

NAME:.....SIGNATURE:.....

CALTEC ACADEMY MAKERERE
Department Of Physics
COMPETENCE BASED CURRICULUM
C.A.T 1
SENIOR TWO.

1 ½ Hours

INSTRUCTIONS: ATTEMPT ALL QUESTIONS

1. (a) Define the term **fundamental** quantities.

.....
.....

- (b) State two examples of the above quantities.

.....
.....
.....

- (c) The table below shows physical quantities, their units and the instruments used to measure them. Complete the table.

| Quantity | Unit | Unit symbol | Instrument |
|----------|---------|-------------|------------|
| Mass | | kg | |
| Weight | newton | | |
| | seconds | s | |
| Length | | m | |
| current | | | Ammeter |

- (d) A woman in the village has harvested some coffee beans. She doesn't know which property of the coffee beans to measure while selling off the coffee beans. Advice the woman on the property she may measure and describe how she can measure them.

.....

.....

.....

.....

.....

.....

.....

2. (a) What is **force**?

.....

.....

(b) State four effects of a force on a body.

.....

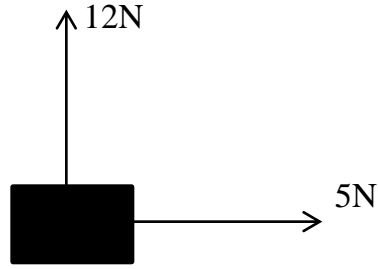
.....

.....

.....

(c) In each of the following diagrams, calculate the resultant force acting on the body.





(d) Peter and Alexa are to move a table by applying forces. Sketch a diagram to show how they can apply the forces so that the resultant force on the table is;

(i) **Minimum**

(ii) **Maximum.**

(e) If Peter is as strong as Alexa, explain what would happen if they apply the forces as in d(i).

.....

.....

.....

.....

3. The village through Kiwenge village is normally slippery after a heavy down pour. A truck delivering mosquito nets to the next village of Nsama is stuck in the mud. The chairman of Nsama has requested you to help get the truck out of the mud. Write down your plan.

(Resources: 8 strong men, gum boots, ropes)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

END