V Semester B.Sc. Examination, April/May 2023
(CBCS Scheme)
GENETICS (Paper – VI)
Basic Human Genetics

Time : 3 Hours

Max. Marks : 70

Instructions : 1) **Answers** *should be written* **completely** *in* **English**.
2) *Draw diagrams* **wherever** *necessary*.

PART – A

I. Answer **any five** of the following : (5×3=15)

1) Write the names of chromosomes depending on the position of centromere.

2) What is Karyotyping ?

3) Mention the characteristics of MHC_1.

4) Write the aberration involved in CML.

5) Mention the difference between innate and acquired immunity.

6) What are stem cells ?

7) Define loops.

PART – B

II. Answer **any five** of the following : (5×5=25)

8) Describe the inheritance pattern and symptoms of LHON.

9) Explain the types of flow cytometry.

10) Write a note on oncogenes.

11) Differentiate between benign and malignant tumor.

12) Write a note on cells of immune system.

13) Elaborate on HLA system.

14) Explain dermatoglyphics and its applications.

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PART – C

III. Answer **any three** of the following : (3×10=30)

15) Write a note on symbols used in pedigree analysis. Albinism is a autosomal recessive disease. If a girl who has an albino brother marries a boy who has a albino sister, what is the probability of their children becoming albino. Support your answer with pedigree.

16) Elaborate on human genome project.

17) Describe the properties of malignant cancers.

18) Give a detailed note on gene therapy.

19) Elaborate on multi factorial inheritance with any one example.