

2022
M.Sc.
First Semester
CORE – 01
ZOOLOGY
Course Code: MZOC 1.11
(Genetics & Cytogenetics)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

UNIT-I

1. (a) Explain the organisation of chromosome in eukaryotic organism. 8
(b) Write a note on mitochondrial diseases in man. 6
2. Write a note on C-value paradox. Add a note on repetitive and non-repetitive sequences in eukaryotic genome. 8+6=14

UNIT-II

3. Explain the mechanism of crossing over. Discuss the various factors affecting crossing over. 8+6=14
4. Elucidate the steps in production of monoclonal antibodies. Write the various applications of monoclonal antibodies. 8+6=14

UNIT-III

5. Give an account on how genes mutation can take place. 14
6. With suitable example explain the structural and numerical alterations of chromosomes. 14

UNIT-IV

7. Give an account on sex determination in drosophila. 14

8. Explain in detail the karyotyping of human chromosome. Add a note on prenatal diagnosis. 10+4=14

UNIT-V

9. Briefly explain the various genetic pathways to cancer. 14
10. Write short notes on the following: 7×2=14
- (a) Burkitts lymphoma
 - (b) Tumour supressor genes
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