

Reg. No.

--	--	--	--	--	--	--	--	--	--

ZOE 456



**Second Semester M.Sc. Examination, September/October 2022
(CBCS)
ZOOLOGY
Human Genetics (OE)**

Time : 3 Hours

Max. Marks : 70

Instructions : 1) Answer *all* questions.
2) Give illustrations *whenever* necessary.

I. Write short notes on :

(5×2=10)

- Chiasmata.
- Trisomy.
- VNTR.
- Genotype.
- Endogamy.

- II. a) Explain the process of fertilization.
b) Genetic significance of X-inactivation.

12

OR

Write explanatory notes on :

- Sex determination.
- Milestones in the development of genetics.

- III. a) With suitable examples explain the chromosome aneuploidy in humans.

12

OR

Elaborate :

- Duplications.
- Factors responsible for chromosome aberrations.

- IV. a) Write an account on DNA polymorphism and its applications.

12

OR

Write notes on :

- Gene Bank and its importance.
- Structure of a gene.

P.T.O.



- V. a) Discuss the contributions of Gregor Mendel in understanding genetics with suitable examples. **12**

OR

Discuss on :

- b) Mendelian inheritance of autosomal recessive genes in humans.
- c) Extra chromosomal inheritance.

- VI. a) Discuss the factors influencing Hardy-Weinberg Law of genetic equilibrium. **12**
- b) Write an account on ultrasound and its applications.

OR

Write explanatory notes on :

- c) Foetal blood sampling and maternal serum screening.
 - d) Career screening for X-linked disorders.
-