ADM.............NAME...CLASS.........

GATITU SECONDARY SCHOOL P.O BOX 327- 01030 GATUNDU
FORM TWO PHYSICS END TERM EXAM
TERM I 2015   **TIME 2HRS**

Instructions

➤ Write your name admission number and class in the spaces provided above
➤ Answer all the questions in the spaces provided in the question paper.
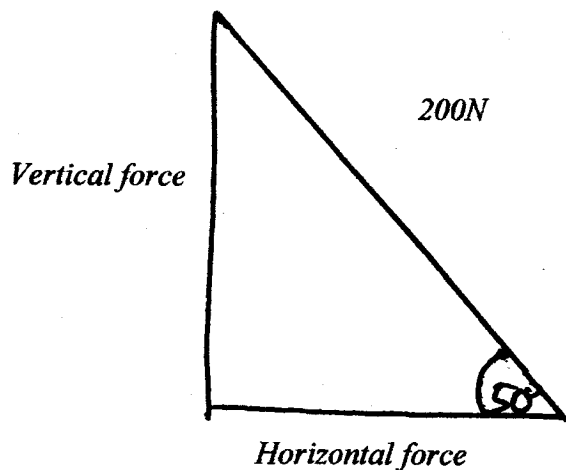➤ All working must be shown clearly.

1. Define the terms
   a) Vector quantity

   (4mks)

   b) Scalar quantity.

2. A garden roller is pulled with a force of 200N acting at an angle of 50° to the level ground. Find the horizontal force pulling the roller. You may use the diagram below. (3mks)
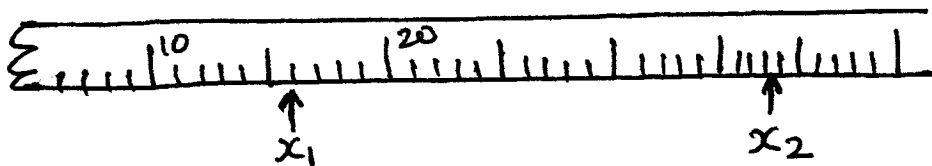
Vertical force

200N

Horizontal force

3. Explain how you would assist a victim of ;
   a) Acid burn.

   (4mks)

   b) An electric shock.

4. Give the length measured using the metre rule shown below.   (4mks)

   $X_1 =$

   $X_2 =$

5. A coffee table measures 40cm by 30cm. its top has a thickness of 2cm. determine the
   i)   Area of the top of the table.   (2mks)

   ii)   The volume of material used to make the top of the table. Give your answer in
         standard form.   (3mks)

6.
   a) Define center of gravity.   (2mks)

b) How does the position of center of gravity determine the stability of a body. (2mks)

7. (a) What is density? Give its SI unit. (3mks)

(b) Gold of mass 9.6 grams fills a container whose capacity is $0.5cm^3$. Calculate the density of gold. (3mks)

8. (a) Define pressure and give its SI units. (3mks)

(b) A block of copper with a density of $8.9gcm^{-3}$ measures 5cm by 2cm by 3cm. Given that g = 10N/Kg, determine;

i)   Maximum pressure the block exerts. (3mks)

ii)   The minimum pressure. (3mks)

9. One of the properties of a liquid used in a hydraulic machine is that it must be incompressible. State any other property of the liquid. (2mks)

10. **TWO** liquids were sucked up in two identical tubes as shown below. Given that liquid B is water, determine the density of liquid A.
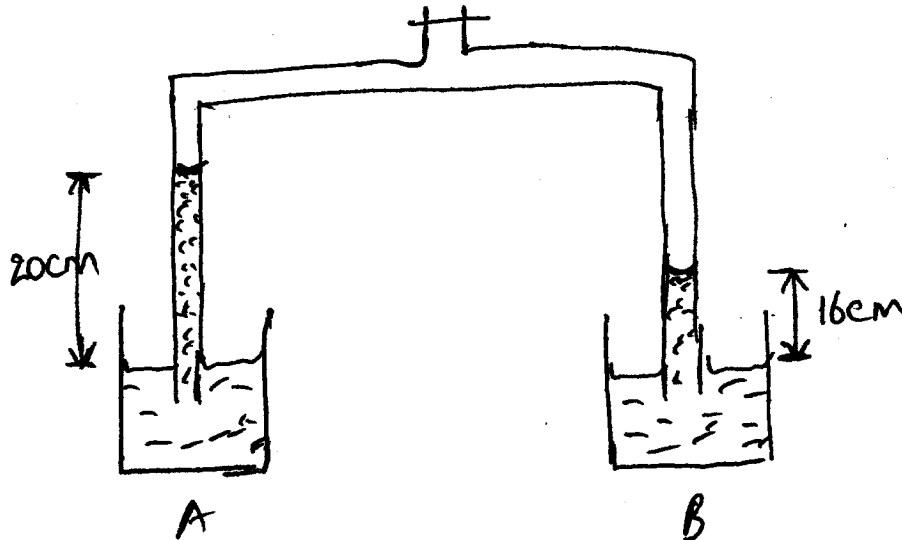
11. Convert temperature below into the indicated unit

a) 30°C into kelvin

b) 570K into °C

c) -23°C into K

12. Why are ventilation holes are positioned high up on the wall? (2mk)

13. (a) What is light? (2mks)

   b) Name the two major types of sources of light. (2mks)

14. (a) A pinhole camera of length 20cm is used to view the image of a tree of height 12cm which is 40cm away from the pinhole. Calculate the height of the image of the tree on the screen. (3mks)

   (b) Write down three characteristics of the image formed above. (3mks)

15. In the figure below, the mirror is rotated through an angle of $10°$. Determine the angle through which the reflected ray is rotated for the same incident ray. (2mks)
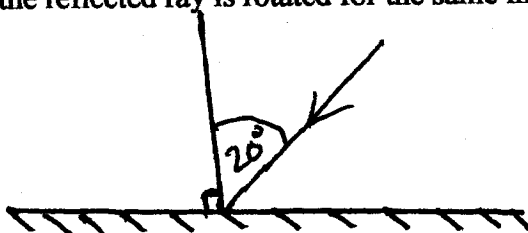
16. State THREE factors that affect electrostatic force. (3mks)

17. Mention any TWO ways of discharging an electroscope. (4mks)

18. Draw the symbol used for the electrical appliances shown below. (4mks)

Appliance	Symbol
Battery	
Switch	
Capacitor	
Variable resistor	

22. What is the purpose of a cell in a circuit? (2mks)

23. Name six sources of electricity. (6mks)

24. Give two faults of a simple cell. (2mks)