Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic : 5_ Light And Electromagnetic Spectrum

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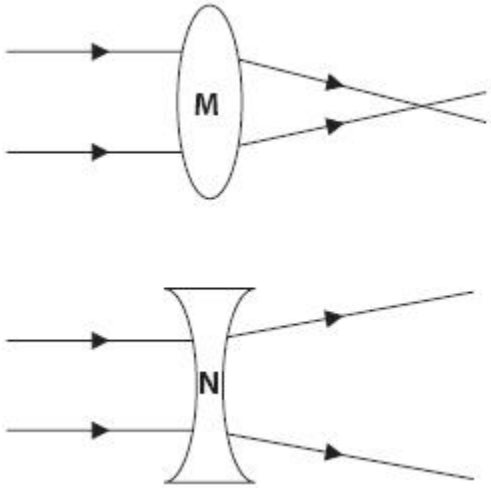
Name of the Student:_____
Max. Marks : 20 Marks **Time : 20 Minutes**

Q1.

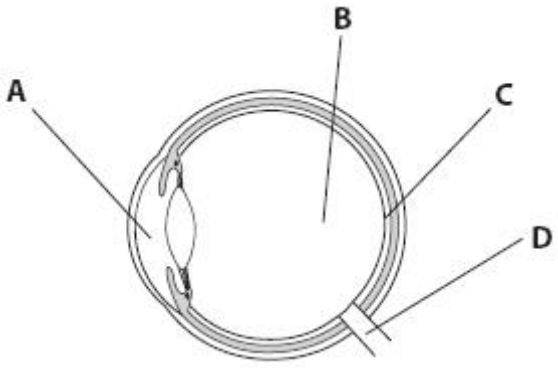
(a) The diagrams show rays of light passing through two lenses labelled **M** and **N**.



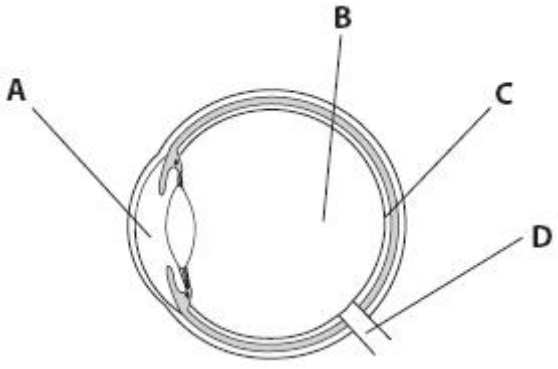
(i) Complete the sentence by putting a cross (■) in the box next to your answer.

The light changes direction as it leaves the lenses.
This is called

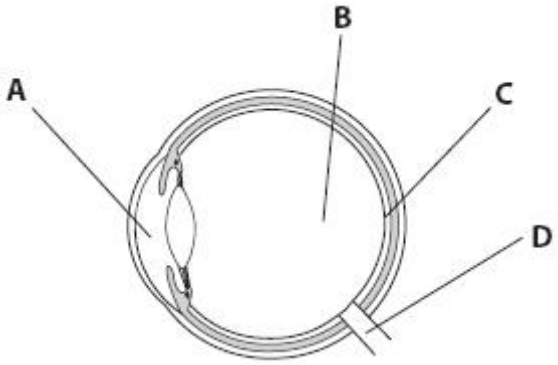
(1)



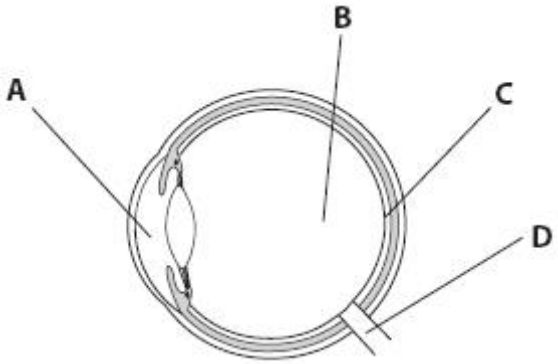
A contraction



B diffraction



C reflection



D refraction

(ii) The focal length of lens **M** is 2 m.

