

TEST ONE

PHYSICS S.4

TIME : 1 : 40 MINS

Attempt all questions

1. John is a new student who joined your school this term and he is in the same class with you, In his former school they had not covered Waves which you covered. If your teacher chooses you to explain to John what you learned about Waves for him to also understand.

Task

Write a summary that you're going to use to explain to John and it should include,

- a). Meaning of waves, classification of waves and at least three differences between them, definitions of some four common terms used in waves.
- b). Simple diagram of an electric bell and how it can be used to show that sound waves require a material medium for their transmission, some four factors that affect the speed of sound.
- c). Guide him through this calculation, A vibrator produces waves which travel a distance of 35cm in 2 seconds. If the distance between two successive crests is 5cm. Find
 - i). Velocity of the wave
 - ii). Frequency of the waves

2. In our communities, there are instances that occur and some people try to explain how they come across but others just don't know what takes place but at the end of the day they are all related to science and nature.

Task

- a). Define Refraction, show how light can move from air to glass and use it to state the laws of Refraction of light.
- b). Describe a simple experiment to determine Refractive index and explain what is meant by Refractive index.
- c). A ray of light traveling through air strikes glass at an angle of 45 degrees to the surface, given that the Refractive index of glass is 1.40. find
 - i). Angle of Refraction
 - ii). Angle of deviation

END