

29-06-21
TUESDAY
C.W

Date _____
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COMMON LABORATORY APPARATUS AND EQUIPMENTS

EXERCISE

1. Mention ~~the~~ use of each of the following equipments:

(a) Spirit lamp: Spirit lamp is used to heat up substances.

(b) Test tube: Test tube is used to conduct tests with small quantities of chemicals for heating and boiling purposes.

(c) Conical flask: Conical flask is used to hold sufficient quantities of substances in the form of solutions.

(d) Evaporating dish: it is used for evaporating liquids.

(e) Wire gauze: is ~~used~~ 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 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 a cavity vacuum.

(k) 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 an 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 ~~outer~~ centre.

(e) Mortar and Pestle is made of porcelain.

3. List any five precautions taken care of while performing an experiment in a chemistry laboratory.

Five precautions to be taken in laboratory are:

- 1) Don't touch or taste any unknown substance.
- 2) Use only small quantity of chemical to carry out experiment.
- 3) Don't work alone in the laboratory.
- 4) Don't throw hot concentrated acids into the sinks directly.
- 5) Always wear an apron in the laboratory 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.

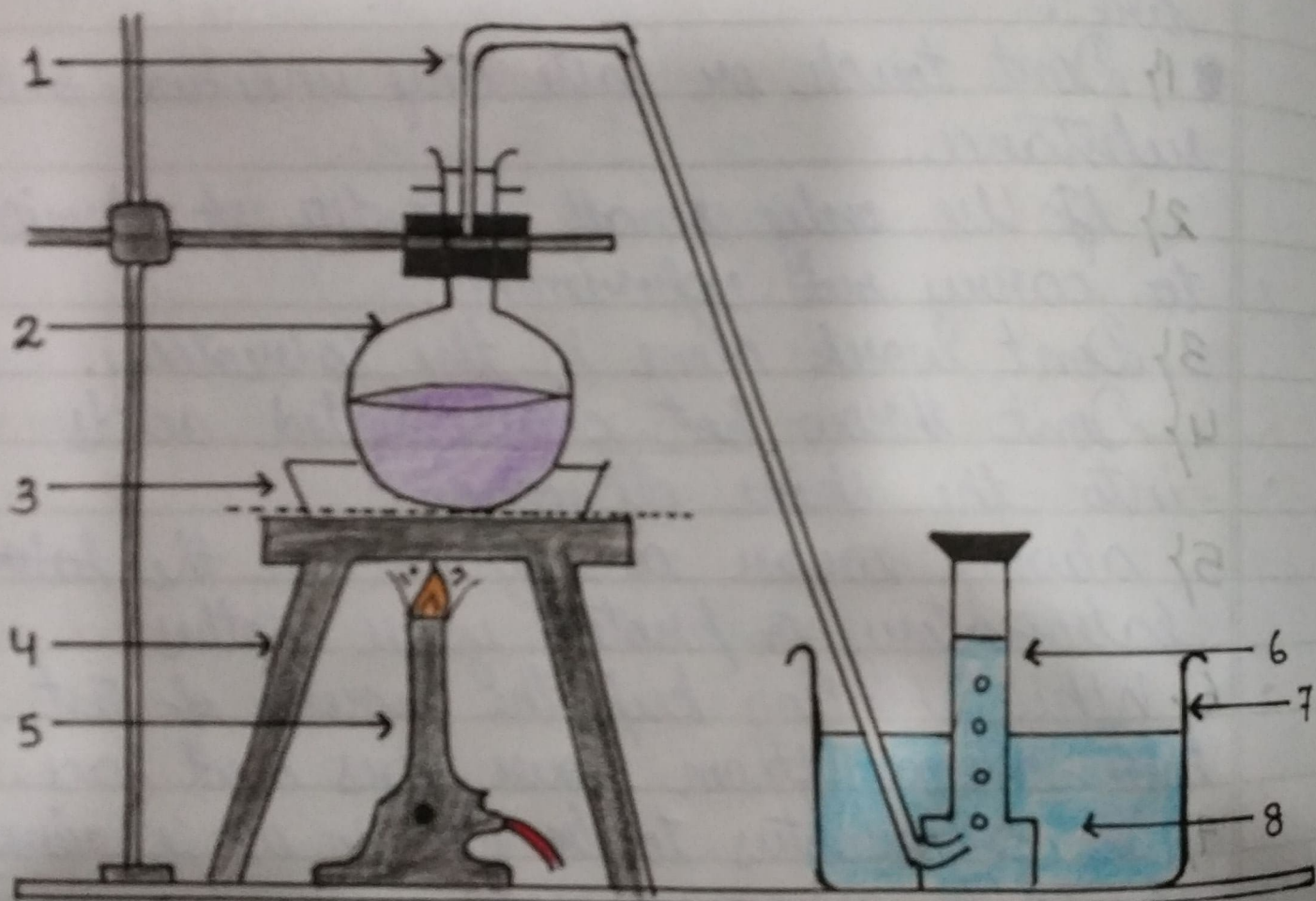
4. (a) Why is chemistry known as an experimental science?

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

(b) Why are most apparatus made of glass?
Most of the ~~labor~~ laboratory apparatus is made 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. Label the marked equipments in the diagrams given below.



- | | |
|-------------------------------|-------------------------|
| 1. Delivery tube (glass tube) | 2. Flask (round bottom) |
| 3. Wire gauze | 4. Burner |
| 5. Tripod (stand) | 6. Gas jar |
| 7. Water trough | 8. Water |

OBJECTIVE TYPE QUESTION

1. Fill in the blanks.

- (a) Experiment and observation are the two important basics of chemistry.
- (b) A porcelain dish is used for evaporation.
- (c) A test tube holder is used to hold the test tube while it is hot or being heated.
- (d) ~~Motor~~ 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.

COLUMN 'A'

COLUMN 'B'

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

3. Multiple choice questions.

- (a) Evaporating dish is made of
(i) porcelain
- (b) Spirit lamp is made of
(iv) all of the above
- (c) The apparatus to measure an accurate volume of a liquid is
(iii) measuring cylinder
- (d) To pass a gas from one vessel to another, you will use
(ii) delivery tube
- (e) To prevent the escape of a gas from a gas jar, you will cover its mouth with
(i) watch glass

4. True or False.

- (a) A glass funnel is used to pour off liquids. (T)
- (b) A test tube is used to test liquid chemicals. (F)
- (c) A mortar and pestle is used for evaporating. (F)
- (d) A glass rod is used to stir solutions. (T)
- (e) A round bottom flask is used to store chemicals. (F)