Chapter-1 (Matter)

B. Short/Long Answer Questions:

1. Anything that has mass and occupies space is called matter. Matter is composed of molecules.

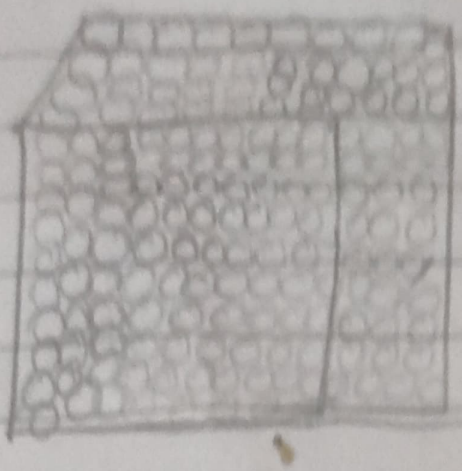
2. Three properties of matter are:
* Molecules of Inter-Molecular force of attraction
* They are very small in size
* They have spaces between them

3. The space between the molecules of matter is called inter-molecular space. This is less in solids, more in liquids, most in gases.

4. The molecules exert a force of attraction each other. This is force of attraction. It is less in gases, more in liquids, most in solids.

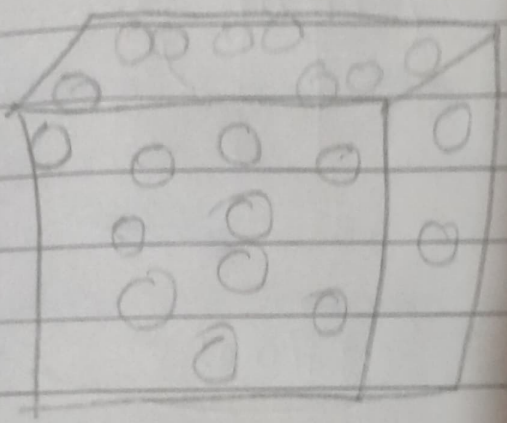
5. a) Correct
b) Correct
c) Incorrect
d) Incorrect

6

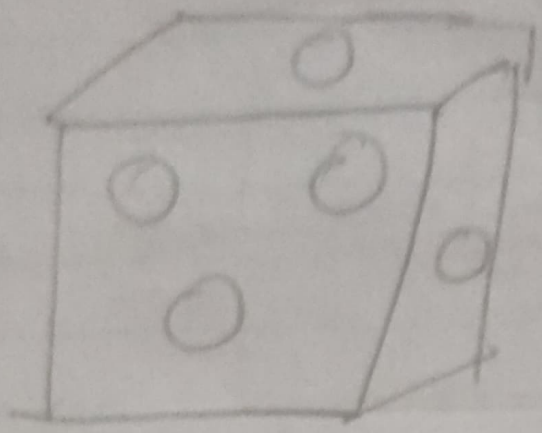


Arrangement of molecules in a solid

* Inter molecular space is very less.
* They vibrate in an two fro movement
* Molecules are tightly packed

