



विद्या सर्वार्थ साधिका

ANANDALAYA
MID TERM EXAMINATION
Class : XII

Subject: Biology
Date: 28/09/2019

M.M: 70
Time: 3Hours

General Instructions:

1. There are total of 27 questions and four sections in the question paper. All questions are compulsory.
2. Section A contains question numbers 1 to 5, multiple choice questions of one mark each. Section B contains question numbers 6 to 12, short answer type I questions of two marks each. Section C contains question numbers 13 to 24, short answer type II questions of 3 marks each. Section D contains question numbers 25 to 27, long answer type questions of 5 marks each.
3. There is no overall choice in the question paper. However, internal choices are provided in two questions of one mark each, one question of two marks, two questions of three marks and all the five marks questions. An examinee is to attempt any one of the questions out of the two given in the question paper with the same question number.
4. Diagrams drawn should be neat and properly labelled.

SECTION A

1. The type of pollination found in *Salvia* is (1)
(a) Anemophily (b) entamophily
(c) Ornithophily (d) hydrophily

OR

The plant which is showing hydrophily is

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|------------------------|--------------------|
| (a) <i>Vallisneria</i> | (b) Water Hyacinth |
| (c) Peacock flower | (d) Nilambo |

2. The biocontrol agent of soil borne plant pathogen is
(a) *Trichoderma* sp. (b) *Bacillus* sp.
(c) *Meloidogyne* sp. (d) *Rhizobium* sp.

OR

The bacterium that was the first biopesticide used on a commercial scale in the world is

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|----------------------------|----------------------------|
| (a) <i>Meloidogyne</i> sp. | (b) <i>Trichoderma</i> sp. |
| (c) <i>Bacillus</i> sp. | (d) <i>Pseudomonas</i> sp. |

3. The cells which are attacked by HIV that causes AIDs is (1)
(a) Monocytes (b) T- helper cells
(c) Lymphocytes (d) RBCs

4. Among the given examples, select the pair of homologous organ. (1)
(a) Wings of bat and wings of butter fly (b) flippers of whales and fins of fish
(c)Wings of birds and wings of butterflies (d) Fore limbs of horse and fore limbs of monkey

OR

The scientists who first experimentally produced amino acids and simple sugars from simple molecules are

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|--------------------------|-------------------------|
| (a) Redi and Spallanzani | (b) Oparin and Haldane |
| (c)Urey and Miller | (d) Darwin and De Vries |

5. In 1953 James Watson and Francis Crick proposed the the structure of DNA based on (1)
(a) Ultracentrifugation (b) X- ray diffraction
(c) Polymerase chain reaction (d) ELISA

SECTION B

6. What is the significance of double fertilization in Angiosperms? (2)
 7. What is the advantage of inbreeding in cattle? How does continued inbreeding affect the cattle population? (2)
 8. Differentiate between Autoimmunity and Immuno-deficiency. (2)
 9. List the specific symptoms of Amoebiasis. Which is the causative agent? (2)
 10. Why are some organisms called connecting link? Support your answer with an example. (2)
- OR
- What is a missing link? What is its significance?
11. "Ontogeny recapitulates Phylogeny". Explain this statement in view of evolution. (2)
 12. Why was *Neurospora* selected as experimental organism by Beadle and Tatum? (2)
- SECTION C**
13. Which are the three properties of genetic code that makes it unique? (3)
 14. What is the significance of Operon concept in understanding gene expression? Which are the three genes that make it? (3)
 15. What is DNA finger printing? What are its applications? (3)
 16. How do shark and whales show convergent evolution? (3)
- OR
- What is divergent evolution? Explain with an example.
17. Enumerate human evolution from *Australopithecus* to modern man. (3)
 18. Compare the effects of stimulants, hallucinogens and sedatives on CNS. (3)
 19. What are the various measures that should be adopted to avoid the youth from falling victims of drug abuse and to make them productive citizens? (3)
 20. In your surroundings what measures would you take to prevent water-borne diseases? (3)
 21. Which are the steps involved in MOET? Briefly explain. (3)
 22. Differentiate between pisciculture and aquaculture. Give two examples of culture fishes in India. (3)
 23. Explain the methods followed in creating disease resistant plants. (3)
 24. Define the following terms: (a) Apomixis (b) Polyembryony (c) Vivipary (3)
- SECTION D**
25. Give an account of methods used in sequencing of human genome. (5)
- OR
- Give an account of Hershey and Chase experiment. What did it conclusively prove?
26. Discuss the structure of immunoglobulin-G. Illustrate through a diagram and label the parts. (5)
- OR
- What are pyrogens? Explain the various diagnostic tools used for detecting cancers.
27. Describe the various steps involved in tissue culture. (5)
- OR
- How was pest resistant cotton plants developed through Biotechnology?