Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic: GCSE Triple Science_Waves (HDQ)

Merit Minds
www.merit-minds.com
Exam Preparation and Free Resources

Name of the Student:_____
Max. Marks : 21 Marks **Time : 21 Minutes**

Q1.

The picture shows a pre-natal scan obtained using ultrasonic waves.



(i) Explain how ultrasonic waves are used to produce the image of an unborn baby.

_____

_____

_____

_____

(2)

(ii) Give another use for ultrasonic waves.

_____

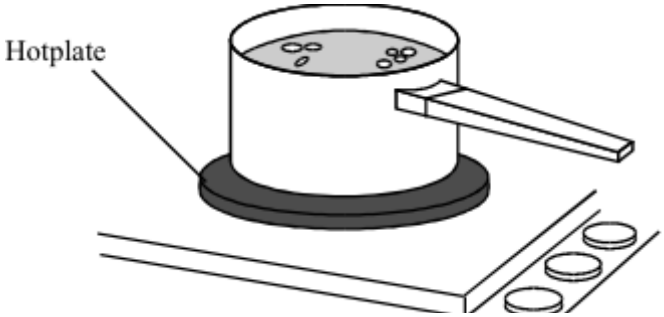
(1)

(Total 3 marks)

Q2.

The drawing shows water being heated in a metal saucepan.

Downloaded from www.merit-minds.com



(a) Explain, in terms of the particles in the metal, how heat energy is transferred through the base of the saucepan.

_____

_____

_____

_____

(2)

(b) Energy is transferred through the water by convection currents. Explain what happens to cause a convection current in the water. The answer has been started for you.

As heat energy is transferred through the saucepan, the water particles at the bottom

_____

_____

_____

_____

_____

_____

_____

_____

(3)

(c) Some energy is transferred from the hotplate to the air by *thermal radiation*. What is meant by *thermal radiation*?

_____

_____

(1)

(Total 6 marks)

Q3.

(a) The diagram shows a lens used as a magnifying glass. The position of the eye is shown and the size and position of an object standing at point **O**.

Downloaded from www.merit-minds.com

(i) What type of lens is shown in the diagram?

_____

(1)

(ii) Two points are marked as **F**. What are these points?

_____

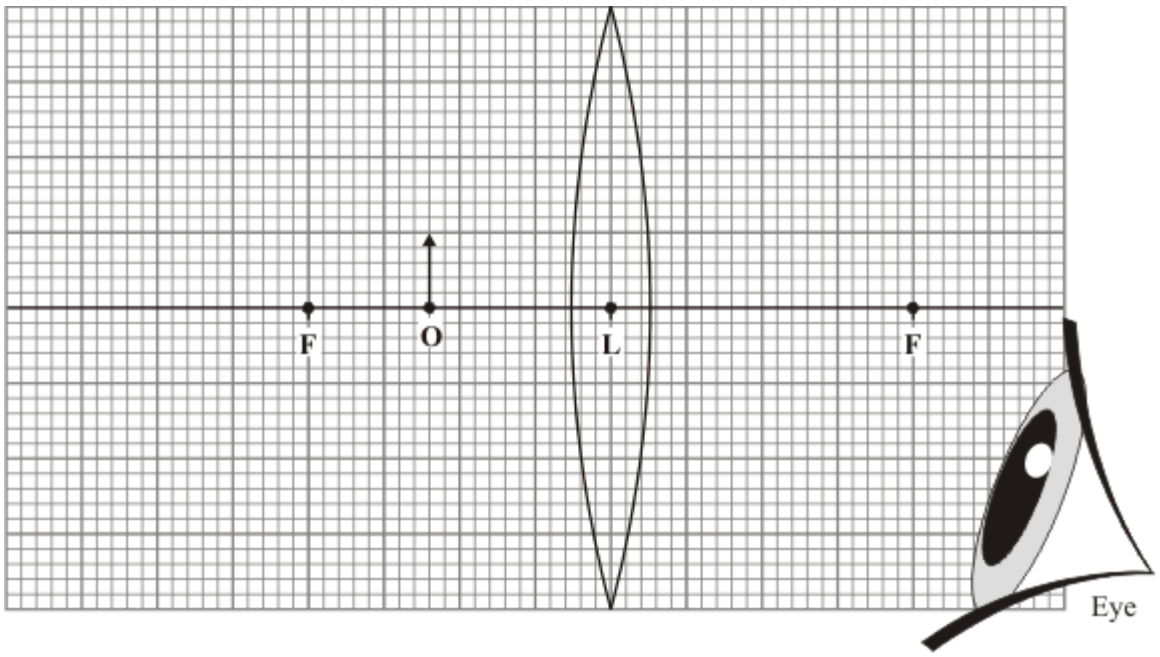
(1)

(iii) What is the name of the straight line which goes through the point **F**, through the point **L** at the centre of the lens, and through the point **F** on the other side?

_____

(1)

(iv) On the diagram, use a ruler to construct accurately the position of the image. You should show how you construct your ray diagram and how light appears to come from this image to enter the eye.



(5)

(v) The image is *virtual*. What is a *virtual* image?

_____

_____

(1)

(b) The lens shown in the diagram in part (a)(iv) can be used in a camera to produce a *real* image.

Explain why a *real* image must be produced in a camera and how the object and the lens are positioned to produce a *real* image which is **smaller** than the object.

Do **not** draw a ray diagram as part of your answer.

_____

_____

Downloaded from www.merit-minds.com

_____

_____

_____

_____

(3)

(Total 12 marks)

Downloaded from www.merit-minds.com