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

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

Q1.

Waves may be longitudinal or transverse.

(a) Describe the differences between longitudinal waves and transverse waves.

_____

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_____

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_____

(3)

(b) Radio waves are electromagnetic waves.

Describe how radio waves are different from sound waves.

_____

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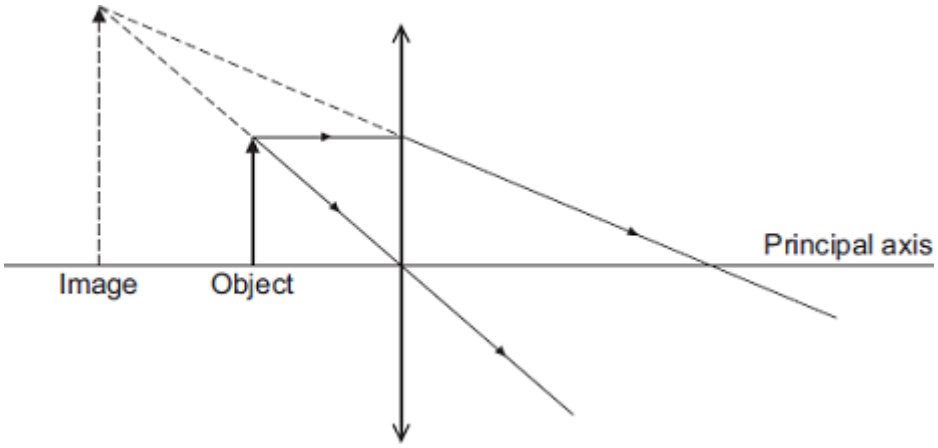
(4)
(Total 7 marks)

Q2.

(a) The diagram shows how a convex lens forms an image of an object.

This diagram is **not** drawn to scale.



(i) Which **two** words describe the image?

Draw a ring around each correct answer.

diminished **inverted** **magnified** **real** **upright**

(2)

(ii) The object is 4 cm from the lens. The lens has a focal length of 12 cm.

Calculate the image distance.

_____

_____

_____

Image distance = _____ cm

(3)

(b) What does a minus sign for an image distance tell us about the nature of the image?

_____

(1)

(Total 6 marks)

Q3.

(a) Light waves transfer energy.

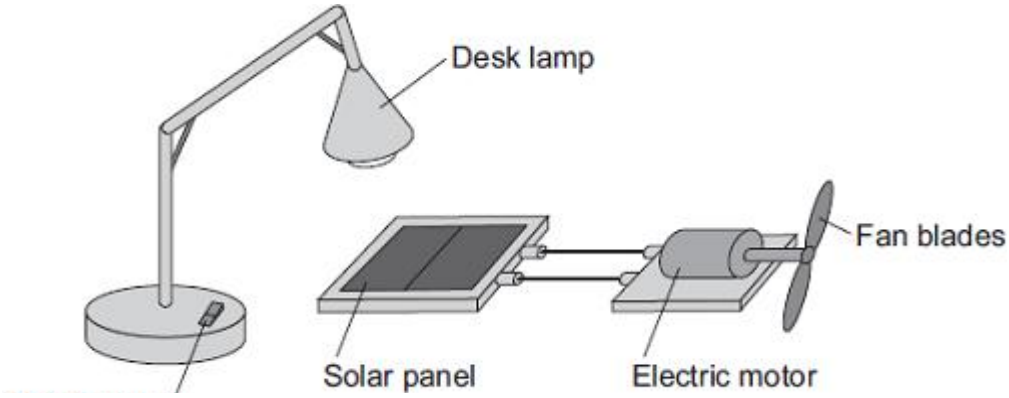
(i) Complete the following sentence.

The oscillations producing a light wave are _____

to the direction of the energy transfer by the light wave.

(1)

(ii) The apparatus in the diagram shows that light waves transfer energy.



Describe how switching the desk lamp on and off shows that light waves transfer energy.

You do **not** need to describe the energy transfers.

_____

_____

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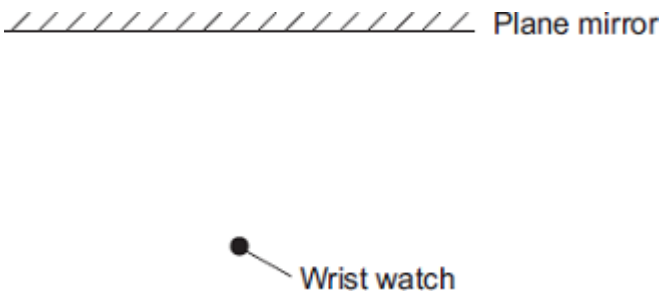
_____

(2)

(b) A student holds a wrist watch in front of a plane mirror. The student can see an image of the wrist watch in the mirror.

The diagram shows the position of the wrist watch and the mirror.



Draw a ray diagram showing how the image of the wrist watch is formed.

Mark the position of the image.

(4)

(c) The image of the wrist watch seen by the student is virtual.

What is a virtual image?

_____

(1)

(Total 8 marks)