



BIOLOGY

BOOKS - SARAS PUBLICATION

MARCH 2019 QUESTION PAPER

Exercise

1. For every CO_2 molecule entering the C_3 cycle, the number of ATP and NADPH required is

A. $3\text{ATP} + 2\text{NADPH}$

B. $3\text{ATP} + 3\text{NADPH}$

C. $2\text{ATP} + 2\text{NADPH}$

D. $2\text{ATP} + 3\text{NADPH}$

Answer:



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2. The haploid number of chromosome for an Angiosperm is 14, the number of chromosome in its endosperm would be

A. 42

B. 28

C. 7

D. 14

Answer:



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3. Vexillary aestivation is characteristic of the family

A. Solanaceae

B. Brassiceae

C. Fabaceae

D. Asteraceae

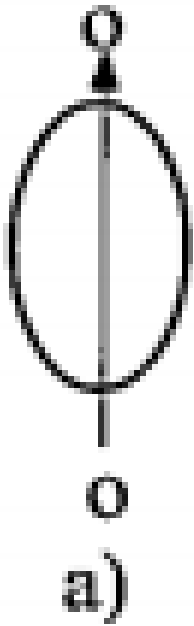
Answer:



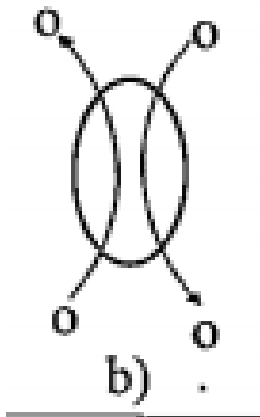
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4. Which of the following represents sympo?

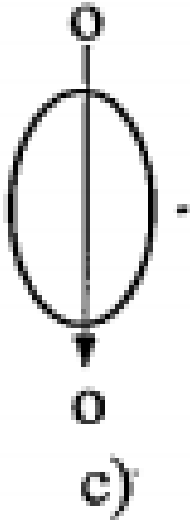
A.



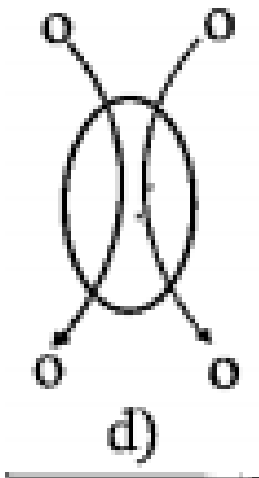
B.



C.



D.

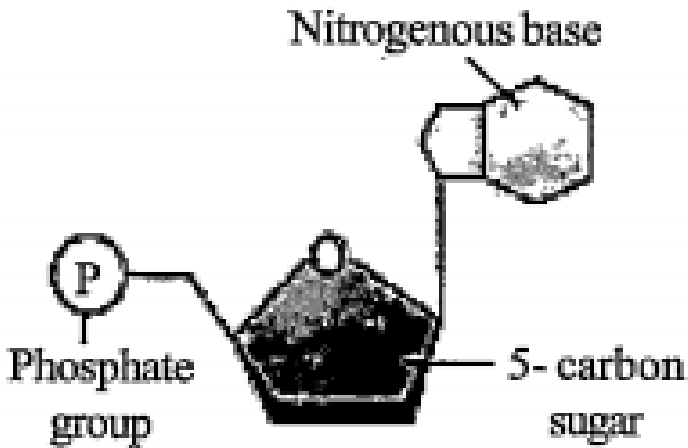


Answer:



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5.



The above structure represents a _____

A. Polynucleotide

B. Amino acid

C. Nucleoside

D. Nucleotide

Answer:



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6. The pairing of homologous chromosomes in meiosis is known as

A. Disjunction

B. Synergids

C. Bivalent

D. Synapsis

Answer:



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7. Photosynthetic roots are seen in :

A. vanda

B. Tinospora

C. Cuscuta

D. Viscum

Answer:



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8. Match the following

- | | |
|---------------|------------------------------------------------------------------|
| 1) Potassium | (i) Constituent of cell membrane, Proteins, Nucleic acids, ATP |
| 2) Magnesium | (ii) Essential component of Proteins, Nucleic acids, Amino acids |
| 3) Nitrogen | (iii) Maintains osmotic potential and turgidity of the cell |
| 4) Phosphorus | (iv) Constituent of chlorophyll |

A. 1- iii, 2 - iv, 3 - ii, 4 - i

B. 1- iii, 2 - ii, 3 - i, 4 - iv

C. 1- iv, 2 - ii, 3 - iii, 4 - i

D. 1- i, 2 - iv, 3 - iii, 4 - ii

Answer:



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9. What is plectostele? Give example.



