MARKING SCHEME

- 1. (a) To circle the 2 dots to the right.
 - (b) Line above solvent font
 - Line below base line
- 2.
- Add water to the mixture, warm, stir
- Filter the mixture, the residue is copper(II)oxide
- Evaporate water and sodium chloride remains

3.

- P sublimation
- Q condensation
- R melting
- S-deposition

(b)

(a)

- Dry ice
- Iodine

4.

- (a) Increase, zinc react with air to form zinc oxide.
- (b) Decrease carbonate decompose to zinc oxide and carbon(IV)oxide which escapes into the air.

5.

i)

- ii) Measure the temperature of the distillate coming out.
- iii) C, it has the least boiling point, hence it boils faster.
- 6. To draw dropper.

7.

- a) Sodium bromine
- b) Zinc and sulphur
- c) Lead and oxygen
- d) Magnesium and nitrogen
- e) Potassium and iodine

8.

Element	Symbol
Carbon	С
Nitrogen	N
Oxygen	0
Hydrogen	Н
Copper	Cu
Magnesium	Mg

9.

- Transparent, hence reactions can be observed easily.
- Does not react with most reagents.

10.

- Does not make beakers dirty because it has no soot.
- It is the hottest hence heats faster.

11.

a) 30⁰C

b)

PQ – Temperature increases steadily as solid X absorbs heat energy, the heat absorbed increases kinetic energy of the particles as they vibrate vigorously. QR – solid-liquid Temperature remains constant until solid X melts heat supplied is used to weaken forces of attraction holding particle of solid X together. The particles move far apart as solid changes from solid to

RS – Temperature rises steadily as the liquid X absorbs heat energy. The heat supplied increases further the kinetic energy of the particle causing them to move fast.

12.

- Bhang
- Cocaine
- Miraa

13. Wash immediately with cold water.

14.

- Don't run in the lab.
- Label reagents to avoid confusion.
- Don't smell gases directly, waft instead.

15.

- (a) Parts of the flame
 - A pale blue zone
 - B green blue zone
 - $C-almost \ colourless \ zone$

(b)