KIYALA HIGH SCHOOL

MID-TERM TWO ASSESSMENT TEST 2024

PHYSICS

S.2

Time: ***2 Hours***

INSTRUCTIONS:

- *This paper consists of* **two items.**

Answer **all** *the items***.**

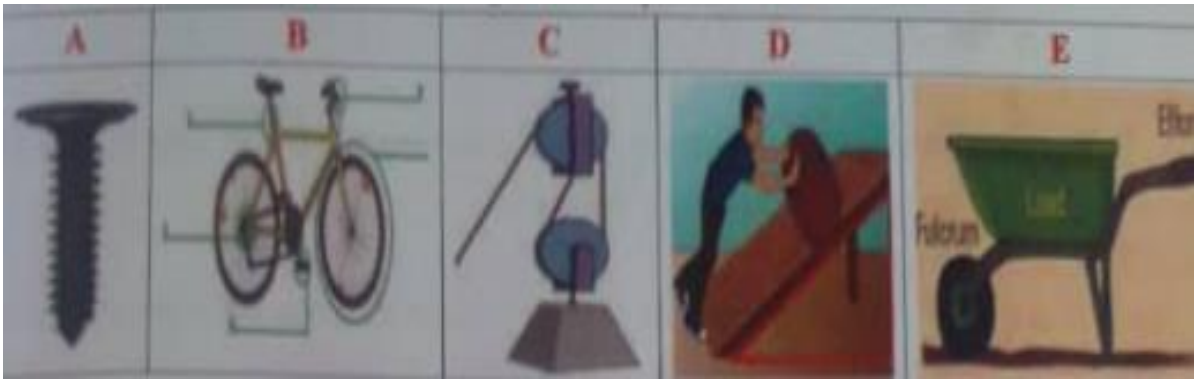
<u>Item 1</u>

a) Juliet and Remah failed to agree in a discussion that was organized towards the end of term one last year. The discussion was whether energy exists informs or not. Juliet said there cannot be forms of energy whereas Remah said they exist about seven of them.
Task
As a S.2 student, write a report guiding them clearly out their arguments and include the applications of content in daily life.

b) During the holidays of term three, the father asked his son to go and join a certain construction site. As he was to wok, an engineer lifted a heavy stone of 2,200 kg from a deep hole through a vertical height of 7m from the bottom of the hole using crane within 2 minutes.
Task
As a physicist, help him to get how much work was done by the crane and its power. (use g = 10 ms^{-1})

Item 2

The work we do at home and other places can be simplified by use of different types of machines and these machines are designed to do specific work.



Task

a) Use the figures A, B, C, D and E above to state and explain different types of machines above.

b) A simple machine raises a load of 2.4 KN through a distance of 0.4m when an effort of 250N is applied through a distance of 15m. Calculate;

- ***i)*** Mechanical advantage.
- ***ii)*** Velocity ratio.
- ***iii)*** Efficiency of the machine.

GOODLUCK