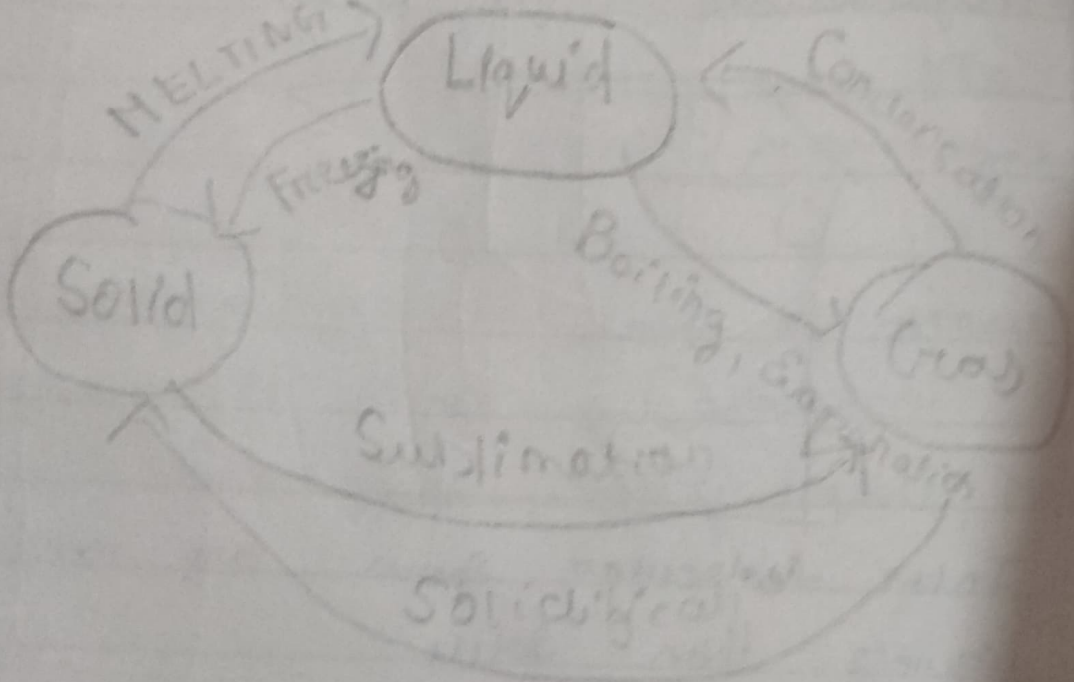


* Inter molecular Spaces are more than in liquids than solids
* They are not closely packed



They have large inter molecular spaces
They have less force of attraction

The change in a the state and the characteristics of an object is called "change in state"



8.

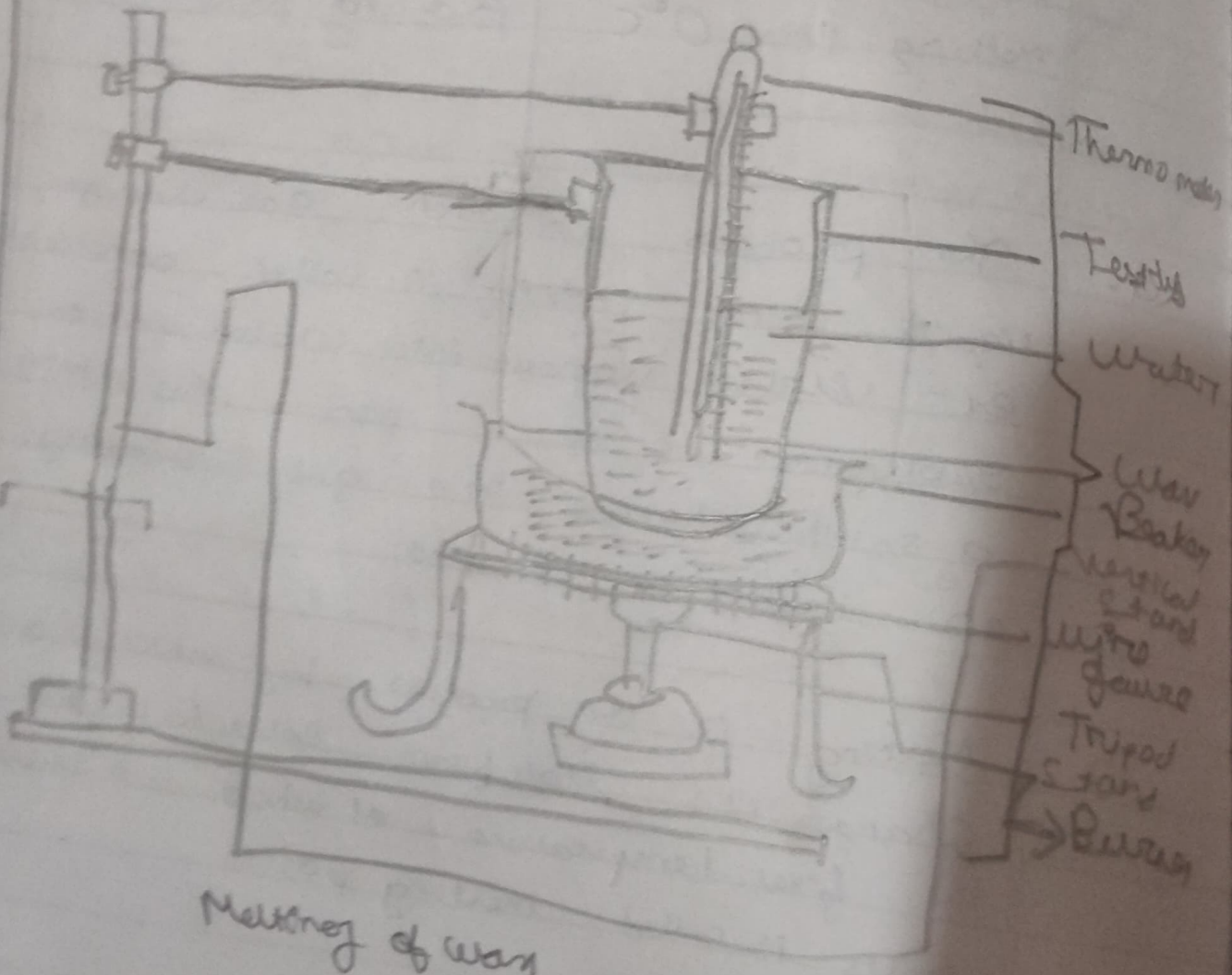
Melting Point	Boiling Point
Melting point is the fixed temperature in which a solid changes it's state into liquid	Boiling point is the fixed temperature in which a liquid changes it's state to gas
Ex: Melting of ice melting point $0^{\circ}C$	Ex - Boiling of water Boiling point $100^{\circ}C$

