ENGLAND GCSE BIOLOGY AQA FOUNDATION · 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 **Horses are bred for speed. What is this called?**

- A mutation of the genes
- B natural selection in the wild
- C selective breeding
- D evolution over millions of years

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

A the rabbits' diet only

B different alleles and the environment

C the number of rabbits

D natural selection only, acting over time

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3 **A forest absorbs carbon dioxide. Which process does this?**

A decomposition in the soil

B photosynthesis

C respiration in the trees

D combustion of the wood

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

- A a dead or weakened pathogen
- B an antibiotic
- C white blood cells
- D a live dangerous pathogen that causes disease

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

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

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

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

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7 **What is the genome?**

- A one chromosome
- B one gene
- C all the DNA of an organism
- D all the proteins in a cell

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

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

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

- A giraffes do not have long necks
- B there was no evidence for evolution at all
- C changes in life are not inherited
- D Darwin proved him wrong in a trial

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10 **What is a clone?**

A an organism that looks similar to another organism

B a new species

C an organism genetically identical to another

D a twin

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11 **What is the order of the Linnaean groups, largest first?**

A a list of all living things

B species to kingdom in order

C kingdom to species in order

D genus to family in order

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12 **What is the oldest method of cloning plants?**

A a new laboratory technique

B tissue culture in a laboratory

C taking cuttings

D embryo transplants

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13 **How does sexual reproduction cause variation?**

A it stops mutations

B it changes the number of chromosomes

C it mixes genes from two parents

D it copies one parent exactly

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14 **What is a genotype?**

A the alleles an organism has

B the number of chromosomes

C the appearance of an organism

D the sex of an organism

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

A 50%

B 75%

C 25%

D 0%

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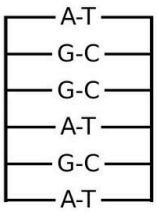
16 **The diagram shows a short section of DNA. How many base pairs are there in total?**



A 7

B 5

C 6

D 8

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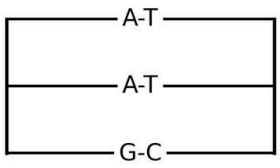
17 **The diagram shows a short section of DNA. How many adenine-thymine pairs are there?**



A 1

B 5

C 2

D 4

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

A 30%

B 20%

C 80%

D 10%

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19 **What is a genome?**

A all the DNA of an organism

B all the proteins of an organism

C all the genes on one chromosome

D all the cells of an organism

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20 **What causes cystic fibrosis?**

A an infection in the lungs

B a dominant allele

C a mutation in the sex chromosomes

D two recessive alleles

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21 **Where is DNA found in a cell?**

A in the nucleus

B in the cell membrane

C in the cytoplasm

D in the mitochondria only

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

A E. coli

B TB bacteria

C MRSA

D Salmonella

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23 **Which chromosomes determine that a baby is male?**

A two Y chromosomes

B an X and a Y

C one X only

D two X chromosomes

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24 **What is speciation?**

A one species splits into two

B a species changes into a fossil

C a species dies out completely

D two species join into one

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25 **How are GM crops made?**

A by watering them more

B by changing their genes

C by spraying them with chemicals

D by growing them in greenhouses

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ANSWER KEY

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

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