

41256

(Pages : 2)

Name.....

Reg. No.....

**FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION  
APRIL, 2023**

**Zoology**

**ZOL 4C 04T—GENETICS AND IMMUNOLOGY**

**(2019 Admission onwards)**

**Maximum : 60 Marks**

**Time : Two Hours**

**Section A**

**I. Short Answer Questions. Each question carries 2 marks :**

- 1 What are Autosomes ?
- 2 What is Karyotyping ?
- 3 Distinguish between cellular and humoral immunity.
- 4 What are split genes ?
- 5 What are carcinogens ? Give an example.
- 6 What is Metastasis ?
- 7 What are monoclonal antibodies ? Write any *one* application.
- 8 Write any *two* enzymes and their role in recombinant DNA technology.
- 9 What is RIA ? Write its applications.
- 10 What are Vaccines ? Give an example.
- 11 Mention any *two* methods of gene transfer used in genetic engineering.
- 12 Comment on the genic balance theory of sex determination.

**(Ceiling:20 marks)**

**Section B**

**II. Paragraph Questions. Each question carries 5 marks :**

- 13 Briefly explain the genetic basis of color blindness.
- 14 Give a brief description on cloning vectors.

**Turn over**

- 15 Write the principle and applications of DNA finger printing.
- 16 Briefly describe the concept of polygenic inheritance.
- 17 Write a note on different types of cancer.
- 18 Write an account on Immunodeficiency Syndrome.
- 19 Write a brief note on eugenics, euthenics and euphenics.

### Section C

(Ceiling : 3)

III. Essay Questions. Answer any *one* question :

- 20 Describe the various immunoglobulin gene families.
- 21 Write an essay on chromosomal mechanism of sex determination.

(1 × 10 = 10)