

2008

100376

ZOOLOGY (Optional)**प्राणिशास्त्र (वैकल्पिक)****Time : 3 hours****Maximum Marks : 200****Note :**

- (i) In all attempt **five** questions.
- (ii) Question No. 1 is **compulsory**.
- (iii) Of the remaining Questions, Attempt **any four** by selecting **one question** from each section.
- (iv) Numbers of optional questions upto the prescribed number in the order in which questions have been solved, will only be assessed and excess answers of the question/s will not be assessed.
- (v) Candidate should not write roll number, any names (including his/her own), signature, address or any indication of his/her identity anywhere inside the answer book otherwise he/she will be penalised.

1. Answer **any four** of the following : 40
- (a) What is Probability ? Describe the theory of Probability.
- (b) Describe the Plasmids as cloning vehicles.
- (c) Explain the structure of human eye and add a note on physiology of vision.
- (d) Give an account of life cycle of '*Fasciolahepatica*', and add a note on its parasitic adaptations.
- (e) Write a note on Genome information.

SECTION - A

2. Answer the following sub-questions :
- (a) Give an account of structure and functions of Golgi-apparatus. 20
- (b) What is Darwinism ? Describe the Darwin's view for Natural selection. 20
3. Answer the following sub-questions :
- (a) Give an account of the ultrastructure and functions of lysosome. 20
- (b) What is mutagenesis ? Describe the mechanism of mutagenesis. 20

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SECTION - B

4. Answer the following sub-questions :
- (a) Describe the structure and biological importance of Proteins. 20
 - (b) Explain the different types of RNAs and their functions. 20
5. Answer the following sub-questions :
- (a) Describe the different types of polysaccharides and their derivatives. 20
 - (b) Explain the translation in Protein synthesis. 20

SECTION - C

6. Answer the following sub-questions :
- (a) Describe the thermoregulation in Homeothermic vertebrates. 10
 - (b) Describe the process of oogenesis. 15
 - (c) Discuss the diseases caused by Mosquitoes. 15
7. Answer the following sub-questions :
- (a) Explain the structure and functions of human ear. 10
 - (b) Describe the development of frog embryo upto the gastrulation. 15
 - (c) Write an essay on Sericulture. 15

SECTION - D

8. Answer the following sub-questions :
- (a) Write an essay on Migration in fishes. 10
 - (b) Describe briefly the biological nomenclature of species. 10
 - (c) Describe the food pyramids in terrestrial ecosystem. 20
9. Answer the following sub-questions :
- (a) What is living fossil ? Describe it with reference to Rhyncocephalia. 10
 - (b) Give an account of classification on the basis of five kingdoms. 10
 - (c) With the help of the diagram explain the Nitrogen cycle in nature. 20