

Q.P. Code – 50830

Final Year B.Sc. Degree Examination

OCTOBER/NOVEMBER 2014

(Directorate of Distance Education)

Zoology

**(DSC 310) Paper III – CELL BIOLOGY, GENETICS, EVOLUTION,
APICULTURE AND SERICULTURE**

Time : 3 Hours]

[Max. Marks : 75/85

Instructions to 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 answer questions should be answered in the first two pages of the answer book.*
- 4) *All questions are compulsory.*
- 5) *Draw labelled diagrams **wherever** necessary.*
- 6) *Question No. **V** is **compulsory** for **85** marks scheme **only**.*

I. Simple Answer Questions :

Answer in a word or a phrase or a sentence :

10 × 1 = 10

1. What is cell fractionation?
2. Define parthenogenesis.
3. What is concordance?
4. What are fossils?
5. What is apiculture?

Q.P. Code – 50830

6. Define stifling.
7. Mention the causative agent of pebrine disease of silkworm.
8. What is mutation?
9. What is innate immunity?
10. Define metastasis.

II. Short Answer Questions :

Write any **FIVE** of the following :

5 × 3 = 15

11. Explain haploid parthanogenesis with an example.
12. What is norm of reaction? Explain with an example.
13. Explain the homeostasis.
14. Describe the Klinefelter's syndrome.
15. Explain the use and disuse theory of Lamarck.
16. Mention any three species of Honey bees.
17. Explain the non-mulberry silkworms.

III. Medium Answer Questions :

Answer any **FIVE** of the following :

5 × 6 = 30

18. Describe the characteristics of cancer cells.
19. Explain the process of oogenesis.
20. Describe the multiple allelic series in Rabbits.
21. Explain the different types of mutations.
22. Describe the morphological evidences for organic evolution.
23. Explain the silkworm rearing appliances.
24. Describe the morphology of worker honeybee.

Q.P. Code – 50830

IV. Long Answer Questions :

Answer any **TWO** of the following :

2 × 10 = 20

25. Describe the different stages of evolution of horse.
26. Explain the modern method of beekeeping.
27. Describe the mechanism of gene regulation in prokaryotes.
28. Describe the mechanism of fertilization. Add a note on its significance.

V. **Compulsory** Question for **85** marks scheme only :

Long Answer Questions :

Answer any **ONE** of the following :

1 × 10 = 10

29. Describe the various reproductive isolating mechanisms in speciation.
 30. Explain the life cycle of *Bombyx mori* with neat labeled diagrams.
-