Reg. No. : ....

Name : ....

Fifth Semester B.Sc Degree Examination, December 2022

First Degree Programme Under CBCSS

Zoology

Core Course VI

ZO 1543 : GENETICS AND BIOTECHNOLOGY

(2013 and 2014 Admission)

Time : 3 Hours   Max. Marks : 80

I.   Answer **all** questions in a word or **one** or **two** sentences.

      (Each question carries **1** mark).

1.   Mongolism.

2.   ABO blood group.

3.   Sex-linked trait in humans.

4.   Ligases.

5.   P.C.R

6.   Lipofection.

7.   Bioethics.

8.   Albinism.

9. Hermaphrodite.

10. Extremophiles.

(10 × 1 = 10 Marks)

II. Answer any **eight** of the following. (Each question carries **2** marks)

Answer should not exceed **one** paragraph.

11. Comment on human Eye colours.

12. What is Sex-influenced inheritance?

13. Mention the chromosomal basis for an Intersex.

14. Define Eugenics.

15. Genomic Library.

16. Transgenic Microbes.

17. DNA Vaccines

18. Biotechnology and industry.

19. Kappa Particles in Paramecium.

20. Holandric Genes.

21. Significance of Crossing Over in Genetics.

22. Pleiotropism with an example.

(8 × 2 = 16 Marks)

III. Answer any **six** of the following. (Each question carries **4** marks)
Answer should not exceed **120** words.

23. Comment on Barr bodies.

24. Write a short note on Animal Cloning.

25. Cutting and joining of DNA.

26. Give the relevance of Oncogenes in human health.

27. Describe the role of Gene Therapy in modern medicine.

28. Comment on Phenylketonuria.

29. Blotting Techniques.

30. Monoclonal Antibodies.

31. Implications of Gene Doping.

(6 × 4 = 24 Marks)

IV. Answer any **two** of the following. (Each question carries **15** marks)
Answer as a short essay.

32. Write an essay on Genetics and Human welfare.

33. Enumerate the Potential Hazards involved in Biotechnology.

34. Describe the Tools used in Recombinant DNA technology.

35. Explain Chromosome theory of Sex Determination.

(2 × 15 = 30 Marks)

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