Calculate the power of lens **M**.

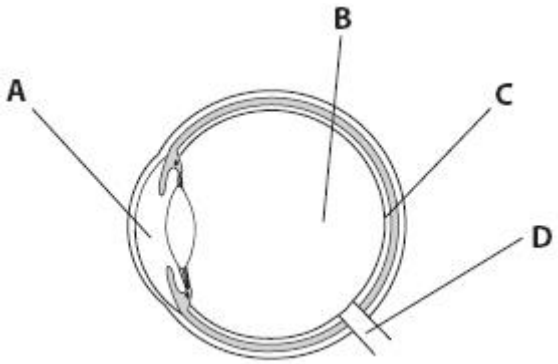
(2)

power = ...D

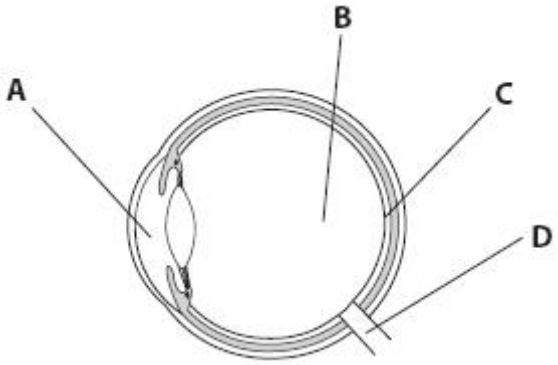
(b) The diagram shows an eye of a short sighted person.
A diverging lens is used to correct short sight.

(i) The eye will form an image of a distant object.
Which letter shows where the image will form for the short sighted eye?
Put a cross (■) in the box next to your answer.

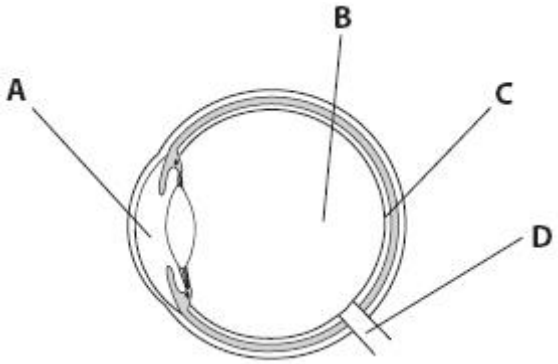
(1)



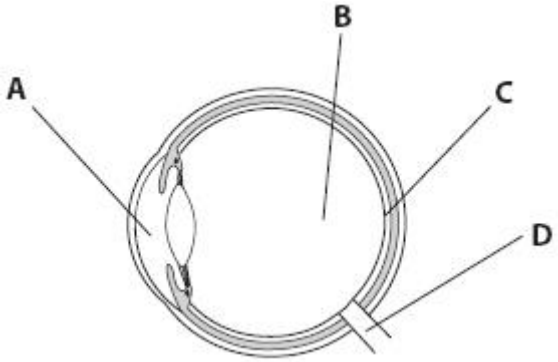
A



B



C



D

(ii) Draw on the diagram a diverging lens in a position which would correct the short sightedness.

(1)

(iii) Describe how the diverging lens corrects this defect of vision..

(2)

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.....

.....

(iv) Suggest one way of correcting short sight other than wearing glasses.

(1)

.....

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(Total for Question = 8 marks)

Q2.

A student looks through a blue filter at a green leaf on a white background.

Describe the colours that the student sees.

(2)

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.....

.....

(Total for question = 2 marks)

Q3.

Figure 12 is a diagram showing a lens, with some light rays passing through it.