9. The process in which gas changes into liquid on cooling is called condensation
Ex- Water vapour into water vapour.
Sublimation is the process by which a solid changes into gas directly on heating Ex- Camphor.

10 Melting is the process by which a substance changes its state from solid to liquid on having the fixed temperature at which a substance melts is called melting point

11- Aim of the activity: To prove Substance absorbs heat while melting without the change in temperature

Materials required :- Test tube, Wax, Vertical stand, beaker, wire gauze, tripod stand, burner, thermometer water



Melting of wax

Time (in minute)	Temperature of wax (in °C)
0	25
1	30
2	35
3	40
4	45
5	50
6	55
7	55
8	55
9	55
10	60
11	65
12	70

Conclusion: From the ab

Take a test tube. Put some wax in the test tube. Clamp the test-tube in a stand and place the test tube in a beaker of water placed on a wire gauze with a tripod stand. Clamp a thermometer

In the same vertical stand and insert the thermometer in the test tube so the bulb will focus to where the wire is. Heat the beaker with the burner and record the temperature.

Confession melting depends on absorption of heat and thus during melting temperature will not change

12 The change from liquid state to gaseous state on heating at a constant temperature by absorption of heat is called vaporization or boiling. A fixed temperate in which a liquid is vapourized is called the boiling point.

