ENGLAND GCSE BIOLOGY EDEXCEL HIGHER · 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 never changes
- B it can grow fast
- C it always falls
- D it always stays small

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

3 **A brown dog is bitten by a tick. Ticks can spread disease. How is the disease spread?**

A by touch

B through water

C by a vector

D through the air

Understand It with Pulse | Flag a mistake

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

A leaves

B water

C seeds

D pollen

Understand It with Pulse | Flag a mistake

5 **A forest is cut down. What happens to the carbon stored in the trees?**

A it is released

B it disappears

C it is stored forever

D it turns to oxygen

Understand It with Pulse | Flag a mistake

6 **Horses are bred for speed. What is this called?**

A natural selection in the wild

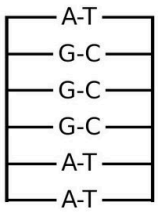
B mutation of the genes

C selective breeding

D evolution over millions of years

Understand It with Pulse | Flag a mistake

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



A 6

B 7

C 8

D 5

Understand It with Pulse

Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

9 **What causes cystic fibrosis?**

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

Understand It with Pulse | Flag a mistake

10 **Where is the mRNA copy of a gene made?**

A in the mitochondria of the cell

B on the cell membrane

C at a ribosome in the cytoplasm

D in the nucleus

Understand It with Pulse | Flag a mistake

11 **What is a mutation?**

A a change in the size of a cell

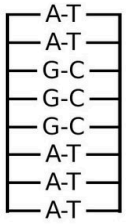
B a change in the DNA base order

C a change in the number of chromosomes

D a change in the number of cells

Understand It with Pulse | Flag a mistake

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



- **A** 7
- **B** 5
- **C** 4
- **D** 8

Understand It with Pulse | Flag a mistake

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

- **A** one X only
- **B** two Y chromosomes
- **C** an X and a Y
- **D** two X chromosomes

Understand It with Pulse | Flag a mistake

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

A 80%

B 20%

C 10%

D 30%

Understand It with Pulse | Flag a mistake

15 **What is the genome?**

A one chromosome

B all the DNA of an organism

C all the proteins in a cell

D one gene

Understand It with Pulse | Flag a mistake

16 **What causes polydactyly?**

A a recessive allele

B an extra chromosome

C a dominant allele

D a missing chromosome

Understand It with Pulse | Flag a mistake

17 **Where does mRNA go after it is made?**

A out of the nucleus

B back into the chromosome it came from

C into the cell membrane to leave the cell

D into the mitochondria to release energy

Understand It with Pulse | Flag a mistake

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

A it stops mutations

B it copies one parent exactly

C it changes the number of chromosomes

D it mixes genes from two parents

Understand It with Pulse | Flag a mistake

19 **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

Understand It with Pulse | Flag a mistake

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

- A 3/4
- B 1/8
- C 1/4
- D 1/2

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

A thymine

B cytosine

C uracil

D guanine

Understand It with Pulse | Flag a mistake

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

A 0%

B 75%

C 50%

D 25%

Understand It with Pulse | Flag a mistake

24 **What causes Huntington disease?**

A a viral infection of the brain

B a recessive allele that acts at birth

C a dominant allele acting late

D a missing chromosome

Understand It with Pulse | Flag a mistake

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

A 46

B 92

C 23

D 12

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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