

MARKING GUIDE

By ONDERI KENNETH
0705476300

~~HANDESSA~~ HONIMA

$$\left(\frac{60}{60} = 100\%\right)$$

S.1 TERM ONE EXAMINATIONS 2023

PHYSICS

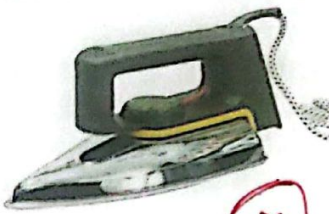



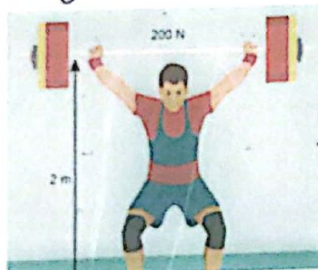



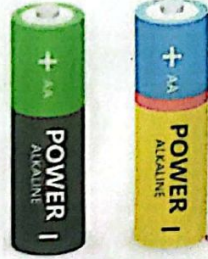
NAMESTREAM.....

INSTRUCTIONS

TIME: 1 hour 30 minutes

❖ Answer all questions

- Physics has eight major branches that are commonly applicable in daily running of our societies all over the world. by looking at the pictures below, you are required to identify the branches of physics using your knowledge of components of branches of physics you learnt. (9mks)

		
Heat/electricity ✓	light ✓	modern physics ✓
		
light ✓	mechanics ✓	waves and sound ✓
		
electricity ✓ Earth and space ✓	Earth and space ✓ light ✓	electricity ✓

MASSH PHYSICS DEPARTMENT "CARING TO ACHIEVE"

Total

9

2. The importance of physics in our lives is highlighted by the many applications that physics has made possible in people's lives, and which have become one of the indispensable necessities of life however most people are not aware of this significance. Explain briefly four ways how physics helps in our daily life. (4mks)

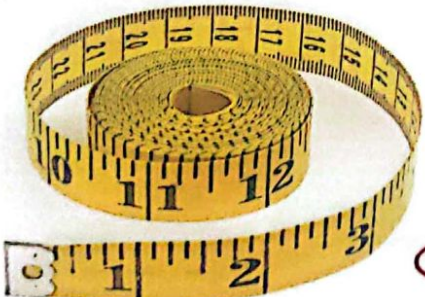

→ weather instruments help predict the weather and we plan our daily activities based on weather pattern.
→ measuring instruments help in avoiding cheating.
→ machines help ease man's work e.g. Tractors.
→ source of employment to teachers, engineers etc.
→ solve daily energy needs using solar energy.
→ save the environment by eliminating poor waste management especially plastic.

3. During the visitation at your school parents and guardians flooded the school compound and as part of school way of promoting their school to the outside community you are one of the few students selected to show the parents around the school laboratory. Whereas in the laboratory many apparatuses were organized to be displayed to the parents and guardians who were eagerly waiting to see how well their learners have attained knowledge and skills while at school.

- a) Before you let the parents in the laboratory, don't forget to inform them about what a laboratory is, and also inform them about the **rules** and **regulations** they must abide by as they enter the laboratory for the tour (5mks)


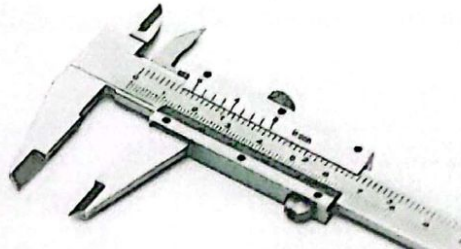
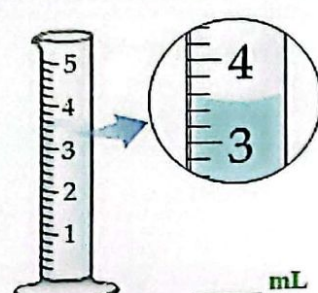

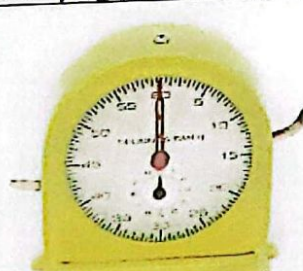

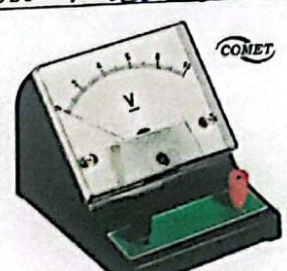
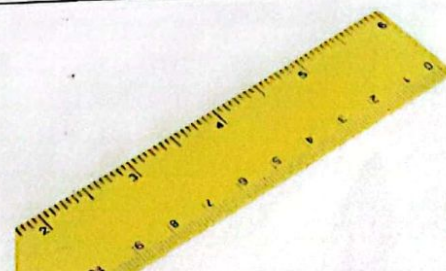
✓ A laboratory is a special room where scientists experiments are carried out.
✓ You must not eat or drink while inside the lab.
✓ You must ensure silence inside the lab.
✓ You must be orderly in the lab to avoid accidents.
✓ You must put on safety gears like gloves or safety glasses before you enter the lab.
✓ You must only carry out permitted experiments.

