

10 Essential IGCSE Biology Exam Questions

Edexcel 9-1
Paper 1B



ScienceSauceOnline.com



1.

a) Define the term **diffusion**.

(2)

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b) Define the term **osmosis**.

(3)

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c) Define the term **active transport**.

(3)

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2. State the ways in which the structure of an artery differs from the structure of a vein.

(3)

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3. Explain how human lung tissue allows efficient gas exchange.

(4)

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4. Explain how the structure of the small intestine is adapted for efficient exchange of substances.

(4)

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5. Describe the stages that are used to genetically modify a bacterium that is able to manufacture insulin.

(5)

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Use the video to check your answers

bit.ly/bio-exams



6. Design an investigation to find out if the colour of light affects the amount of fruit produced by a plant.

(6)

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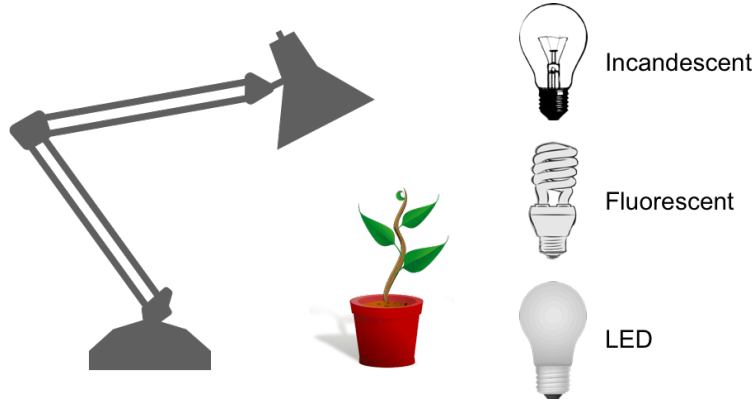
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7. A student conducted an experiment to find out how the type of light bulb affects the mass of fruit produced by a plant.



For the investigation name:

a) the dependent variable

(1)

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b) the independent variable

(1)

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c) two variables that should be controlled

(2)

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8. A student conducted the following experiment to compare the amount of starch in different liquid food samples:

The diagram illustrates the experimental setup. On the left, three groups of test tubes are shown, labeled 'sample A', 'sample B', and 'sample C'. Each group contains three test tubes. A label 'Test tube containing solution' points to the first tube in sample A. A label 'Iodine' with a yellow droplet icon points to the second tube in sample B. On the right, a 'Spotting tile' is shown with a 4x3 grid of wells. The first three columns are labeled 'A', 'B', and 'C'. The top row shows the results: the first well (A) is blue, the second (B) is dark blue/black, and the third (C) is green. The remaining wells in the grid are empty.

1. Add 3cm³ of the three liquid samples to test tubes.
2. Have three repeats for each sample.
3. Add 2 drops of iodine solution to each test tube.
4. Compare the intensity of the colour change on a spotting tile.

Give 2 reasons why her results were reliable.

(2)

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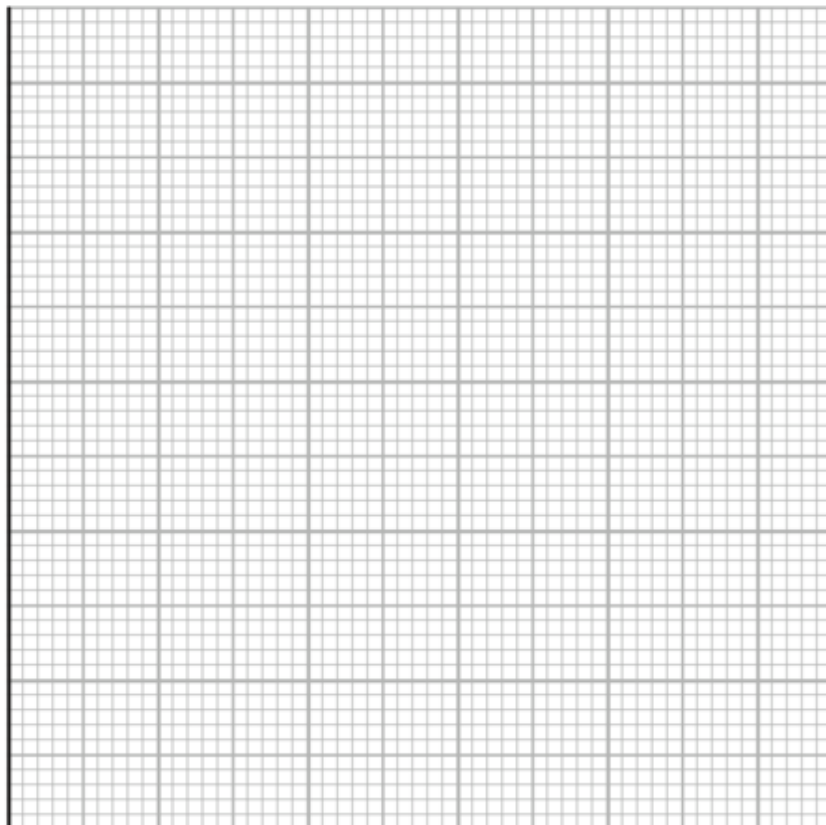
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9. Plot the data below in a line graph.

Daily intake of protein (g)	Average mass of individual (g)	
	Species A	Species B
0.2	2	3
0.4	5	3
0.6	6	4
0.8	6	8

(6)





10. Plot the data below in a bar graph.

Lamp Type	Biomass (g / m ²)
LED 660	8.8
LED 670	8.4
LED 680	8.1
LED 690	9.0

(5)

