

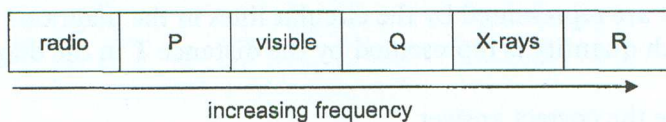
Topic 12 Electromagnetic Spectrum

PAPER 1

MULTIPLE-CHOICE QUESTIONS

For each question, there are four possible answers. Choose the one you consider correct and record your choice (A, B, C or D) in the brackets provided.

1. The diagram shows some components of the electromagnetic spectrum.



What are P, Q and R?

(2014/P1/Q14)

	P	Q	R
A	gamma rays	ultra-violet	infra-red
B	microwaves	infra-red	gamma rays
C	microwaves	ultra-violet	gamma rays
D	ultra-violet	infra-red	microwaves

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2. The diagram represents the electromagnetic spectrum.

gamma rays	X-rays	ultra-violet	light	W	microwaves	radio
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Which row shows the properties of wave W?

(2016/P1/Q14)

	type of wave	comparison of speed in a vacuum
A	longitudinal	travels at the same speed as microwaves
B	longitudinal	travels faster than light
C	transverse	travels at the same speed as light
D	transverse	travels faster than microwaves

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3. Which row describes the properties of electromagnetic waves? (2017/P1/Q15)

	type of wave	speed in a vacuum
A	longitudinal	constant
B	longitudinal	variable
C	transverse	constant
D	transverse	variable

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4. Visible light and gamma rays are both waves.

Which row is correct?

(2018/P1/Q14)

	visible light	gamma rays
A	longitudinal	longitudinal
B	longitudinal	transverse
C	transverse	longitudinal
D	transverse	transverse

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5. Which row describes properties of electromagnetic waves?

(2019/P1/Q14)

	transverse wave	travel through a vacuum	travel through air
A	no	yes	no
B	no	no	yes
C	yes	no	no
D	yes	yes	yes

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PAPER 2**STRUCTURED QUESTIONS****Section A**

Answer the following questions.

1. The list shows some of the components found in the electromagnetic spectrum.

infra-red light radio ultra-violet X-ray

Use only components from the list to answer the following questions.

- (a) Name the component used in a remote control to change the channels on a television. [1]
- (b) Name the component with the shortest wavelength. [1]
- (c) Name the component that is found in sunlight and is mainly responsible for causing sunburn. [1]
- (2018/P2/A1)

Section B

Answer the following questions.

1. Some of the energy from the Sun is in the form of visible light.

Visible light is part of the electromagnetic spectrum.

Name two other components of this spectrum. [1]

(2015/P2/B7aii)