

H.w
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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 - Conical flask is to hold sufficient quantities of substance 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 - Beaker 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 is used for storing chemicals.
2. From what material are the following made up of?
- (a) Test tube rack - It is made up of wood or plastic.
- (b) Test tube holder - It 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: It is made of porcelain.

3. Ans - Five precautions to be taken in laboratory are:

- 1- Do not touch or taste any unknown substance.
- 2- Use only small quantities of chemical to carry out experiment.
- 3- Do not work alone in the laboratory.
- 4- Do not throw hot concentrated acids into the sink basically.
- 5- Always wear an apron in the laboratory to carry out experiment.
- 6- While heating keep the mouth of test tube away from your eye and face.

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

Ans - 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 apparatus made of glass?

Ans - 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 give break even at high temperature.