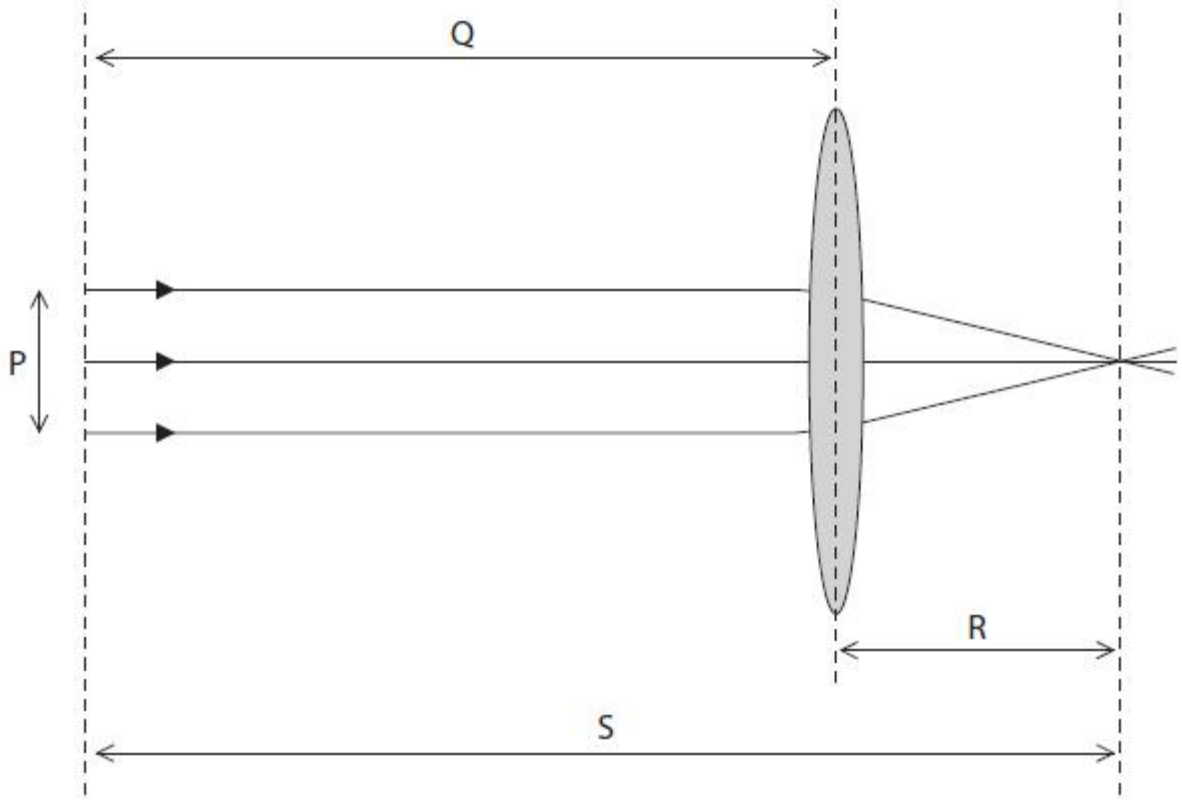


Figure 12

(i) This diagram shows a

(1)

- ☒ **A** converging lens forming a real image
- ☒ **B** diverging lens forming a real image
- ☒ **C** converging lens forming a virtual image
- ☒ **D** diverging lens forming a virtual image

(ii) Which length, labelled on Figure 12, shows the focal length of the lens?

