



BIOLOGY

BOOKS - TRUEMAN BIOLOGY

Cell Reproduction

Assertion And Reason

1. [A] : Chromosome number is halved during telophase I .

[R] : Chromosomes whose arms are equal are called submetacentric .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

Answer:



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2. [A] : In cell cycle , most of the ordered sequence of phases occur during I phase .

[R] : Synthesis of mRNA , tRNA and ribosomal RNA occurs in G_1 and replication of DNA occurs in S phase .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

Answer:



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3. [A] : Proteins and RNA are synthesized in G_2 phase of cell division .

[R] : PSI is located on outer surface of thylakoid .

- A. If both A and R are true and R is the correct explanation of A
- B. If both A and R are true but R is not the correct explanation of A
- C. If A is true and R is false
- D. If both A and R are false

Answer:



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4. [A] : Division of extracellular protoplast is called cytokinesis .

[R] : This cytokinesis is due to cell plate formation or by cleavage .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

Answer:



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5. [A] : Histone proteins are synthesized during S phase .

[R] : Histone proteins are found associated with DNA to form bead like nucleosomes .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

Answer:



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6. [A] : Binary fission and Mitosis allow unicellular organisms to reproduce asexually .

[R] : Mitosis in eukaryotes is for growth and repair of tissue .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

Answer:



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7. [A] : Synapsis occurs in zygotene stage .

[R] : Pairing of homologous chromosomes is known as synapsis .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

Answer:



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8. [A] : Crossing over takes place during pachytene stage .

[R] : It is a process of inter change of chromatin material between one sister chromatid of each homologous chromosome .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

Answer:



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9. Assertion: In mitosis, prophase has no substages.

Reason: In meiosis, prophase has six substages.

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

Answer:



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10. [A] : Meiosis maintains a constant number of chromosomes .

[R] : Synapsis and crossing over introduce changes in the DNA .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

Answer:



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11. [A]: The first meiotic division is known as heterotypic division.

[R]: The first division in meiosis results in reduced number of chromosomes.

- A. If both A and R are true and R is the correct explanation of A
- B. If both A and R are true but R is not the correct explanation of A
- C. If A is true and R is false
- D. If both A and R are false

Answer:



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12. [A]: Meiotic division in meiosis results in reduced number of chromosomes.

[R]: Synapses occurs during zygotene of meiosis.

A. 1) If both A and R are true and R is the correct explanation of A

B. 2) If both A and R are true but R is not the correct explanation of A

C. 3) If A is true and R is false

D. 4) If both A and R are false

Answer:



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13. [A]: Meiosis II is not similar to mitosis.

[R]: Meiosis II occurs in cell with haploid chromosomes

A. 1) If both A and R are true and R is the correct explanation of A

B. 2) If both A and R are true but R is not the correct explanation of A

C. 3) If A is true and R is false

D. 4) If both A and R are false

Answer:



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14. [A] : In meiosis , one diploid cell produces four haploid cells .

[R] : The daughter cells in meiosis receive both maternal and paternal chromosomes of a homologous pair .

- A. If both A and R are true and R is the correct explanation of A
- B. If both A and R are true but R is not the correct explanation of A
- C. If A is true and R is false
- D. If both A and R are false

Answer:



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15. [A] : The first meiotic division is known as reduction division .

[R] : The first division in meiosis results in reduced number (half) of chromosomes .

A. If both A and R are true and R is the correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. If A is true and R is false

D. If both A and R are false

Answer:



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