1. Answer any four of the following:

(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 'Fasciola hepatica', 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.
(b) What is Darwinism? Describe the Darwin's view for Natural selection.

3. Answer the following sub-questions:

(a) Give an account of the ultrastructure and functions of lysosome.
(b) What is mutagenesis? Describe the mechanism of mutagenesis.
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