**BUNJAKKO ISLAND VOC. HIGH SCHOOL MPIGI**

**END OF TERM II ASSESSMENT 2024**

**Uganda Lower Secondary Curriculum Education**

**Senior Three**

PHYSICS

**Paper 1**

Theory

**Time:**

**INSTRUCTIONS TO LEARNERS:**

* This paper consists of **three** examination **Items**.
* Answer **all** examination Items.
* Any additional item(**s**) answered will **not** be scored.
* All answers **must** be written in the booklets provided.

**Item One**

While in the dining hall watching an international T.V during lunch time, learners watched heavy rains with fog and floods being experienced in a certain outside country on a live broadcast. To worsen matters the floods were happening at night and this risked many people as many of them were ambushed while asleep. Learners wondered how it would be night and seriously raining in a particular area yet it was day and the sun was highly shinning at that time in their school. The learners also wondered how the T.V station managed to cast pictures from that far.

**Task**

As a physics learner, help the learners clear their queries about;

1. Occurrence of those different seasons at the same time.
2. How the night in that outside country was day in their area at the same time.
3. How T.V signals broadcast from where the floods were happening reached them.
4. Where the sun always got energy to so much shine and heat the earth.

**Item Two**

There has been continuous complain of eye problems in your community and members of the community have associated these eye problems to witch craft as some see far clearly and others see nearer clearly. The L.C.1 chairman announced across the community using a mobile speaker that the eye care organization was to visit the community for eye defect tests and give free spectacles but the residents were against the move since they think the problem cannot be addressed medically. While communicating, the L.C.1 reached in front of a big church whose priest thinks it may be abolished by UNRA for being in road reserve, the words mentioned were heard by the L.C.1 repeated at an interval of **1.1 s**. the L.C.1 wondered and said the speaker had got a problem as it wasn’t doing that before.

**Support material**

* Speed of sound in air
* The total distance from the church building to the road including road reserve should not be less than.

**Task**

As a physics learner,

1. Write a message to the community that the above defects do are health disorders and can be solved medically.
2. Help explain to the L.C.1 the fate of the speaker.
3. Advise the Priest whether the church will be demolished.

Item Three

On a construction site a builder uses an electric lifter to transfer wet concrete mixture from the ground to a height of on the building. When power went off and work has to continue, the builders get a rope, a cut jerry can plate with a handle of mass 1.5 kg to lift to lift a maximum load of 20 kg concrete mixture to the next floor. They hope to design a simple machine with the help of a grooved rim which enables them resume the work. Given velocity ratio **(V.R**) should be **4** and the rope has to be strong enough in order to support the work of more than.

**Task**

**As** a learner of physics,

1. Help the builders to design the machine and guide them on how it works.
2. Show whether the rope will withstand the load without breaking.
3. Suggest the possible ways to be used in order for the work to be done quickly with ease.

**END.**