

**2023**  
**B.A./B.Sc.**  
**Fifth Semester**  
CORE – 12  
**ZOOLOGY**  
*Course Code: ZOC 5.21*  
(Principles of Genetics)

*Total Mark: 70*  
*Time: 3 hours*

*Pass Mark: 28*

*Answer five questions, taking one from each unit.*

**UNIT-I**

1. Explain the principles of incomplete and co-dominance giving examples. 7+7=14
2. Write notes on the following: 7×2=14
  - (a) Epistasis
  - (b) Sex-influenced inheritance

**UNIT-II**

3. Explain the types of linkage. Add a note on interference. 8+6=14
4. Write notes on the following: 7×2=14
  - (a) Coincidence
  - (b) Somatic cell hybridization

**UNIT-III**

5. Explain the different types of chromosomal aberration with examples. 14
6. Write notes on the following: 7×2=14
  - (a) CLB method
  - (b) Attached X-method

## UNIT-IV

7. Discuss chromosomal mechanism of sex determination in drosophila and man. 7+7=14
8. Explain mitochondrial mutation in saccharomyces and infective heredity in paramecium. 7+7=14

## UNIT-V

9. Describe polygenic inheritance with suitable examples. 14
10. Write notes on the following: 7×2=14
- (a) Transformation in bacteriophage
  - (b) Transposons in human
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