

Common Laboratory Apparatus and Equipments

1. Mention one use of each of the following equipments :
- (a) Spirit lamp : It is used to heat up substances.
 - (b) Test tube : It is used to conduct tests with small quantities of chemicals for heating and boiling purposes.
 - (c) Conical flask : It holds sufficient quantities of substances in the form of solution.
 - (d) Evaporating dish : It is used for evaporating liquids.
 - (e) Wire gauze : It is used to keep glass apparatus (flask, beaker) on while heating is in progress. It is also used for uniform distribution of heat.
 - (f) Beaker : It is used for keeping of solutions.

- (g) Mortar and Pestle : It is used to grind and crush solid substances into a powder.
- (h) Measuring cylinder : It is used to measure the volume of (mainly) liquid substances.
- (i) Glass tube : It is used to transfer fluids or gases from one vessel to another.
- (j) Gas jar : It is used for collecting gases and holding them in captivity vacuum.
- (k) Reagent bottle : It is used for storing chemicals.

2. From what materials are the following made up of ?

- (a) Test tube rack : wood or plastic
- (b) Test tube holder : Iron clamp at front and wood or plastic handle at other end.

(c) Measuring cylinder : Glass

(d) Wire gauze : Made of meshed iron wire and a thin asbestos sheet that is fixed at its centre.

(e) Mortar and pestle : Porcelain

3. List any five precautions to be taken while performing an experiment in a chemistry laboratory.

Ans- ① Do not touch or taste any unknown substance.

② Use only small quantity of chemical to carry out experiment.

③ Do ~~not~~ not work alone in the lab.

④ Do not throw hot concentrated acids into the sink directly.

⑤ Always wear an apron in the lab to protect your clothes.

⑥ While heating keep the mouth of test tube away from your eyes and face.

⑦ The apparatus to be used in an experiment should be arranged neatly.

before beginning an experiment.

- ⑧ Do not throw broken glass apparatus or used filter paper in the sink. Throw them in a dustbin.

4. Answer the following questions in brief:

(a) Why is chemistry known as an experimental science?

Ans. Chemistry is known as an experimental science as an experiment is performed under controlled conditions in an activity and we observe a natural or an artificially created phenomenon.

(b) Why are most of the apparatus made of glass?