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10. Mention two characters shared by gymnosperms and angiosperms ?



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11. List out any four primary functions of leaves.



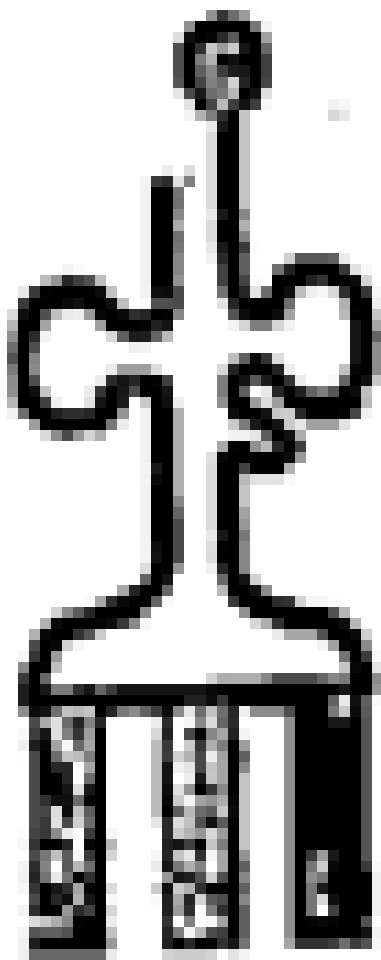
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12. A series of events leading to the formation of new cell is known as Cell Cycle. Give the diagrammatic view of Cell Cycle.



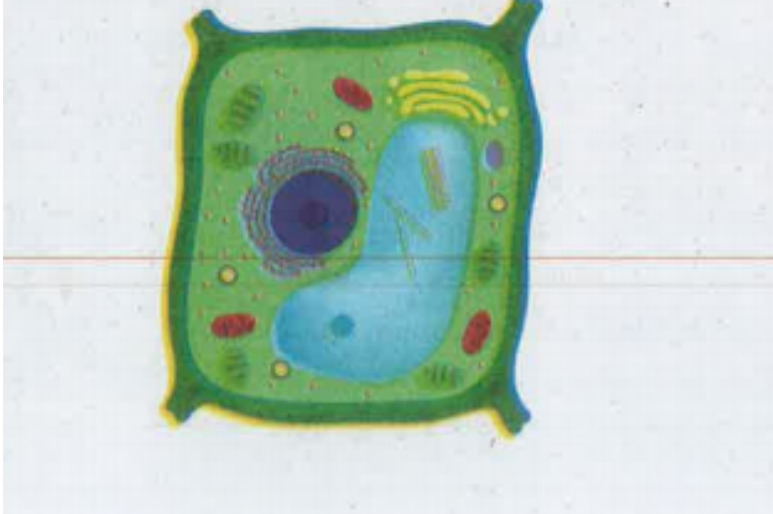
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13. Name the diagram



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14. Identify any four parts of the plant cell.



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15. Mention the different types of plasmolysis seen in plant cells.



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16. Tabulate any two differences between Cyclic and Non-Cyclic photphosphorylation.



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17. Define Placentation & mention their types.



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18. Draw and label the structure of Mitochondria.



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19. Why Mitochondria is called as 'the power house of a cell'?



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20. A transverse section of the trunk of a tree shows concentric rings which are known as growth rings . How are these rings formed ?
What are the significance of these rings ?



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21. What is the formula for Respiratory Quotient?