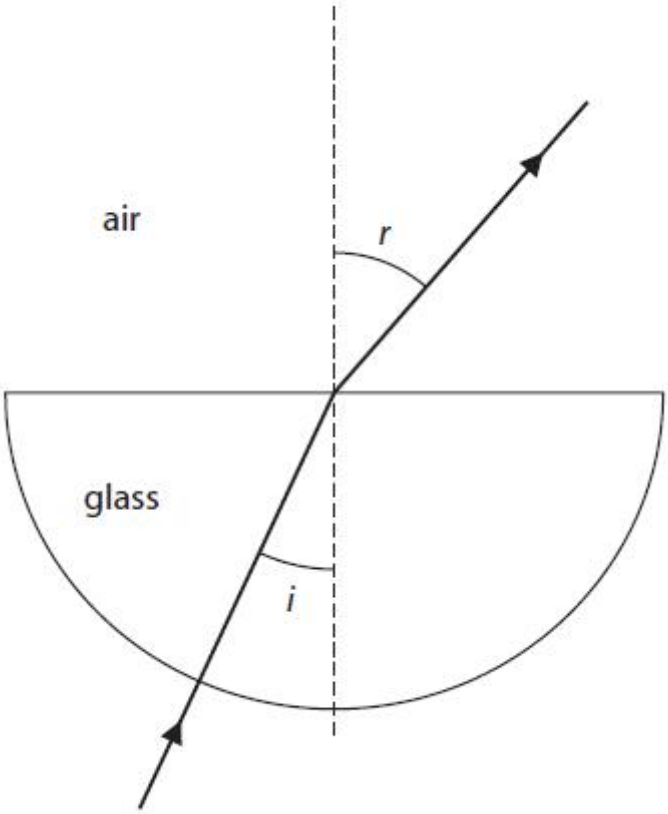
(1)

- ☒ **P**
- ☒ **Q**
- ☒ **R**
- ☒ **S**

(Total for question = 2 marks)

Q4.

A student investigates the way light passes through glass.
The diagram shows the path of a ray of light through the glass.



(a) State the scientific name for the dotted line in the diagram.

(1)

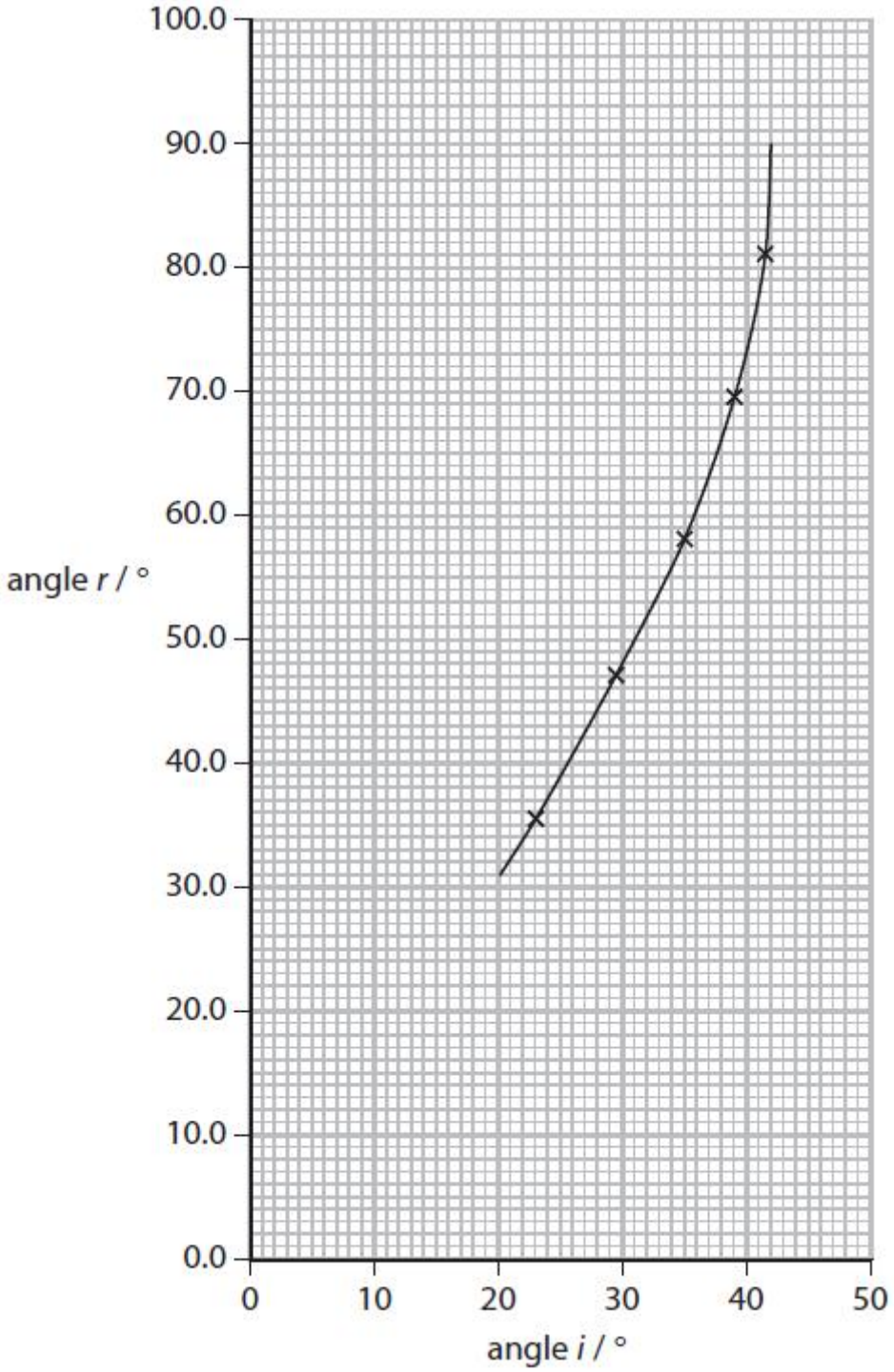
.....

