

**Eduqas Physics GCSE**  
**Topic 10.2: Red shift as**  
**sources move away**  
**Questions by topic**

1.

(iii) There is a red-shift in the light received from some galaxies.  
State what is meant by red-shift.

(1)

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(iv) Some galaxies show greater red-shift than others.  
Explain what this suggests about the Universe.

(2)

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2.

(b) When astronomers study distant galaxies, they notice changes to the waves they observe.

(i) Describe the changes to the waves they observe.

(2)

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(ii) State the evidence that astronomers have observed to support the Big Bang theory for the origin of the Universe.

(2)

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3.

(b) Some visible light telescopes are located in space.

Other visible light telescopes are located on the Earth's surface.

Explain why the images produced by telescopes on Earth are less clear than the images produced by telescopes in space.

(2)

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(c) This simplified diagram compares spectra of light from the Sun and two galaxies.



The light from galaxy 1 and galaxy 2 both show redshift.

Explain what these redshifts predict about the position and movement of the two galaxies.

(3)

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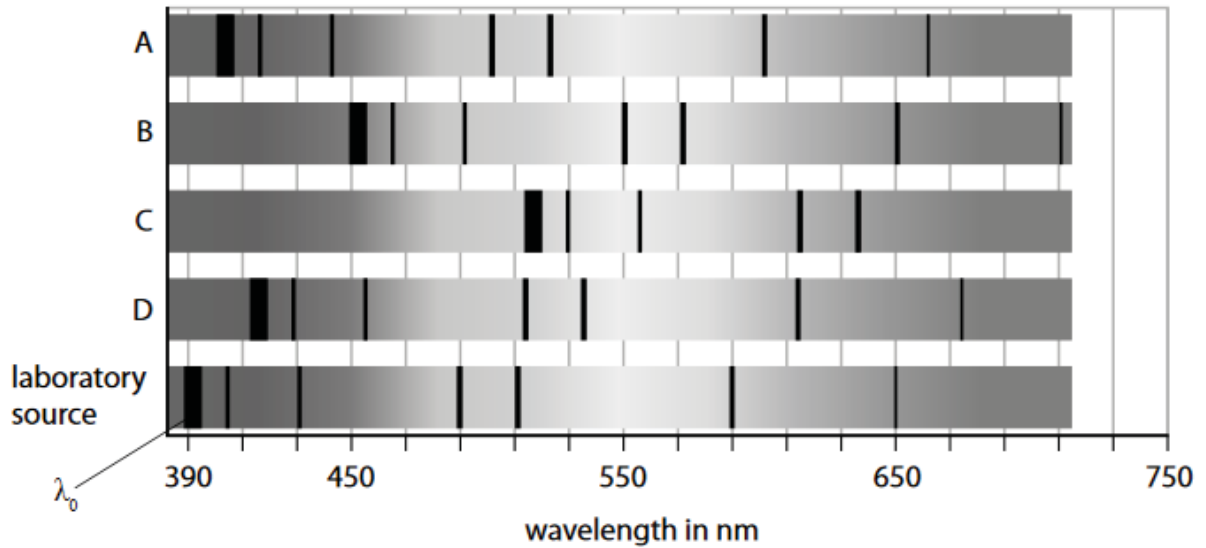
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4.

(d) Figure 9 shows some lines in the absorption spectra from four different galaxies (A, B, C, and D) and from a laboratory source.

All the spectra are aligned and to the same scale.



**Figure 9**

Explain, using Figure 9, which galaxy is furthest away from us.

(3)

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