

Grade Nine Guides

GCSE BIOLOGY

Paper 2

EXAM

QUESTIONS

- **Exam questions per topic**

Aiming at grade 8/9



Answers in No Waffle GCSE videos :)

Topic	Question [marks]	Answer
B6: Sexual and asexual reproduction	<ul style="list-style-type: none"> > Compare the advantages and disadvantages of sexual and asexual reproduction [4] > Explain sexual reproduction in flowers [3] 	
meiosis	<ul style="list-style-type: none"> > Describe three differences between the processes of mitosis and meiosis. [3 marks] > Describe one similarity between them [1] 	
DNA and the genome	<ul style="list-style-type: none"> > Explain how a change in one amino acid in an enzyme molecule could stop the enzyme working. 	
DNA structure AND protein synthesis	<ul style="list-style-type: none"> > Define variation [1] > What process causes variation [2] > What are homologous pairs [2] > What are base pairs connected by? > What are non coding regions? [2] > Why is DNA defined as a polymer? > Describe the structure of a nucleotide: [4] 	
Genetic inherited disorders, sex determination	<ul style="list-style-type: none"> > Define mutation 	

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evolution	<ul style="list-style-type: none">> The eyes of some birds contain cells that detect ultraviolet (UV) light. UV light is reflected by some fruits and the urine of small mammals. Explain how birds that detect UV light have evolved from birds that could not detect UV light. [6 marks] > Describe how the ancestors of modern lemurs may have evolved into the species shown in Figure 14. [5]	
selective breeding	<ul style="list-style-type: none">> Describe the steps to selective breeding [4] > Evaluate the advantages and disadvantages of selective breeding [4] > Name two qualities pet owners may want[2]	
genetic engineering	<ul style="list-style-type: none">> What is the purpose of genetic engineering [2] > Explain the process of genetic engineering [4]	
Cloning	<ul style="list-style-type: none">> Describe the process of tissue culture [micropropagation] [4]	

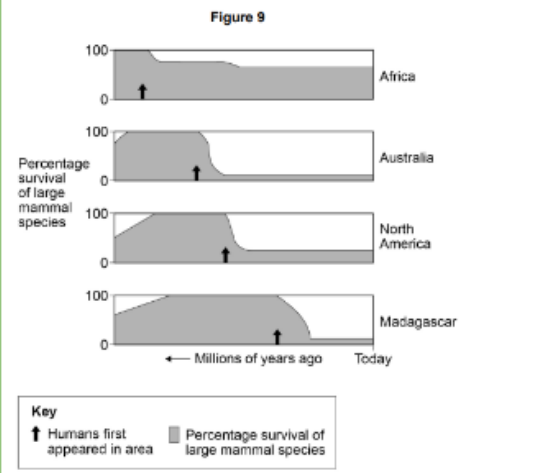
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	<ul style="list-style-type: none">➤ Describe the process of taking plant cuttings [4]➤ Describe the process of adult cell cloning [6]➤ Describe the process of embryo transplanting [5]➤ Evaluate the advantages and disadvantages of cloning [4]	
Speciation & history of genetics	<ul style="list-style-type: none">➤ Mendel discovered: [3]➤ Watson and crick discovered: [2]	
Evidence, fossils and evolution	<ul style="list-style-type: none">➤ Information about extinct animals is often not clear because the fossil record is incomplete. Give three reasons why the fossil record is not clear for older species. [3 marks]➤ A mass extinction is a rapid decrease in biodiversity on Earth. A student stated: 'The data in Figure 9 shows that humans caused mass extinctions.' Evaluate the student's statement:	

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Figure 9 shows the percentage (%) survival of large mammal species in four areas of the world.

The time at which humans first appeared in each of the four areas is also shown.



Resistant
bacteria +
Classification

> Define classification [1]

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