

Final Year B.Sc., Degree Examinations

August/September 2011

Directorate of Distance Education Course

ZOOLOGY

Paper III : Cell Biology, Genetics, Evolution, Apiculture & Sericulture

Time: 3 hrs.]

[Max.Marks:75/85

Instructions to the Candidates :

1. Students who have attended 25 Marks IA Scheme will have to answer for total of 75 Marks.
2. Students who have attended 15 Marks IA Scheme will have to answer for total of 85 Marks.
3. Simple questions should be answered in first two pages of the answer book.
4. Draw labelled diagrams wherever necessary.
5. All Questions are compulsory.
6. Question No. V is compulsory for 85 marks scheme.

I. Simple answer questions :

10 X 1= 10Marks

Answer in a word, a phrase or a sentence.

1. What is metastasis ?
2. What are homologous organs ?
3. Define pleiotropism.
4. What is allopatric speciation ?
5. Name any two species of Honey bee.
6. Name a protozoan disease of silkworm.
7. What are fossils ?
8. Define spermiogenesis.
9. Name any two lymphoid organs.
10. What is cell fractionation ?

II. Short Answer Questions.

Write any FIVE of the following.

5X 3= 15Marks

11. Explain the significance of parthenogenesis.
12. Explain the environmental conditions for silkworm rearing.
13. What is ecological isolation ? Give an example.

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14. Explain phenocopy with an example.
15. Draw a neat labelled diagram of a human sperm.
16. What is vaccination ? Give two examples for vaccines.
17. Explain the role of over production in evolution.

III. Medium answer questions.

Answer any FIVE of the following.

5X6= 30Marks

18. Explain the Lamark's theory of evolution.
19. Describe the nature – nurture problem in human twins.
20. What are lethal genes ? Explain with an example.
21. Briefly explain the mechanism of induced mutations.
22. What are vestigial organs ? Give examples.
23. Describe the structure of mouth parts in honeybee.
24. Explain the Hardy – Weinberg's law of equilibrium.

IV. Long answer questions :

2X10=20 Marks

Answer any TWO of the following.

25. Explain the Chawki and adult silkworm rearing methods.
26. Describe the different stages of horse evolution.
27. Explain the structure of antibody. Add a note on their functions.
28. Describe the Lac – operon model of gene regulation.

V. (Compulsory Question for 85 Marks Scheme Only)

Long answer questions :

1X10=10 Marks

Answer any ONE of the following.

29. Explain the modern method of bee keeping.
30. Describe the process of gametogenesis in animals.