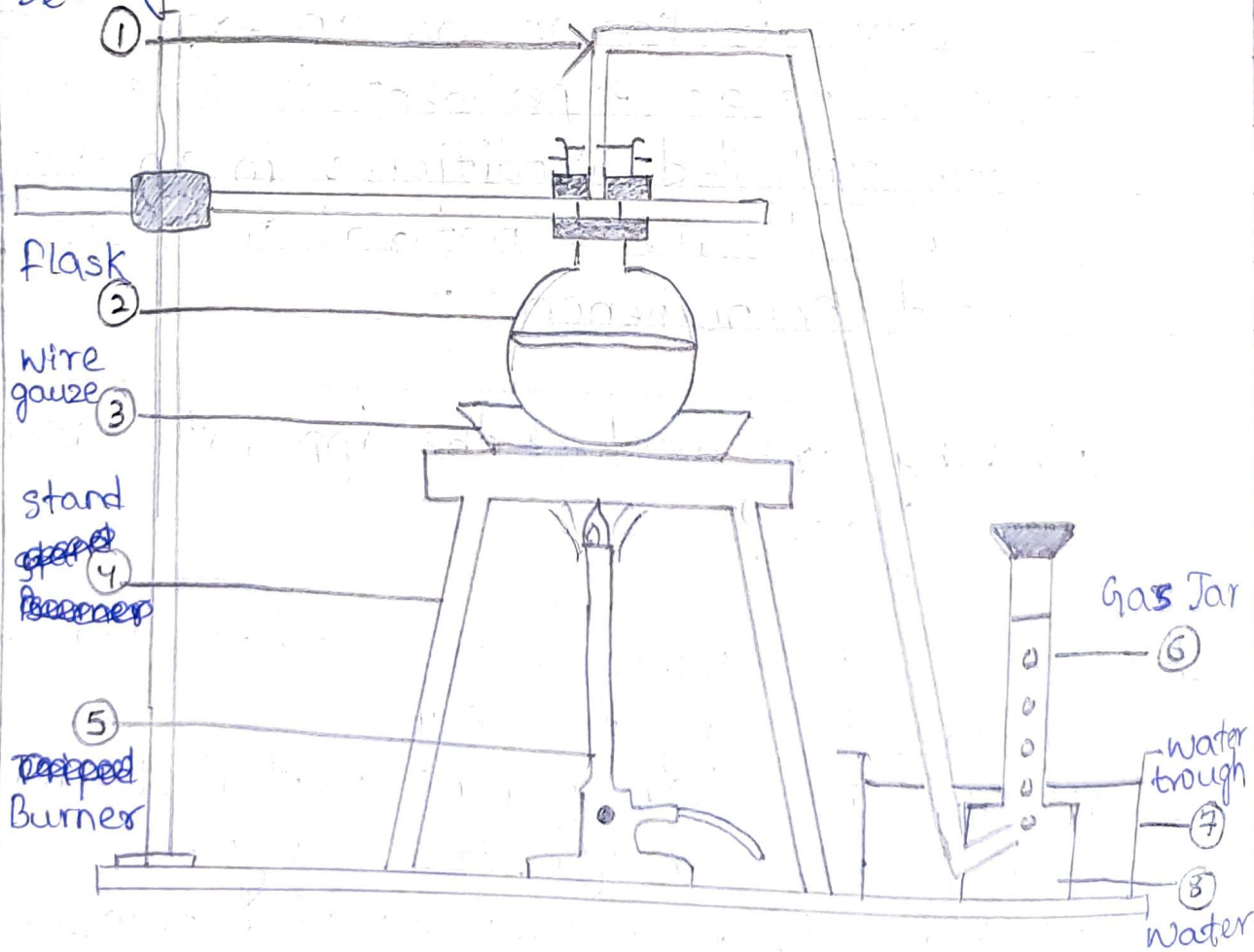
Ans. Most of the apparatus are made of glass because:

- ① Glass is easy to clean
- ② Glass is a transparent material and we can see through it clearly.
- ③ Glass can withstand high temperatures.
- ④ It does not react with most of the chemicals used in experiments.

5. Pyrex glass or Borosil glass is a special type of glass which hardly expands on heating. Such glasses do not break even at high temperatures.

5. Label the marked equipments and apparatus in the diagram given below :

Delivery tube



Objective type questions :

1. Fill in the blanks : —

- a) Experiments and observation are the two important basics of chemistry.
- b) A porcelain dish is used for evaporation.
- c) Test tube holder is used to hold the test tube while it is hot or being heated.
- d) Mortar and Pestle is used for grinding and crushing solid substances into a powder.
- e) Glass apparatus is made of Pyrex or borosil glass.

2. Match the following : —

- | <u>A</u> | <u>B</u> |
|----------------|------------------------------|
| (a) Iron stand | i) To boil chemicals (b) |
| (b) Test tube | ii) To keep solutions (d) |
| (c) Funnel | iii) To stir solutions (e) |
| (d) Beaker | iv) To support apparatus (a) |
| (e) Glass rod | v) To transfer liquids (c) |

3. choose the correct alternatives from the options given :-

(a) Evaporating dish is made of — Porcelain

(b) spirit lamp is made of — all of the above
(glass, brass, steel)

(c) The apparatus to measure an accurate volume of a liquid is — measuring cylinder.

(d) To pass a gas from one vessel to another you will use — delivery tube.

(e) To prevent the escape of a gas from a gas jar, you will cover its mouth with — watch glass.

4. Write true or false :-

(a) A glass funnel is used to pour off liquids. True

(b) A test tube is used to test liquid

chemicals. false

(A test tube is used to test chemicals and for heating and boiling purposes.)

(c) A mortar and Pestle is used for evaporation. false

(Mortar and Pestle is used to grind and crush solid substances into powder)

(d) A glass rod is used to stir solutions. True

(e) A round-bottom flask is used to store chemicals. false

(A Reagent bottle is used to store chemicals)

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