ENGLAND GCSE COMBINED SCIENCE OCR GATEWAY FOUNDATION · UNIT 5 · 25 QUESTIONS

Genes, Inheritance and Selection — 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 natural selection only, acting over time

B different alleles and the environment

C the number of rabbits

D the rabbits' diet only

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2 **A honeybee is an insect. How many legs does it have?**

- A 4
- B 6
- C 10
- D 8

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3 **Eggs can carry Salmonella bacteria. What should you do before eating eggs?**

- A wash them in cold water
- B eat them raw
- C cook them thoroughly
- D leave them in the sun

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4 **A sunflower makes glucose in its leaves. Which gas does it take in for photosynthesis?**

A oxygen gas from the air

B nitrogen gas from the air

C carbon dioxide

D hydrogen gas from the air

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

A leaves

B water

C seeds

D pollen

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

A producers

B secondary consumers

C primary consumers

D decomposers

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

A haemophilia

B cystic fibrosis

C polydactyly

D sickle cell anaemia

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8

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

A 50%

B 75%

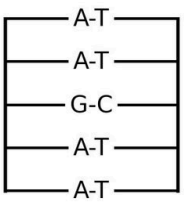
C 25%

D 0%

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



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

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10 **How can the spread of resistant bacteria be reduced?**

- **A** use antibiotics for every illness
- **B** only use antibiotics when needed
- **C** stop washing hands
- **D** share antibiotics

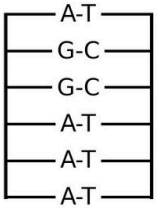
Understand It with Pulse | Flag a mistake

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

- **A** genus to family in order
- **B** kingdom to species in order
- **C** species to kingdom in order
- **D** a list of all living things

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



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

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

A A pairs with G, C pairs with T

B A pairs with A, T pairs with T

C A pairs with C, T pairs with G

D A pairs with T, C pairs with G

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

A 70%

B 30%

C 40%

D 20%

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15 **Which animal was the first cloned from an adult cell?**

- A a pet dog
- B a farm cow
- C a laboratory mouse
- D Dolly the sheep

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16 **What is embryo screening?**

- A testing an adult for a disease
- B testing an embryo for alleles
- C cloning an embryo in a laboratory
- D choosing the sex of the baby

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17 **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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18 **A mother has blood group O and a father has blood group AB. Which blood group can their children NOT have?**

A AB

B O

C A

D B

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19 **What is natural selection?**

A breeding by humans

B survival of the best adapted

C survival of the strongest only

D random extinction

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

A 75%

B 0%

C 50%

D 25%

Understand It with Pulse | Flag a mistake

21 **What is a binomial name?**

A the kingdom and phylum of the organism

B the family and order of the organism

C genus plus species

D the common name of the organism

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22 **What is a problem with selective breeding?**

A crops that grow too fast

B animals that are too healthy

C more variation in the offspring

D a smaller gene pool

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23 **What causes cystic fibrosis?**

- A a dominant allele
- B two recessive alleles
- C a mutation in the sex chromosomes
- D an infection in the lungs

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

- A it mixes genes from two parents
- B it copies one parent exactly
- C it changes the number of chromosomes
- D it stops mutations

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25

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

A 1/4

B 1/2

C 3/4

D 1/8

Understand It with Pulse

Flag a mistake

ANSWER KEY

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

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