13a) Boiling

b) Evaporating

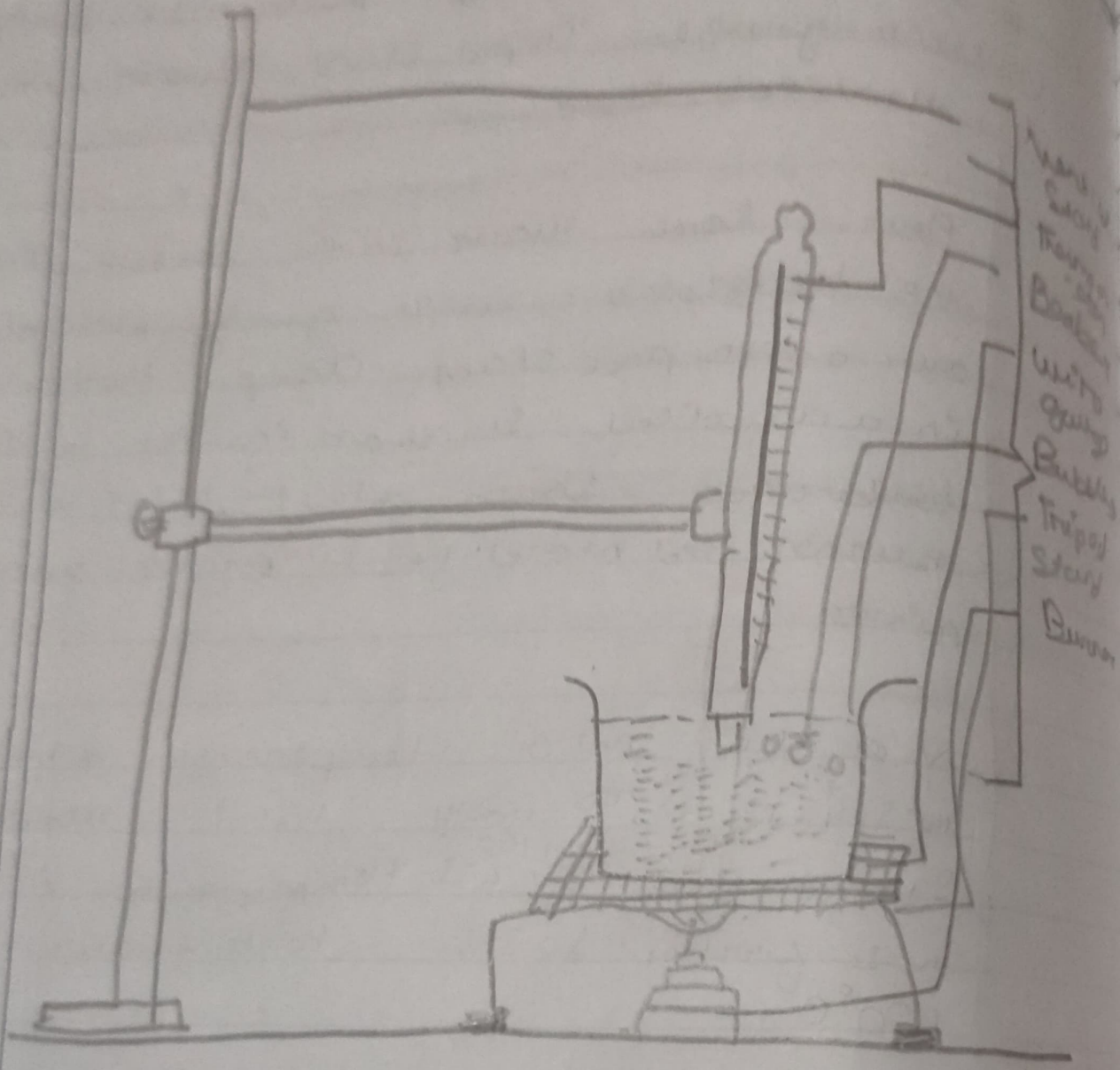
14 Melting point of ice = 0 °C

15. Aim of the experiment: Water absorbs heat during vaporization

Materials required: Thermometer, Beaker, wire gauze, Tripod Stand, Burner, Water, vertical Stand.

Pour some water in the beaker. Place the beaker on a wire gauze placed over a tripod stand. Clamp a thermometer in a vertical stand and insert it in the beaker. Heat the beaker over a burner and record the temperature every minute.

You will notice temperature of water rises continuously till the water starts boiling at 100°C. It's temperature does not rise further. So the boiling point is 100°C.



Vaporization of water

16. a) 0°C
b) 100°C

17. The process by which the surface of liquid turns into gas at any temperature is called evaporation.

18. Factors affecting evaporation are:-
* Temperature of the liquid
* Nature of the liquid
* Presence of humidity

19. In warm dry day the clothes dry faster because there is no humidity in the air, so less is the humidity higher is the evaporation, while in a cold humid day humidity is high so clothes will dry in a long period of time

20. Water in a dish Evaporates faster than in a bottle because the surface area of the plate is higher compared to the bottle so the rate of Evaporation will be high.

21. Volatile liquids like alcohol and spirit evaporate easily hence they are stored in tightly closed bottles to avoid their evaporation

22 Boiling point of water = 100°C

23. The reason when a liquid evaporates it requires heat that heat is obtained from the surroundings that's why it produces an cooling effect

24 Ex- If we take some alcohol (or spirit) in our hands it will evaporate and makes us feel cool.

25 Applications of Evaporation are:
* To put 'Strips' of wet cloth on the forehead of a patient.

* Evaporation helps dogs to dry clothes

* When we pour tea in the saucer, to cool it faster, and * evaporation becomes faster

due to the increased surface area

26. The Earthen pot has small pores throughout that the water evaporates and the required heat is taken from the surroundings and thus, water becomes cool.