- b) Help the parents identify the name and uses of each apparatus labeled below. (20mks)

	
<p>Name <u>Tape measure</u> Use <u>measure long distances</u></p>	<p>Name <u>micrometer screw gauge</u> Use <u>measure small diameters of pipes or wires or thickness</u></p>

MASSH PHYSICS DEPARTMENT "CARING TO ACHIEVE"

total
13

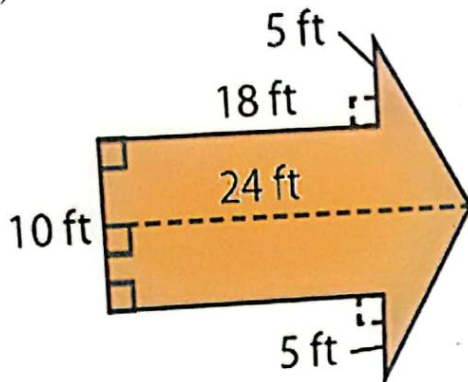
 <p>(2)</p>	 <p>(2)</p>
<p>Name <u>Beam balance</u></p> <p>Use <u>measure weight/mass</u></p>	<p>Name <u>Vernier Calliper</u></p> <p>Use <u>measure short distances</u></p>
 <p>___ mL</p> <p>(2)</p>	 <p>(2)</p>
<p>Name <u>measuring cylinder</u></p> <p>Use <u>measure volume</u></p>	<p>Name <u>Thermometer</u></p> <p>Use <u>measure Temperature</u></p>
 <p>(2)</p>	 <p>(2)</p>
<p>Name <u>stop clock</u></p> <p>Use <u>measure time</u></p>	<p>Name <u>stop watch</u></p> <p>Use <u>measure time</u></p>
 <p>(2)</p>	 <p>(2)</p>
<p>Name <u>Voltmeter</u></p> <p>Use <u>measure voltage</u></p>	<p>Name <u>metre rule</u></p> <p>Use <u>measure distance</u></p>

MASSH PHYSICS DEPARTMENT "CARING TO ACHIEVE"

total
16

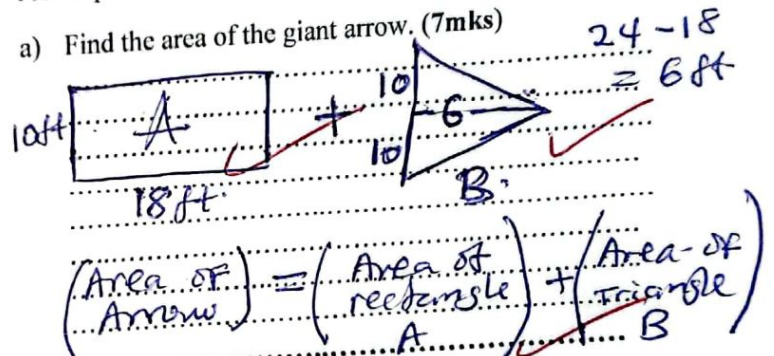
4. From question 3 above, identify the best instrument for measuring the following distances in order to help attain the best results possible. (10mks)

- (i) Length of the school basketball ground Tape measure ✓
(ii) Thickness of a paper sheet micrometer screw gauge ✓
(iii) Diameter of a small wire micrometer screw gauge ✓
(iv) Height of a child Tape measure ✓
(v) Waist size Tape measure ✓
(vi) Diameter of marble or pendulum bob micrometer / vernier ✓
(vii) Time taken to run a race of 100m stop watch ✓
(viii) Volume of irregular objects measuring cylinder ✓
(ix) Area of a rectangular table metre rule or Tape measure ✓
(x) Mass of sugar bought Beam balance ✓



Jess is painting a giant arrow on a playground.

a) Find the area of the giant arrow. (7mks)



5.

$$= (l \times w) + \left(\frac{1}{2} \times b \times h\right)$$

$$= (18 \times 10) + \left(\frac{1}{2} \times 18 \times 6\right)$$

$$= 180 + 60$$

$$= 240 \text{ ft}^2$$

b) If one can of paint covers 100 square feet, how many cans should Jess buy? (5mks)

$$100 \text{ ft}^2 = 1 \text{ can}$$

$$240 \text{ ft}^2 = \frac{240 \times 1}{100} = 2.4 \text{ cans}$$

Jess should buy 3 paint cans to cover 240 ft² of the giant arrow.

The end (Great effort deserves great reward)

MASSH PHYSICS DEPARTMENT "CARING TO ACHIEVE"

Total
22