

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

S.1 PHYSICS

INSTRUCTIONS TO LEARNERS

- ❖ Answer all items
- ❖ Show all you're working.
- ❖ All responses should be written in the spaces provided.

Item one:

One evening, Nayiga kept juice in a tightly filled and corked glass bottle in a deep freezer. On opening the freezer, the following morning, Nayiga found the glass bottle broken with the juice frozen.

She also realized that the temperature readings changed from 95°F to -1°C in the morning.

Task:

- a) As a physics learner;
- i) Explain to Nayiga what happened.

.....

.....

.....

.....

- ii) The properties of the juice before it was frozen.

.....

.....

.....

.....

- b) Express the temperatures in a thermodynamic scale.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Item two:

Gloria built a house and due to certain weather changes, she was advised to buy paint of density 1.5 g/cm^3 .

However without knowing the foreman bought paint before Gloria was advised.

The paint was brought in cylindrical cans with diameter 0.14m and height 0.5m .

On the tin there is a marking, "net weight is 11550g ".

The Spirit of the Living God reigns.....

Facing this Gloria is a bit confused on what to do.

Task:

As a student of physics;

a) Advise Gloria on what to do.

.....

.....

.....

.....

.....

.....

b) Where can we apply density in our daily life?

.....

.....

.....

.....

.....

.....

.....

Item three:

During the rainy season Lorries and pickup trucks usually skid, slide or get stuck in the mud and this makes transport of goods and trading difficult.



One man made an analysis that if the vehicle can apply a force of 20 000N it can overcome the resistance of 180 000N but others were not sure.

Task:

a) Suggest possible ways to remove the truck from this position.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

The Spirit of the Living God reigns.....

.....
b) Advise the driver on how to avoid the above situation.

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

.....
c) Calculate the resultant force on the vehicle.

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

The struggle still continues