

**B.Sc. DEGREE END SEMESTER EXAMINATION MARCH 2018****SEMESTER – 6: ZOOLOGY (CORE COURSE)****COURSE: 15U6CRZOO10: GENETICS AND BIOTECHNOLOGY***(For Regular - 2015 Admission)*

Time: Three Hours

Max. Marks: 60

**PART A****Answer all questions**

1. Define alleles
2. What is linkage?
3. Down syndrome
4. What is cDNA?
5. Eugenics
6. Monoclonal antibodies
7. Plasmid
8. Bioremediation

**(1 x 8 = 8)****PART B****Answer any Six**

9. What is test cross? Give its significance
10. Define epistasis
11. What is Genic Balance Theory?
12. What is gynandromorphy?
13. Write a note on DNA ligase
14. Write a short note on gene therapy
15. What is FISH?
16. Define biopiracy

**(2 x 6 = 12)****PART C****Answer any Four**

17. Define transposable element. Add a note on the mechanism of transposition
18. Explain multiple alleles with example
19. Briefly explain sex linked inheritance
20. Describe gene transfer methods
21. Explain southern blotting technique
22. Discuss the potential hazards of biotechnology

**(5 x 4 = 20)****PART D****Answer any Two**

23. Define mutation. Explain the molecular basis of mutation
24. Give a detailed account on extra nuclear inheritance
25. Write an essay on stem cells
26. Discuss the applications of Biotechnology in Agriculture and Forestry

**(10 x 2 = 20)**