



**GN-273**

V Semester B.Sc. Examination, December - 2019

(CBCS-F+R)

**GENETICS - VI**

**Basic Human Genetics**

Time : 3 Hours

Max. Marks : 70

- Instructions :** (i) Answer should be written Completely in English.  
(ii) Draw diagrams wherever necessary.

**PART - A**

**I.** Answer **any five** of the following questions :

**5x3=15**

1. What is Karyotyping ?
2. Draw pedigree symbols for :
  - (a) Normal male
  - (b) Abortion
  - (c) Consanguineous marriage
3. What is X - linked agammaglobulinaemia ?
4. Differentiate between Benign and Malignant tumours.
5. What is the Chromosomal abnormality associated with CML ?
6. Give any three advantages of dermatoglyphics.
7. What are stem Cells ? Mention its types.



**PART - B**

**II.** Answer **any five** of the following questions :

**5x5=25**

1. Explain Flow Karyotyping.
2. Explain inheritance of autosomal dominant disease with an example.
3. With a suitable example explain mitochondrial disease.
4. Give an account on HLA disease association.
5. What are protooncogenes ? Explain with an example.
6. Give an account on eugenics and euphenics.
7. Explain Chorionic Villus sampling.

**P.T.O.**

**PART - C****III.** Answer **any two** of the following questions :**2x10=20**

1. Explain the genetics and inheritance pattern of Duchenne's muscular dystrophy.
2. Give an account of the major histocompatibility complexes.
3. What is gene therapy ? How it is used to treat Haemophilia ?
4. Explain :
  - (a) Paris nomenclature
  - (b) Cells of immune system

**PART - D****IV.** Answer **any one** of the following questions :**1x10=10**

1. Describe amniocentesis and ultrasonography.
2. Explain :
  - (a) Properties of cancer cells
  - (b) Inheritance pattern of Diabetes

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