

D4BZL2202

Reg. No:

Name:

FOURTH SEMESTER B. Sc. DEGREE EXAMINATION, APRIL 2024

(Regular/Improvement/Supplementary)

ZOOLOGY: Complementary Course for Botany

GZOL4C04T: GENETICS AND IMMUNOLOGY

Time: 2 Hours

Maximum Marks: 60

SECTION A: Answer the following questions. Each carries *two* marks.

(Ceiling 20 Marks)

1. What is prenatal diagnosis? Give examples.
2. Add an account on Phenylketonuria.
3. Write a note on Barr body and its significance.
4. What are transposons?
5. Comment on pBR322.
6. What is a YAC vector?
7. Write an account on melanoma.
8. Differentiate between epitope and paratope.
9. List the factors influencing immunogenicity.
10. Differentiate between Fab and Fc region of immunoglobulin.
11. What are agglutination reactions?
12. Expand and give principles of (a) RIA, (b) ELISA.

SECTION B: Answer the following questions. Each carries *five* marks.

(Ceiling 30 Marks)

13. What is polygenic inheritance? Explain with examples.
14. Describe chromosomal mechanism of sex determination.
15. Explain various methods of gene transfer.
16. Differentiate between malignant and benign cancer.
17. What is acquired immunity? Describe the types of acquired immunity.
18. Compare primary and secondary response.
19. Write a note on vaccination and its types.

SECTION C: Answer any *one* question. Each carries *ten* marks.

20. What is gene expression? Explain the processes involved.
21. Explain the major steps in recombinant DNA technology.

(1 x 10 = 10 Marks)