Provincial Department of Education -Sabaragamuwa - Week school

Science

Second week

Grade 10

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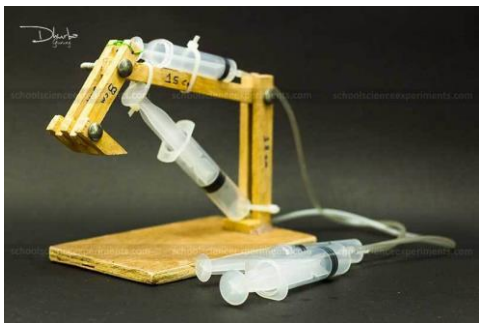
- A model of "JCB" machine is one of the most interesting items in an exhibition. Here the designer has used only 4 syringes.



(1) What is the basic theory behind this apparatus ?

(2) Create a simple setup using **only** the tools below to demonstrate the above mentioned theory.

- 50ml syringe -01
- 30ml syringe – 01
- 40ml water
- 30cm saline tube

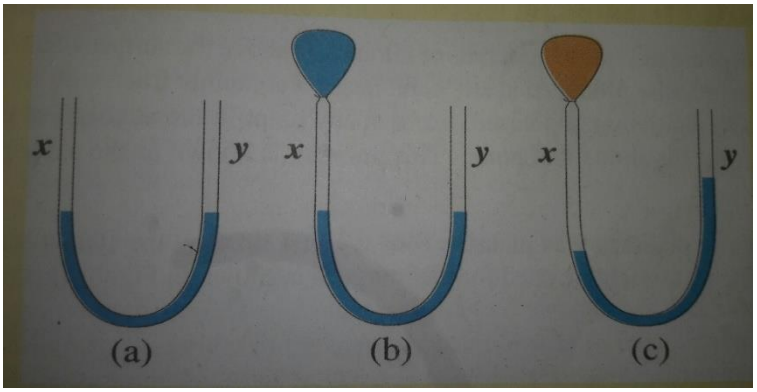
(3) Take observations by operating the above setup.

(4) Improve the setup to explain the principle of pressure transmission of liquid.

(5) Name 3 instances where the principle of liquid pressure transmission is applied.

(6) Illustrate using a diagram how principle of liquid pressure transmission works in a vehicle break system (read for more on page no.72 ,part ii grade 10 science book).

(7) Answer the questions using the below diagrams.



i) In which instance a pressure occurs due to expansion of compressed air.
ii) Select from the above instances where atmospheric pressure represents correctly.
iii) Explain why the liquid level in the "**x**" arm changes when the balloon knot in the "**c**" is removed.