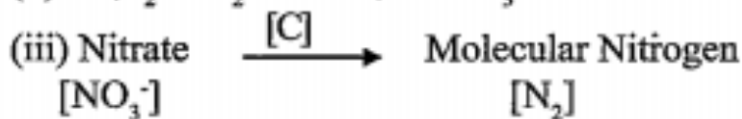
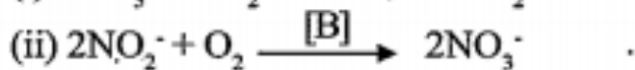
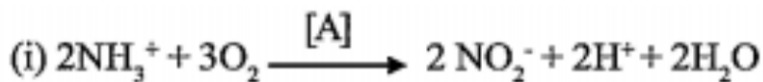
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22. Write any two significances of Pentose Phosphate Pathway.



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23. The equations given below represent the different stages of nitrogen Cycle in plants.



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24. Define Dentitrification.



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25. Which enzyme is required for Nitrogen Fixation?



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26. A Danish Physician, Christian Gram developed a staining procedure to

differentiate bacteria. List the various steps involved in that procedure.



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27. Distinguish between Deoxy viruses and Ribo viruses with example.



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28. Describe the Floral characters of *Allium cepa* with a neat floral diagram.



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29. Draw and label the internal structure of Nerium leaf.



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30. Name and define the different types of Vascular Bundle.



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31. Write the physiological effect of Cytokinins.



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32. Define Vernalisation.



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33. For every CO_2 molecule entering the C_3 cycle, the number of ATP and NADPH required is

A. $3\text{ATP} + 2\text{NADPH}$

B. $3\text{ATP} + 3\text{NADPH}$

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34. The haploid number of chromosomes for an Angiosperm is 14. The number of chromosome in its endosperm would be

A. 42

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35. Vexillary aestivation is characteristic of the family

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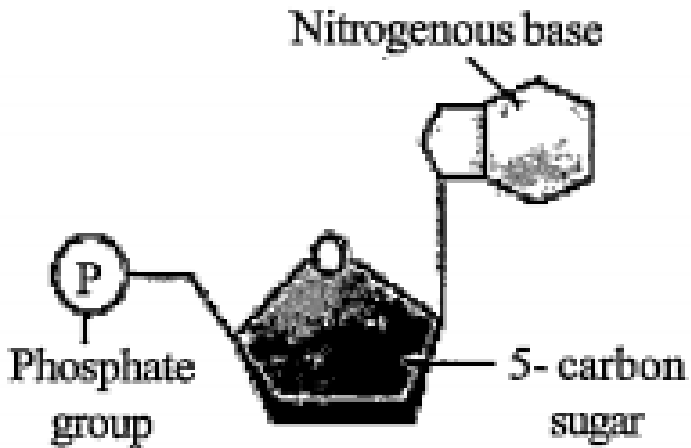
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36. Which of the following represents symport?

37. The above structure represents a ____



A. Polynucleotide

B. Amino acid

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Answer:



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38. The paring of homologous chromosomes on meiosis is known as

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39. Photosynthetic roots are seen in :

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Answer:



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40. Match:

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|---------------|------------------------------------------------------------------|
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| 2) Magnesium | (ii) Essential component of Proteins, Nucleic acids, Amino acids |
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A. 1- iii, 2 - iv, 3 - ii, 4 - i

B. 1- iii, 2 - ii, 3 - i, 4 - iv

C. 1- iv, 2 -ii, 3 - iii, 4 - i,

D. 1- i, 2 - iv, 3 - iii, 4 - ii

Answer:



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41. What is plectostele? Give example.



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42. Mention any one character shared by gymnosperms and angiosperms.



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43. Which are the primary functions of leaves?



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44. A series of events leading to the formation of new cell is known as Cell Cycle. Give the diagrammatic view of Cell Cycle.



