

Exercise

1) Mention one use of each of the following equipments:

- a) Spirit lamp: It is used to heat up substances.
- b) Test tube is used to conduct tests with small quantities of chemicals for heating and boiling purposes.
- c) Conical flask to hold sufficient quantities of substance in the form of solution.
- d) Evaporating dish is used for evaporation of liquids.
- e) Wire ~~gauze~~ gauze 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 is used for keeping of solutions.
- g) Mortar and pestle is used to grind and ~~to~~ crush solid substances into a powder.
- h) Measuring cylinder is used to measure the volume of (mainly liquid substances).
- i) Glass tube is used to transfer fluids or gases from one vessel to another.
- j) Gas jar is used for collecting gases and holding them in ~~active~~ captivity vacuum.

1) Reagent bottle is used for storing chemicals.

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

a) Test tube rack is made up of wood or plastic.

b) Test tube holder is made up of a iron clamp at front and wood or plastic handle at other end.

c) Measuring cylinder is made up of glass.

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

e) Mortar and pestle is made of porcelain.

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

Precautions to be taken in laboratory are:

* Do not touch or taste any unknown substance.

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

* Do not work alone in the laboratory.

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

* Always wear an apron in the laboratory to protect your clothes.

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

* The apparatus to be used in an experiment should be arranged neatly before beginning an experiment.

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

Q) Answer the following questions in briefs

a) Why is chemistry known as an experimental science?

A) Chemistry is known as 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 apparatuses made of glass?

As most of the laboratory apparatus is made up of glass because:

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

2) flask (round bottomed)

3) Wire gauze

4) Burner

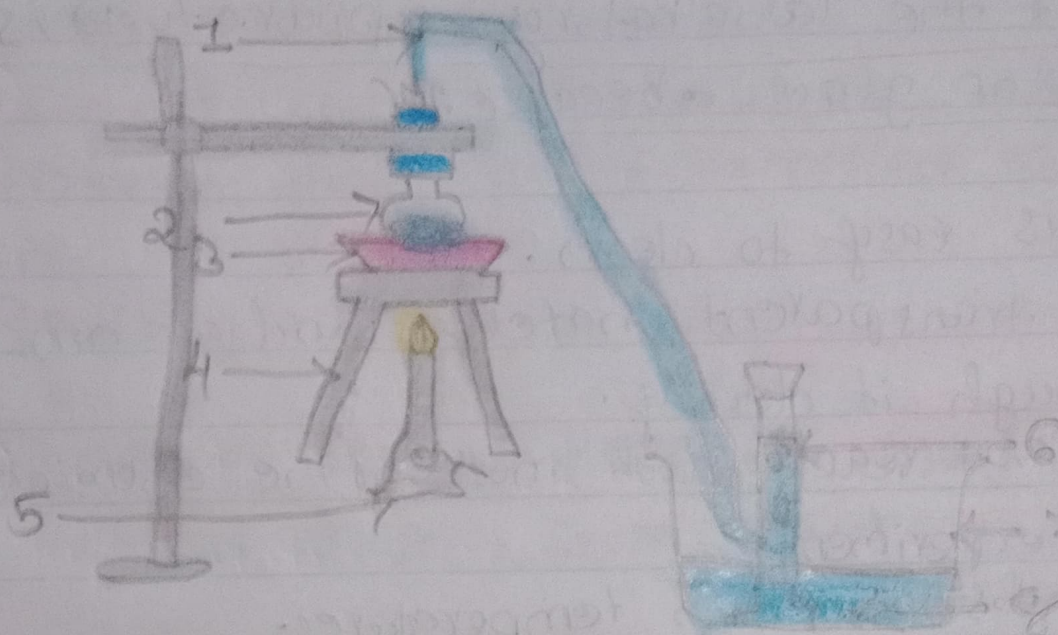
5) Tripod (stand)

6) Gas jar

7) Water trough

8) Water

Diagram of Q-35



Objective type questions

1) Fill in the blanks:

- Experiment and observation are the two important basics of chemistry.
- A porcelain ~~dish~~ dish is used for evaporation.
- A test tube holder is used to hold the test tube while it is heated.
- Mortar and pestle is used for grinding and crushing solid substances into a powder.

e) Glass apparatus is made of pyrex
~~or~~ or Borosil glass.

② As Column A Column B

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

③ Choose the correct alternative from the options.

a) Evaporating dish is made of:

As i) Porcelain

b) Spirit lamp is made of:

As iv) All of the above.

c) The apparatus to measure an accurate volume of a liquid is:

As iii) measuring cylinder.

d) To pass a gas from one vessel to another you will use:

Ans ii) delivery tube.

e) To prevent the escape of ~~gas~~ a gas from a gas jar, you will cover its mouth with.

Ans i) watch glass

4) Write true or false against the following statements and correct the false ones.

a) True

b) False:- Correct ones: A test tube is used to test chemicals and for heating and boiling purposes.

c) False: Mortar and pestle is used to grind and crush solid substances into powder.

d) ~~True~~ True

e) False: Correct: a reagent bottle is used to store chemicals.