

NAME:..... STREAM:.....

S.1 PHYSICS

Time: 2 HR

INSTRUCTION;

ATTEMPT ALL QUESTIONS IN BOTH SECTION A AND SECTION B
SECTION A

- 1.** During the visitation at your school, parents and guardians flooded the school compound and as part of school way of promoting the school to the outside community you are 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. You have been selected as one of the few students to guide parents and guardians through laboratory tour. Organize the speech you are going to present to parents about the physics laboratory and don't forget to inform them of the rules and regulations they must abide by as they enter the laboratory for the tour. As the second part of your presentation, you are required to organize ten different apparatuses found in physics laboratory, write down their name and briefly explain their real-life applications. (20 marks)
- 2. a)** Your father, who knows nothing about measurements, intends to buy a piece of land to relocate the entire family. Musiime, his closest friend, informs him about a rectangular plot on sale. Musiime claims that the plot measures 150ftX100ft. As a student of Physics, advise your father on the choice of the apparatus to measure the land. Write down the steps that your father would follow in order to accurately measure area of the land clearly highlighting the necessary precautions. Calculate the area of the land in m^2 . Sketch the plot to scale. HINT; 1ft = 30.5cm. (10 marks)
b) Bosco pours and sells water in a 20 litre jerrycan at UgShs.450 per jerrycan. One day he was paid UgShs.23400 by one of his customers who wanted to buy water. What physics term can be used to replace the sentence, "the space occupied by water in a jerry can? how much water in liters should Bosco sell to his customer? name any other two common units used in measuring the amount

of space occupied by an object, what is the relationship between mentioned units and the unit used by Bosco. (10 marks)

SECTION B

- 3.** (a)(i) Explain the term weight and state its SI unit. (02 marks)
(ii) State the relationship between mass and weight. (03 marks)
- (b) A minibus of mass 3,000 kg is authorized to carry 14 passengers, a driver and one conductor. If the average mass per person is 50 kg, determine;
(i) the weight of the minibus. (03 marks)
(ii) the total weight of its occupants. (03 marks)
(iii) the total weight of the minibus and its occupants. (02 mark)
- (c) State three differences between mass and weight of an object. (03 marks)
- (d) The mass of an object on earth with $g=10 \text{ ms}^{-2}$ is 250kg. if that same object is transferred to another place with $g= 8.5 \text{ ms}^{-2}$. As a physics learner, find the change in its weight. (04 marks)
- 4.a)** “Length of a football pitch is a fundamental physical quantity whereas Area of the football pitch is a derived quantity”. Said the teacher, briefly explain what this statement means, name any other four fundamental quantities and four derived quantities. (10 marks)
- b) Six different groups of were research work on project about finding the length and width of a standard football pitch. Since each group worked independently, they ended up presenting their research findings in different units shown in the table below.

GROUP	A	B	C	D	E	F
LENGTH	11Dm	11000cm	120000mm	0.1km	0.9Hm	1000dm
WIDTH	7Dm	7000cm	80000mm	0.06km	0.45Hm	550dm

As the student coordinator in the class help your friends from other groups to work together by using standard units of measurements of length for all groups and find area of the football pitch for each group. (10 marks)