SASKATCHEWAN BIOLOGY 30 · UNIT D · 25 QUESTIONS

Biotechnology — 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 to let Brett know so he can fix it.

1 **The use of living things or their products to make useful products is called**

- A biotechnology
- B gene therapy
- C cloning
- D PCR

Understand It with Pulse | Flag a mistake

2 **PCR is used mainly to**

- A cut proteins
- B make many copies of DNA
- C sequence RNA only
- D clone whole animals

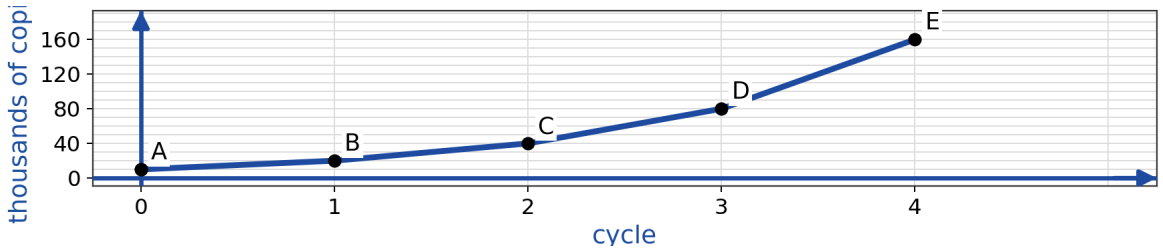
Understand It with Pulse | Flag a mistake

3 **A bacterial culture starts with 10 cells and doubles 4 times. The final number of cells is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **The graph shows DNA copies during PCR cycles. The copies at cycle 4, in thousands, is _____**



ANSWER _____

Understand It with Pulse | Flag a mistake

5 **Changing DNA of an organism on purpose is called**

A cloning

B PCR

C genetic engineering

D gel electrophoresis

Understand It with Pulse | Flag a mistake

6 **Gel electrophoresis separates DNA pieces by**

A colour

B temperature

C mass of the whole organism

D size

Understand It with Pulse | Flag a mistake

7 **A bacterial culture starts with 20 cells and doubles 3 times. The final number of cells is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **Treating disease by changing genes in a patient cells is called**

A gene therapy

B PCR

C gel electrophoresis

D GMO

Understand It with Pulse | Flag a mistake

9 **A GMO is an organism whose DNA has been**

A left unchanged

B changed by genetic engineering

C copied only

D removed

Understand It with Pulse | Flag a mistake

10 **A bacterial culture starts with 5 cells and doubles 5 times. The final number of cells is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **Making a genetically identical copy of an organism or cell is called**

A gel electrophoresis

B GMO

C cloning

D stem cell

Understand It with Pulse | Flag a mistake

12 **DNA fingerprinting can identify a person because DNA patterns are**

A the same for everyone

B changed by diet

C only in blood

D unique except for identical twins

Understand It with Pulse | Flag a mistake

13 **A bacterium is given the human gene for insulin and then produces insulin for patients. This is an example of**

A recombinant DNA technology

B natural selection

C gel electrophoresis

D cloning a whole animal

Understand It with Pulse | Flag a mistake

14 **A method that makes many copies of a DNA section is called**

- A PCR
- B GMO
- C stem cell
- D DNA fingerprinting

Understand It with Pulse | Flag a mistake

15 **An ethical concern about gene therapy is**

- A that it is too simple
- B safety and fairness of access
- C that it never works
- D that it uses no DNA

Understand It with Pulse | Flag a mistake

16 **In gel electrophoresis, a DNA fragment of 200 base pairs and a fragment of 900 base pairs are run together. The fragment that travels farther through the gel is**

- A the 200 base pair fragment
- B the 900 base pair fragment
- C both travel the same distance
- D neither fragment moves

Understand It with Pulse | Flag a mistake

17 **A method that separates DNA pieces by size is called**

- A stem cell
- B DNA fingerprinting
- C gel electrophoresis
- D recombinant DNA

Understand It with Pulse | Flag a mistake

18 **A farmer grows a crop that was given a gene for insect resistance. A concern raised about this crop is that**

A the new gene could spread to wild relatives

B the crop will need no water at all

C the crop will stop photosynthesizing

D insects will become plants

Understand It with Pulse | Flag a mistake

19 **An organism whose DNA has been changed by genetic engineering is called**

A DNA fingerprinting

B recombinant DNA

C biotechnology

D GMO

Understand It with Pulse | Flag a mistake

20 **A DNA sample starts with 4 copies. Each PCR cycle doubles the copies. After 3 cycles, the number of copies is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **An unspecialised cell that can become specialised cells is called**

A stem cell

B recombinant DNA

C biotechnology

D genetic engineering

Understand It with Pulse | Flag a mistake

22 **Two cells are produced by cloning a single skin cell. Compared with the skin cell, the clones are**

A genetically identical to it

B genetically half like it

C from a different species

D unable to divide

Understand It with Pulse | Flag a mistake

23 **Identifying a person from their unique DNA pattern is called**

A biotechnology

B DNA fingerprinting

C genetic engineering

D gene therapy

Understand It with Pulse | Flag a mistake

24 **Which of the following is a reason a patient might be offered gene therapy**

A to replace a faulty gene that causes disease

B to change their eye colour for fashion

C to make their children taller

D to remove all of their DNA

Understand It with Pulse | Flag a mistake

25 **DNA made by joining DNA from different sources is called**

A genetic engineering

B gene therapy

C recombinant DNA

D cloning

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. A
2. B
3. 160
4. 160
5. C
6. D
7. 160
8. A
9. B
10. 160
11. C
12. D
13. A
14. A
15. B
16. A
17. C
18. A
19. D
20. 32
21. A
22. A
23. B
24. A
25. C

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