(b) The student measures several values of angle *i* and angle *r*.
She plots some of her results on the graph.
The table shows results that she has not plotted.

angle *i*	angle *r*
0°	0°
6°	9°

(i) Plot these results on the graph.

(2)



(ii) Continue the line on the graph through the results you have plotted.

(1)

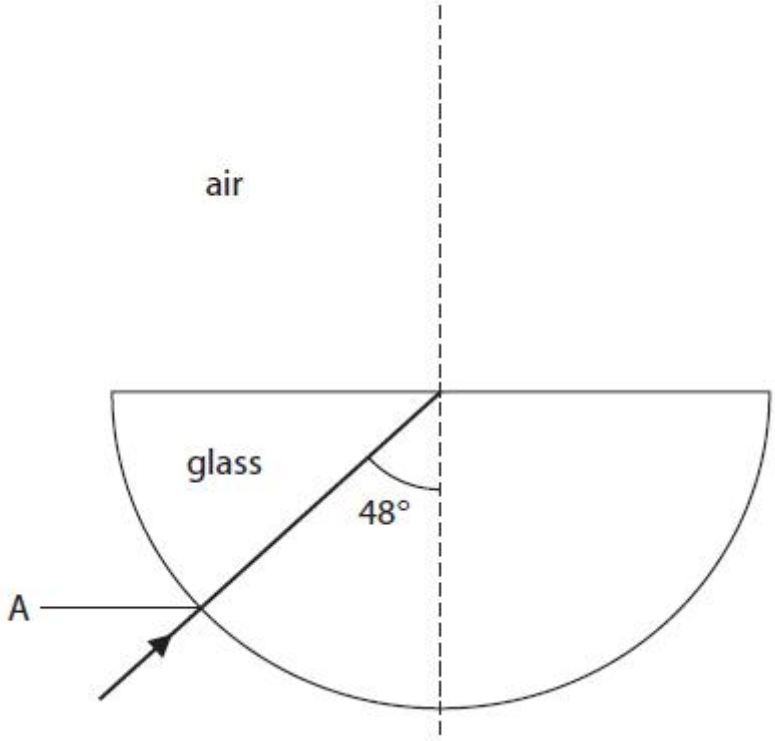
(iii) Write down the value of angle *i* when angle *r* = 90°.

(1)

angle *i* = ... °

(c) (i) Complete the diagram to show what happens to the ray of light when angle *i* is 48°.

(2)



(ii) State why the ray of light does not change direction when it enters the glass at A.

(1)

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(Total for Question = 8 marks)