proportions may vary depending on the weather and the environmental conditions.

QVII Long answer questions:
I

(2Q X 5M = 10M)

1 Explain a lever and its classifications.

Ans A rigid rod like structure that is fixed at the fulcrum is called a <u>lever.</u>

Based on the position of fulcrum, levers can be classified into three types:
• First Class Levers: A first-class lever has the fulcrum (F) in between the load (L) and the effort (E). Ex-Screwdriver, pliers, see-saws, claw hammers,
• Second Class Levers: A second-class lever has the load (L) in between the fulcrum (F) and the effort (E).
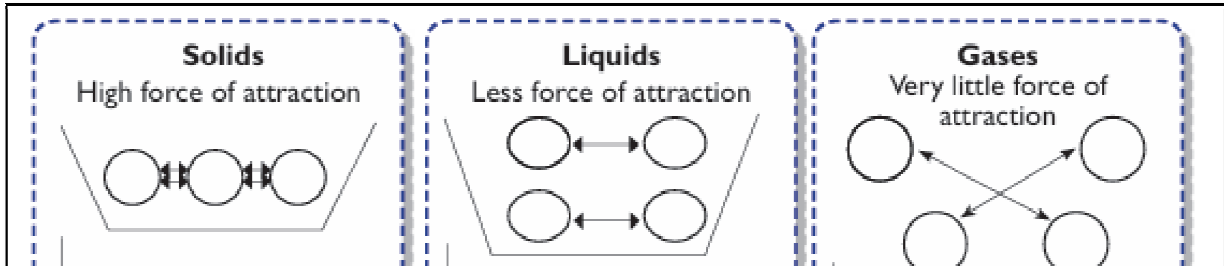Ex-Bottle openers, nut crackers, wheel barrows,
• Third Class Levers: A third-class lever has the effort (E) in between the fulcrum (F) and the load (L). Ex-Fishing rod, forceps, tweezers.

2 a   Draw the diagrams of the arrangements of molecules in solid, liquids, and gases. [2.5M]

Ans

b   Describe the formation of solutions. [2.5M]

Ans   We know that molecules of liquids have spaces between them. When a solid is mixed in a liquid, the molecules of that solid separate, and enter the space between the molecules of the liquid. This is how a solute (the solid), dissolves in a solvent (the liquid), and forms a solution (the end result).