Polarisation Past Paper Questions

Jan 2002 to Jan 2009

5 Which one of the following types of wave **cannot** be polarised?

| A | radio | Q5 Jan 2003 |
|---|-------------|-------------|
| В | ultraviolet | |
| C | microwave | |
| D | ultrasonic | |

| 2 | (a) | State | the | characteristic | features | of |
|---|-----|-------|-----|----------------|----------|----|
|---|-----|-------|-----|----------------|----------|----|

| (i) | longitudinal waves, | |
|------|---------------------|-----------|
| | | |
| | | |
| (ii) | transverse waves. | |
| | | |
| | | (3 marks) |

(b) Daylight passes horizontally through a fixed polarising filter **P**. An observer views the light emerging through a second polarising filter **Q**, which may be rotated in a vertical plane about point **X** as shown in **Figure 4**.

Q2 Jan 2005

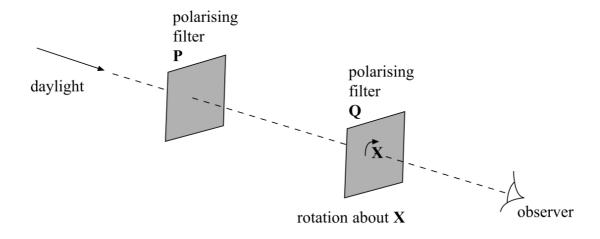


Figure 4

| Descri | ibe what the observer would see as \mathbf{Q} is rotated | d slowly through 360°. |
|--------|---|---|
| You m | nay be awarded marks for the quality of writter | n communication provided in your answer. |
| | | |
| | | |
| | | |
| ••••• | | |
| ••••• | | |
| ••••• | | (2 marks) |
| 5 Wh | nich one of the following properties of light waves do | polarising sunglasses depend on for their action? |
| | tht waves may | Q5 Jun 2005 |
| A | interfere constructively. | |
| B | interfere destructively. | |
| C D | be polarised when reflected from a surface. be polarised by the lens in the eye. | |
| v | oe polatised by the iens in the eye. | |

The sound quality of a portable radio is improved by adjusting the orientation of the aerial.

Q3 Jun 2006

Which statement is a correct explanation of this improvement?

The radio waves from the transmitter are polarised.

The radio waves from the transmitter are unpolarised.

The radio waves become polarised as a result of adjusting the aerial.

The radio waves become unpolarised as a result of adjusting the aerial.

 \mathbf{A}

В

 \mathbf{C}

D