**END OF TERM2 S.3 PHYSICS LOWER CURRICULUM ASSESSMENT 2024**

*Duration: 2hours 15 min*

*Attempt any three questions*

1. Atim is a market vender in your community. She deals in buying and selling agricultural produce .She has been complaining that farmers mix some metals into product to make it. Write a short advice note explaining how she can detect and remove the metallic materials out of the producer

b) Given one of materials found in the produce is a piece of iron bar describe one method you can make the iron bar to attract more metallic objects from the produce.

2. You are on your way one and you found a builder who has been been told by a certain company to construct the storage building. the company directed him to use materials which are malleable, elastic ,plastic ,ductile and brittle but the builder was confused on which materials to use .As a physics student prepare a short speech which can help the builder that understand those terms. In your speech list some of examples of ductile and brittle materials he can use during the construction of the building

b) Assuming that the builder used a metal rod which requires a force of 50N to produce an extension of 2cm .find the force that can produce an extension of 4cm

c) Given that one of steel bar had an original length of 0.48m and cross-section area of 0.000005m2 and a force of 500N acted on it to produce an extension of 3cm.find the strain and stress on the bar

3.Peter went to the lababoratory to collect concave mirrors of focal length 10cm .unfortunately, he found these mirrors mixed with those whose focal length was 10cm .as physics learner given that you are given ,a white screen ,,the mirrors ,mirror holder and metre rule in a room whose windows are open during day time ,help peter to separate the mirrors in order to obtain the concave mirrors whose focal length is 10cm and state the uses and applications of these mirrors .

b) Given that a pen whose height is 5cm is placed 20cm from the above mirror .find by graphical method the nature, position and size of image obtained

c) Give reasons why that above mirror is not used as driving mirror.

4. Joseph first filled one bowl whose area was 0.4m2 with cold water and another whose area was 0.8m2 with boiled hot water .then he just left them to settle to 5-15 minutes. Then he added just a little food colouring in each bowl in an ice controlled way. Perhaps by dipping a handle of a tea spoon into the food colouring and then just touch the surface of each bowl of water with it.

1. State what was observed in the above experiment
2. Explain your observation
3. Name any adjustments you can make so that the experiment takes place faster
4. Given that the weight of the bowl with hot water is 500N and that with cold water is 800N which one exerts more pressure.