

M.Sc. - II (Zoology) (CBCS Pattern) Third Semester  
**PSCZOOT11-5 - Special Group-Cell Biology (Paper-II) Paper-XI**

P. Pages : 1

Time : Three Hours



**GUG/W/18/11321**

Max. Marks : 80

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- Notes :
1. All question are compulsory.
  2. All questions carry equal marks.
  3. Illustrate your answers with dia. wherever necessary.

**1. State in detailed, Human metabolic disorders. 16**

**OR**

- a) Chromosome banding methods. State its applications in genetics.
- b) Chromosomal mutations.

**2. Give an account of Genome Models of Lambda Phage -E coli. 16**

**OR**

- a) Organelle genome.
- b) Functional genomics.

**3. State in detailed cell differentiation and differential Gene Activity. 16**

**OR**

- a) Sex determination in Human.
- b) Nuclear transfer experiment.

**4. Give an account on speciation. 16**

**OR**

- a) Theories of organic evolution.
- b) Hardy-Weinberg equation and its significance in population genetics.

**5. Attempt the following. 16**

- a) In-situ hybridization.
- b) DNA sequencing.
- c) Gap genes
- d) Isolating Mechanism.

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