BRITISH COLUMBIA ANATOMY AND PHYSIOLOGY 12 (MATPH12) · UNIT A · 10 QUESTIONS

Cell Biology and Gene Expression — 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 **During DNA replication, each new DNA molecule keeps one original strand. Replication is therefore described as**

- A semiconservative
- B conservative
- C dispersive
- D random

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2

A ribosome reads messenger RNA and builds a protein during

A replication

B translation

C transcription

D mutation

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3 **A mutation that replaces one base with another is called a**



A deletion

B insertion

C substitution

D duplication

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4

A deletion or insertion of bases is likely to cause a frameshift because it

A changes how later codons are grouped

B removes the whole chromosome

C stops DNA replication

D adds a new nucleus

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5

A stem cell is best described as a cell that



A can never divide

B has no DNA

C only makes blood cells

D can divide and become specialized cell types

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6 **Cell differentiation is the process by which cells**

A lose all their genes

B stop using energy

C merge into one cell

D become specialized for particular jobs

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7 **Sunlight exposure can darken skin by increasing melanin production. This is an example of the environment affecting**

A chromosome number

B gene expression

C DNA length

D cell size only

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8 **The graph shows how a cell population grows when nutrients run out. After hour 2, the population**

- A keeps doubling
- B levels off
- C drops to zero
- D triples each hour

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9 **Uncontrolled cell division that forms a mass of abnormal cells is a feature of**

- A mitosis
- B meiosis
- C cancer
- D differentiation

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10 **During interphase, a cell mainly**

A divides its nucleus

B grows and copies its DNA

C pulls chromatids apart

D forms a cell plate

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ANSWER KEY

1. A
2. B
3. C
4. A
5. D
6. D
7. B
8. B
9. C
10. B

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