

**Final Year B.Sc. Degree Examination**  
**November 2009**  
**(Distance Education)**

**ZOOLOGY**  
**Paper-III : Cell Biology, Genetics, Evolution, Apiculture and**  
**Sericulture**

Time : 3 Hours

Max. Marks : 75

**Instructions to Candidates:-**

- 1) Simple questions should be answered in the first two pages of the answer book.
- 2) Draw labelled diagrams wherever necessary.

**I. Simple questions:**

**10x1=10**

**Answer in a word, phrase or sentence:**

1. Define phenotype.
2. What is norm of reaction?
3. What is amphimixis?
4. What is a malignant tumor?
5. Define expressivity.
6. What is immunoglobulin?
7. What is moulting?
8. What is spermeogenesis?
9. Define gene pool.
10. What is meant by prodigality of nature?

**II. Short answer questions:**

**5x3=15**

**Answer any FIVE of the following:**

11. Briefly explain different types of cancers.
12. Draw a labeled diagram of mouth parts of honey bee.
13. Explain acrosome reaction.
14. What are lethal genes? Explain with an example.
15. Explain homologous organs.

16. Draw a neat labeled diagram of human sperm.
17. Explain the role of genetic drift in evolution.

**III. Medium answer questions:**

**5x6=30**

**Answer any FIVE of the following:**

18. Describe the structure of IgG.
19. Describe oogenesis.
20. Explain C/B technique.
21. Explain any two sex chromosome anomalies.
22. Explain chawki rearing.
23. Mention the utilitarian value of honey.
24. Explain multiple allelism with an example.

**IV. Long answer questions.**

**2x10=20**

**Answer any TWO of the following:**

25. Explain the significance of isolating mechanisms in the process of evolution.
26. Explain the Darwinian theory of evolution.
27. Describe the life cycle of Bombyx Mori.
28. Explain the nature and nurture problem in human twins.

\* \* \*