ENGLAND GCSE COMBINED SCIENCE 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 **Rabbits breed quickly. What does this mean for the population?**

- A it can grow fast
- B it always stays small
- C it never changes
- D it always falls

Understand It with Pulse | Flag a mistake

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

- A producers
- B parasites
- C prey
- D predators

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3 **Horses have different coat colours. What causes the differences?**

- A different species
- B different diets
- C different habitats
- D different alleles

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4 **A honeybee collects nectar. What is nectar?**

- A a mineral solution
- B a protein-rich food
- C a fatty substance
- D a sugary liquid

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5 **A peach tree flowers in spring. What do bees carry between flowers?**

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

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

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

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

A cystic fibrosis

B Huntington's disease

C Down's syndrome

D polydactyly

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

A 20%

B 30%

C 70%

D 40%

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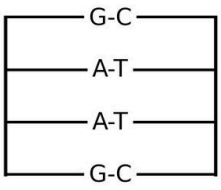
9 **The diagram shows a short section of DNA. How many base pairs are there in total?**



- **A** 4
- **B** 6
- **C** 5
- **D** 3

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10 **Two pea plants with genotype Bb are crossed. What fraction of the offspring will show the recessive trait?**

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

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11 **Which bases pair together in DNA?**

- A A pairs with G, C pairs with T
- B A pairs with T, C pairs with G
- C A pairs with C, T pairs with G
- D A pairs with A, T pairs with T

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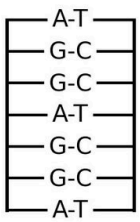
12 **Which base pairs with adenine in DNA?**

- **A** cytosine
- **B** uracil
- **C** guanine
- **D** thymine

Understand It with Pulse | Flag a mistake

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



- **A** 3
- **B** 6
- **C** 2
- **D** 5

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

A 25%

B 0%

C 75%

D 50%

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15 **What causes cystic fibrosis?**

A a mutation in the sex chromosomes

B an infection in the lungs

C two recessive alleles

D a dominant allele

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

- A 80%
- B 30%
- C 10%
- D 20%

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

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

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

A it is junk with no function at all

B it makes proteins directly

C it controls genes switching on

D it copies the whole genome

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19 **What is embryo screening?**

A cloning an embryo in a laboratory

B testing an adult for a disease

C testing an embryo for alleles

D choosing the sex of the baby

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20 **What is meiosis?**

A cell division that makes gametes

B the fusion of two gametes

C the copying of DNA

D cell division that makes body cells

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

A 75%

B 25%

C 35%

D 15%

Understand It with Pulse | Flag a mistake

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

A one X only

B an X and a Y

C two X chromosomes

D two Y chromosomes

Understand It with Pulse | Flag a mistake

23 **What does a gene control?**

A the number of chromosomes

B the order of amino acids

C the size of the cell

D the rate of cell division

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

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25 How many chromosomes does a human body cell have?

- A 23
- B 12
- C 46
- D 92

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ANSWER KEY

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

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