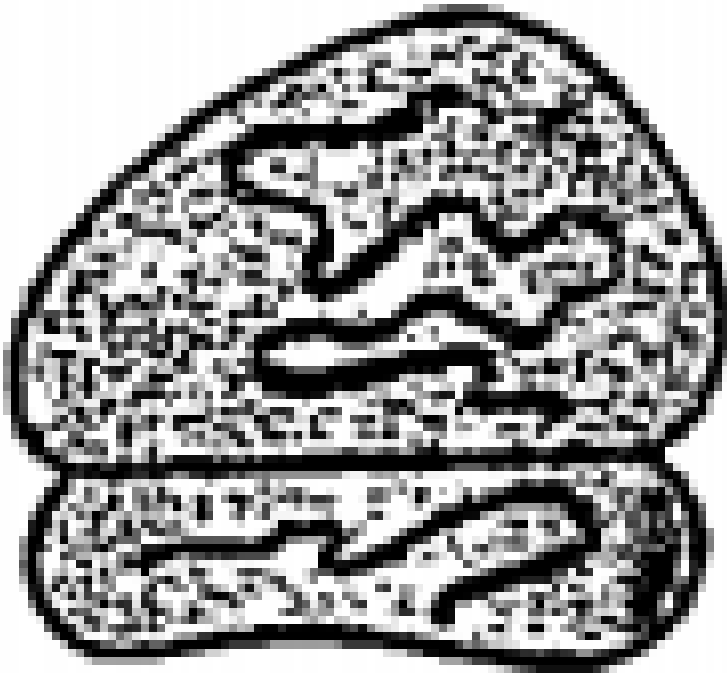
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45. Name the following diagrams



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47. Mention the different types of plasmolysis seen in plant cells.



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48. Tabulate any two differences between Cyclic and Non-Cyclic photophosphorylation.



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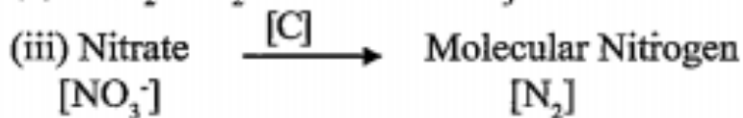
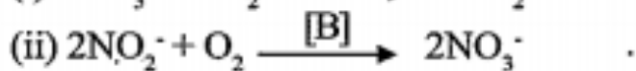
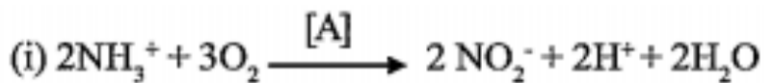
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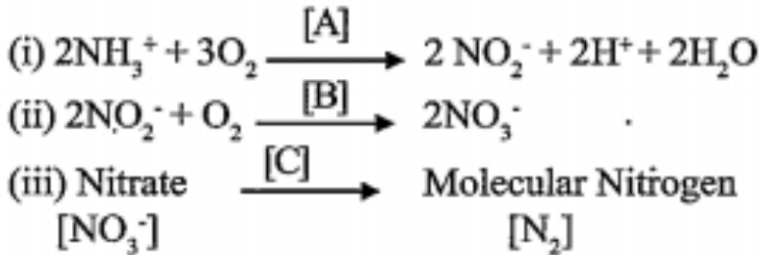
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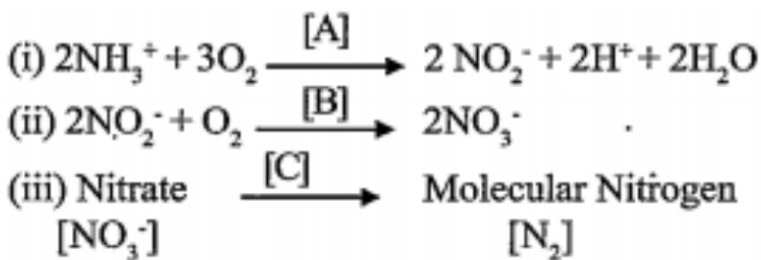
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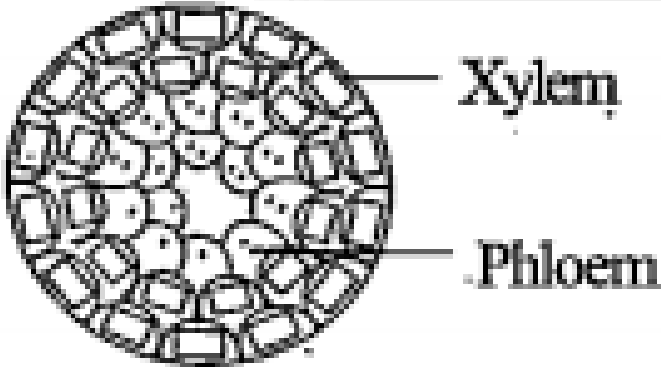
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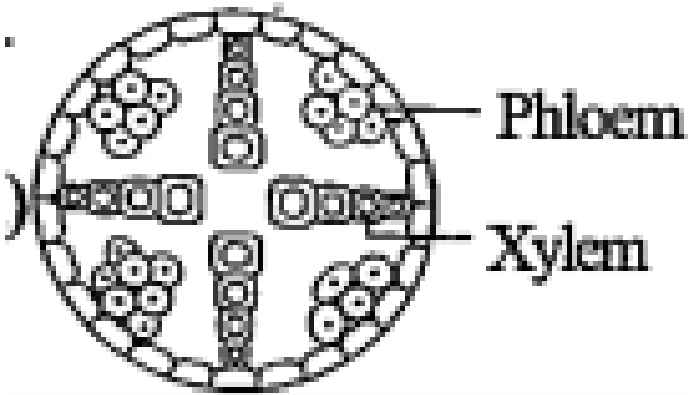
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63. Draw and label the internal structure of Nerium leaf



