ENGLAND GCSE BIOLOGY AQA HIGHER · UNIT 6 · 25 QUESTIONS

Inheritance, Variation and Evolution — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button so it can be fixed.

1 **Rabbits in a meadow show variation in fur colour. What causes this variation?**

A different alleles and the environment

B the number of rabbits

C the rabbits' diet only

D natural selection only, acting over time

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2 **A peach is a fruit. Which part of the flower does it develop from?**

- A the ovary
- B the petal
- C the stigma
- D the anther

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3 **A forest provides a habitat. What does habitat mean?**

- A when an organism sleeps
- B what an organism eats
- C where an organism lives
- D how an organism breeds

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4 **A honeybee moves pollen between flowers. What is this an example of?**

- A fertilisation
- B photosynthesis
- C germination
- D pollination

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5 **Horses eat grass. What trophic level are horses?**

- A decomposers
- B primary consumers
- C producers
- D secondary consumers

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6 **A brown dog is vaccinated. What does the vaccine contain?**

A an antibiotic

B a live dangerous pathogen that causes disease

C white blood cells

D a dead or weakened pathogen

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7 **Why was Lamarck theory not accepted?**

A changes in life are not inherited

B giraffes do not have long necks

C Darwin proved him wrong in a trial

D there was no evidence for evolution at all

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8 **Why do identical twins look the same?**

A they eat the same food

B they have the same genes

C they were born together

D they live in the same house

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9 **Which bacterium is resistant to many antibiotics?**

A E. coli

B TB bacteria

C MRSA

D Salmonella

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10 **How many chromosomes does a human gamete have?**

A 92

B 12

C 46

D 23

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11 **In a DNA sample, 20 percent of the bases are adenine. What percent are thymine?**

A 20%

B 30%

C 80%

D 10%

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12 **Two heterozygous parents have a child. What is the probability the child is homozygous recessive?**

A 75%

B 0%

C 50%

D 25%

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13 **How is sex determined in humans?**

A XX is female, XY is male

B XX is male, XY is female

C XY is female, XX is male

D the mother decides the sex

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14 **Why did Woese propose the three domain system?**

- **A** he used genetic evidence
- **B** he discovered the microscope
- **C** he counted all the species on Earth
- **D** he found fossils of the first life

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15 **A pea plant with genotype Bb is crossed with a plant with genotype bb. What fraction of the offspring will be bb?**

- **A** 1/2
- **B** 3/4
- **C** 1/4
- **D** 1

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16 **What does a gene control?**

- **A** the rate of cell division
- **B** the number of chromosomes
- **C** the size of the cell
- **D** the order of amino acids

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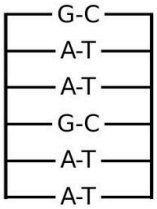
17 **The diagram shows a short section of DNA. How many adenine-thymine pairs are there?**



- **A** 4
- **B** 3
- **C** 6
- **D** 7

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18 **What is genetic engineering?**

- **A** moving a gene between organisms
- **B** cloning plants from cuttings
- **C** selecting the best seeds to sow
- **D** breeding animals for many generations

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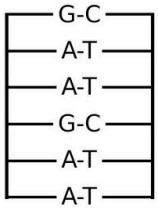
19 **The diagram shows a short section of DNA. How many base pairs are there in total?**



- **A** 8
- **B** 5
- **C** 6
- **D** 7

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20 **Who reached the same ideas as Darwin, working separately?**

A Woese

B Lamarck

C Mendel

D Wallace

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21 **What is a clone?**

A an organism genetically identical to another

B an organism that looks similar to another organism

C a new species

D a twin

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22 **What is natural selection?**

A breeding by humans

B survival of the strongest only

C survival of the best adapted

D random extinction

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23 **In a DNA sample, 25 percent of the bases are adenine. What percent are thymine?**

A 25%

B 35%

C 75%

D 15%

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24 **One parent is homozygous dominant and the other is heterozygous. What is the probability their child is homozygous recessive?**

A 0%

B 75%

C 25%

D 50%

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25 **What is a genotype?**

A the appearance of an organism

B the alleles an organism has

C the sex of an organism

D the number of chromosomes

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ANSWER KEY

1.	A	**10.**	D	**19.**	C
2.	A	**11.**	A	**20.**	D
3.	C	**12.**	D	**21.**	A
4.	D	**13.**	A	**22.**	C
5.	B	**14.**	A	**23.**	A
6.	D	**15.**	A	**24.**	A
7.	A	**16.**	D	**25.**	B
8.	B	**17.**	A		
9.	C	**18.**	A		

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