IGANGA TOWN VIEW SECONDARY SCHOOL.

MIDTERM TWO EXAMINATIONS

NAME :……..

STREAM ……..

S.3	TIME : $1\frac{1}{2}$Hr
PHYSICS	TERM TWO
MID-TERM II	2023

READ THESE INSTRUCTIONS FIRST.

You must answer on the question paper.

- Write in dark blue or black pen.
- You may use an HB pencil for any diagrams or graphs.
- Do not use , paper clips, glue or correction fluid.
- Answer all questions.
- Write your answers in the spaces provided on the Question Paper.
- Electronic calculators may be used.
- You may lose marks if you do not show your working or if you do not use appropriate units.
- At the end of the examination, fasten all your work securely together.
- The number of marks is given in brackets () at the end of each question or part question

TURN OVER

1. a) Kwagala Mary ; a student of iganga town view secondary school , placed a sewing needle and set it down on top of the water in the bowl as shown in the figure

   a) , state what was observed. (01mark)

Figure (a)

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b) She later , Cut a small piece of paper (larger than the needle) and set it to float on the water, Gently set the needle on top of the floating paper and Carefully pressed down on the sides of the paper so that they get water logged and the paper sinks as shown in the **figure (b)** below .

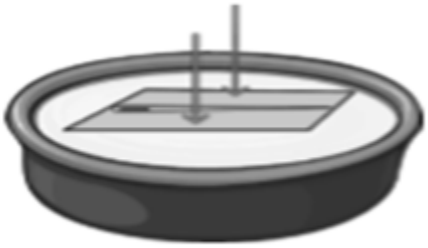

Figure (b)

a) He added soap solution on the surface of the water and repeated the above procedures. State what was observed and make conclusion on the above experiment .

   Observation (01mark)

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   conclusion (01mark)

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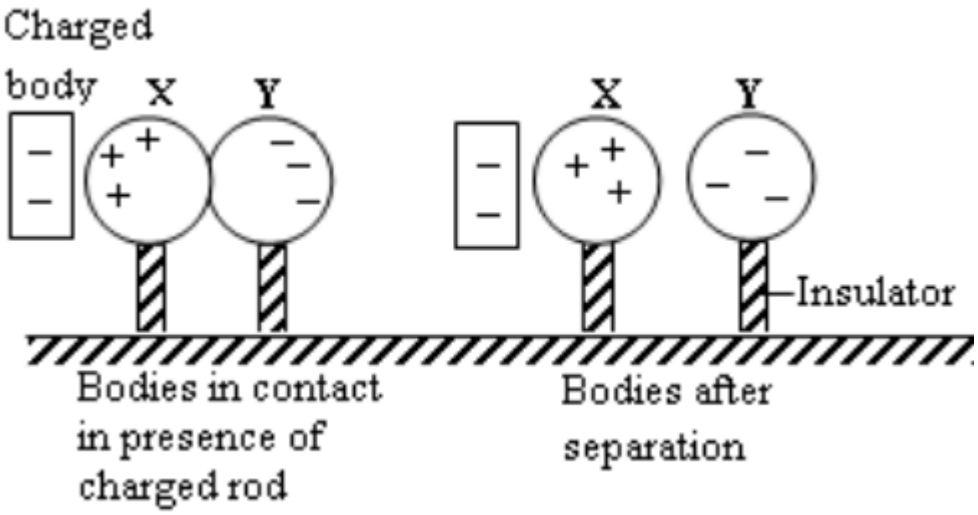
2. Two uncharged bodies (**X** and **Y**) supported on an insulator placed in contact are brought near a charged body as shown in the figure below .



Explain how the two bodies acquired a charge

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3. Most large ships are **not made out of wood**, but **out of steel**. As earlier discussed that a lump of steel will not float because it has a density of 7.9 g $cm^{-3.}$

A ship and ferry floating on water

How then can a large ship made of steel float?

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4. There is a parent project in your school to construct two rectangular pit latrines . one at the girls ' wing and another at the staff quarter' s wing . However , the Board of Governors and the school administration have failed to agree on the choice of materials to use in construction .

SUPPORT

TASK

(a) using the knowledge and skills learnt in ''**mechanical properties of materials**'' , suggest a choice of materials you would advice the school board to use in the construction of the latrines (4mks)

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5. a)state pascals principle

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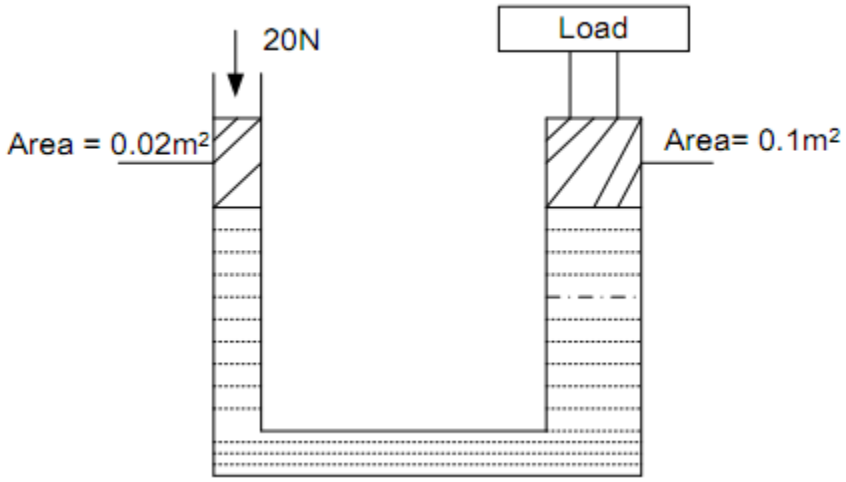
b) The figure below shows a press used to lift the load at a certain industry . find the value of the load .



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8. The table below shows the velocity of a moving car at different times

Time (s)	0	2	4	6	8	10
Velocity (ms^{-1})	0	4	8	8	8	0

(a) Draw a velocity –time graph (use the graph below and a convenient scale)

(b) From the graph , calculate :

(i) Average acceleration of the car in the first four seconds

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(ii) Acceleration of the car between the fourth and the eighth seconds.

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(iii) Acceleration of the car during the last two seconds in motion

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(iv) Total distance covered by the car .

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END

QUOTE OF THE DAY

The forest you see over there ; was ounce a forest .

Whatever you need to be, the person you need to become ; is with you right now.