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64. Name the following Vascular Bundle.



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65. Write any four points regarding Physiological effects of cytokinins.

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66. Define Vernalisation.



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67.

In the above representation, what does P_r and

P_{fr} stand for?



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68. Vital Capacity is:

A. $RV + ERV$

B. $TV + IRV + ERV$

C. $TV + IRV$

D. $TV + ERV$

Answer:



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69. When a cockroach tires to enter into the ear of a sleeping person. Which one of the following process will start ?

A. Stimulation of negative feedback mechanism

B. Neuro muscular fatigue

C. Unconditioned reflex

D. Conditioned reflex

Answer:



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70. Which one of the following is correct pair?

A. Exotic breed - *Cyprinus carpio*

B. Apiculture - Reeling

C. Sericulture - Propolis

D. Milch breed -Malvi

Answer:



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71. If Henle's loop were absent from mammalian nephron, which one of the following is to be expected?

- A. The urine will be more concentrated
- B. The urine will be more diluted
- C. There will be no urine formation
- D. There will be hardly any change in the quality and quantity of urine formed

Answer:





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72. The cytoplasm of the muscle fibre is called :

- A. Myofibril
- B. Sarcoplasm
- C. Sarcomere
- D. Sarcolemma

Answer:



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73. Three domain classification was proposed by :

A. Cavalier Smith

B. R.H. Whittaker

C. Carolus Linnaeus

D. Carl Woese

Answer:



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74. Which of the statements regarding lac insect is True?

Microscopic resinous crawling scale insect.

Inserts its proboscis into plant tissue, suck juices and grows

Secretes lac from the hind end of the body.

The male lac insect is responsible for large scale production of lac

A. (ii), (i) and (iv) are correct

B. (i), (iii) and (iv) are correct

C. (i), (ii) and (iii) are correct

D. (ii), (iii) and (iv) are correct

Answer:



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75. Which of the following is not present in same rank?

A. Diptera

B. Insecta

C. Primata

D. Orthoptera

Answer:



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76. Classify the animals based on the body cavity.



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77. Name the layers found in Human Blood vessels.



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78. How is urea formed in the human body?
(OR) We are not consuming urea. But in our body urea is produced. Why?



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79. List the disorders of muscular system.



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80. Do you know your lower limb segment?

Write the 3 segments of lower limb.



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81. Name the three zones which are present in

Adrenal gland.



Watch Video Solution

82. Compare the anatomical features between Phylum Annelida and Arthropoda.



Watch Video Solution

83. Why are villi present in the intestine and not in the stomach ?



Watch Video Solution

84. Enumerate the benefits of Poultry Farming.



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85. Pituitary gland is commonly called " master gland " of the body .Why?



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86. Write the kingdom, phylum and class for Pigeon. Write the characteristics of birds that

are suitable for flying.



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87. In our heart, all the four chambers are completely partitioned. It results in non-mixing of oxygenated blood with deoxygenated blood. Explain the double circulation related to it.



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88. Differentiate between sympathetic and parasympathetic Neural system.



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89. Discuss the various techniques adopted in cattle breeding.



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Example

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