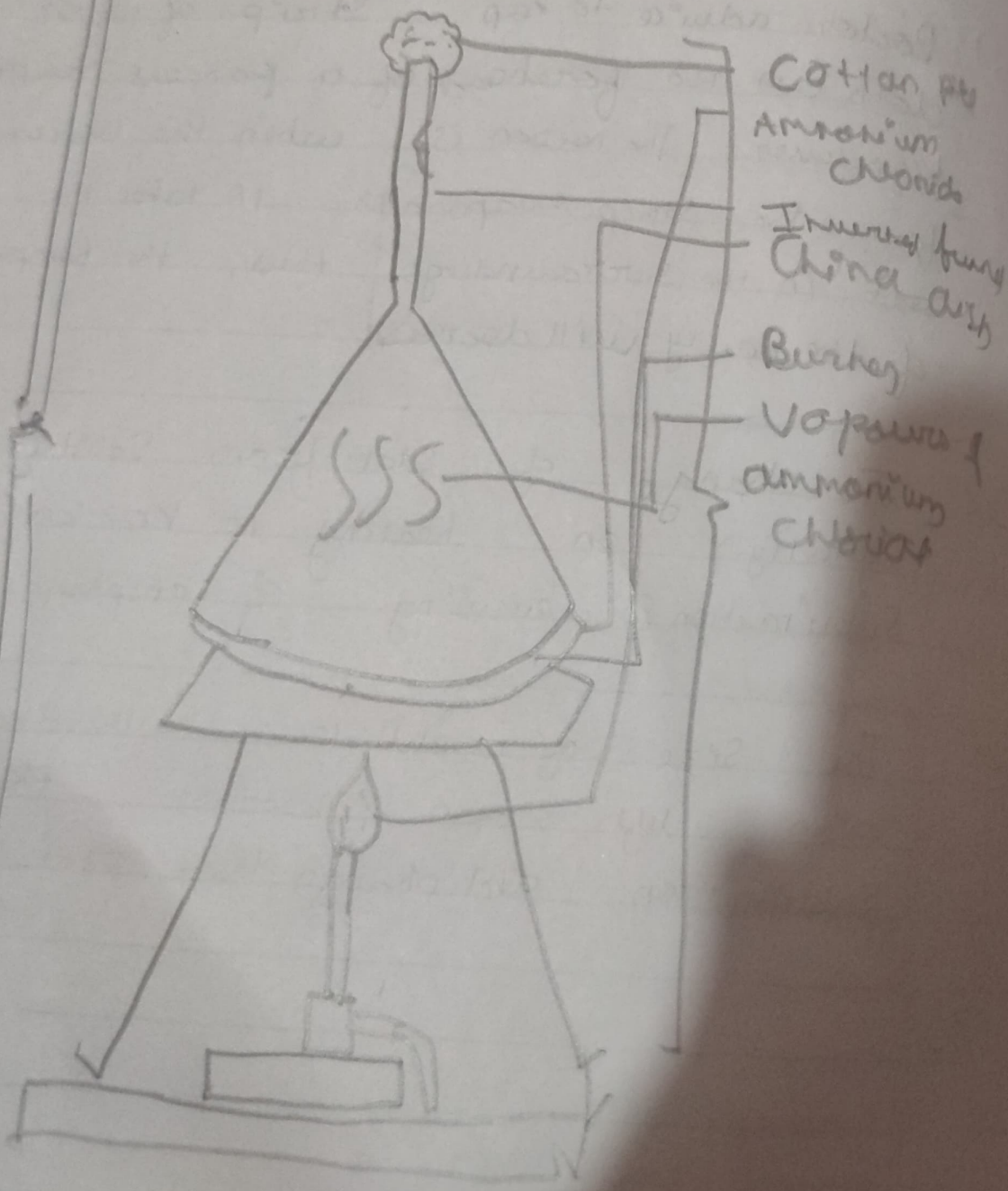
27. Doctor advice to keep strips of wet cloth on the forehead of a patient having high fever. The reason is when the water from the strip evaporates it takes the heat in the surroundings thus, the temperature of the body will decrease.

28. The change of state from solid to gas (directly) on heating is known as Sublimation, Ex - burning of camphor

29 The size of naphthalene balls decrease when left open because, they perform Sublimation and change their state to gas

30 Aim of the experiment: Take some camphor or ammonium chloride. To prove Sublimation.

Materials required: Camphor / Ammonium chloride powder, keep the powder cotton piece, Pneumatic funnel, China dish, Mesh, burner, stand.



Take some ammonium chloride powder in a china dish. Now cover the china dish with an inverted funnel. Heat it then with a burner & see what is coming out of it.