

(ii) State the reason and principle behind your observation

Reason .....

Principle .....

(iii) Relate the experiment to an aircraft in flight. (4 marks)

(b) Fill the container labelled X with water to the level marked Y and do the following:

(i) Record the strength of the jet at points A<sub>1</sub>, B<sub>1</sub> and C<sub>1</sub>.

A<sub>1</sub> .....

B<sub>1</sub> .....

C<sub>1</sub> .....

(1½ marks)

(ii) State the reason behind your observation.

(iii) Relate this experiment to an aircraft system.

(iv) State the effect of your observation on an aircraft in climb.

(3 marks)

Candidates were required to display Bernoulli's principles and pressure head by pouring water to a container with different hole sizes and same hole sizes at different heights.

The main weaknesses displayed by the candidates was inability to interpret the observations made in the experiment and relate them to a scientific principle and state how it is applied in an aircraft.

### 24.3 ADVICE TO TEACHERS

1. Emphasize precautions to be observed during towing, push back, refueling, defuelling, jacking, replenishment and starting engines.
2. Cover air navigation requirements chapter 394 in the laws of Kenya particularly:-
  - a) Roles of Kenya Civil Aviation Authority, Air traffic controllers, flight engineers and ground engineers
  - b) Aircraft certificates of validity, compliance, maintenance and air worthiness.
3. Carryout experiments to demonstrate principles, theorems and laws with a back up of theoretical analysis
4. Demonstrate expertise especially when dimensions are not shown to cater for scale effect.
5. Increase more time on practical work to develop skill, feel and confidence.