ENGLAND GCSE BIOLOGY EDEXCEL FOUNDATION · UNIT 3 · 25 QUESTIONS

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

Understand It with Pulse | Flag a mistake

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

- A combustion of the wood
- B photosynthesis
- C respiration in the trees
- D decomposition in the soil

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3 **A peach contains a stone. What is inside the stone?**

- A a flower
- B a leaf
- C a root
- D a seed

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4 **A honeybee visits a flower to collect nectar. What does it carry between flowers?**

- A pollen
- B seeds
- C leaves
- D water

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5 **A brown dog has fleas. What are fleas?**

A predators

B producers

C prey

D parasites

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6 **Rabbits with white fur survive better in snow. What is this an example of?**

A mutation

B extinction

C artificial selection

D natural selection

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7 **What carries amino acids to the ribosome?**

- A a carrier molecule
- B a vesicle from the cell membrane
- C a hormone travelling in the blood
- D a strand of DNA from the nucleus

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8 **In a DNA sample, 30 percent of the bases are adenine. What percent are thymine?**

- A 20%
- B 40%
- C 30%
- D 70%

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9 **Which disorder is caused by a recessive allele?**

A Huntington's disease

B Down's syndrome

C cystic fibrosis

D polydactyly

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10 **What is the genome?**

A one chromosome

B all the DNA of an organism

C all the proteins in a cell

D one gene

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11

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

A 0%

B 50%

C 75%

D 25%

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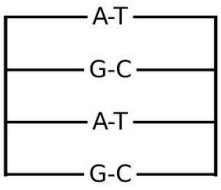
12 **The diagram shows a short section of DNA. How many adenine-thymine pairs are there?**



- **A** 2
- **B** 5
- **C** 1
- **D** 4

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13 **What does non-coding DNA do?**

- **A** it controls genes switching on
- **B** it copies the whole genome
- **C** it is junk with no function at all
- **D** it makes proteins directly

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14 **What is embryo screening?**

A cloning an embryo in a laboratory

B choosing the sex of the baby

C testing an embryo for alleles

D testing an adult for a disease

Understand It with Pulse | Flag a mistake

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

A 3/4

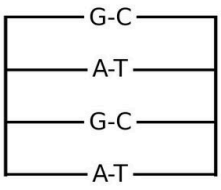
B 1/4

C 1

D 1/2

Understand It with Pulse | Flag a mistake

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



A 5

B 4

C 6

D 3

Understand It with Pulse

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

- A 15%
- B 75%
- C 35%
- D 25%

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

- A 0%
- B 50%
- C 75%
- D 25%

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19 **What causes Huntington disease?**

A a viral infection of the brain

B a missing chromosome

C a recessive allele that acts at birth

D a dominant allele acting late

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

A one X only

B two X chromosomes

C two Y chromosomes

D an X and a Y

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

A 12

B 92

C 46

D 23

Understand It with Pulse | Flag a mistake

22 **Where are amino acids joined together to make a protein?**

A at a ribosome

B on the cell membrane

C in the mitochondria of the cell

D in the nucleus of the cell

Understand It with Pulse | Flag a mistake

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

A 25%

B 0%

C 75%

D 50%

Understand It with Pulse | Flag a mistake

24 **What does a gene control?**

A the size of the cell

B the rate of cell division

C the order of amino acids

D the number of chromosomes

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25

A couple have three children, all girls. What is the chance their next child is a girl?

A 1/2

B 1/8

C 3/4

D 1/4

Understand It with Pulse

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ANSWER KEY

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

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