

B. Sc. DEGREE END SEMESTER EXAMINATION MARCH 2017**SEMESTER – 6: ZOOLOGY (CORE COURSE)****COURSE: U6CRZOO10: GENETICS AND BIOTECHNOLOGY***(For Regular - 2014 Admission)*

Time: Three Hours

Max. Marks: 60

PART AAnswer **all** questions. Each question carries 1 mark

1. Punnett square
2. Hfr strain
3. Chiasmata
4. Linkage map
5. What are DNA vaccines?
6. Wild type allele
7. FISH
8. Non-disjunction

 $(1 \times 8 = 8)$ **PART B**Answer **any six** questions. Each question carries 2 marks

9. Mention about Chromosome theory of Heredity.
10. Mention about Restriction fragment length polymorphism.
11. Name the characters selected by Mendel.
12. What do you mean by Patent Protection?
13. A coleopteran larvae feed Bt brinjal modified by Cry I gene, what will be its fate?
14. Comment on Euthenics.
15. Distinguish between test cross and back cross.
16. Explain Environmental influence on sex determination.

 $(2 \times 6 = 12)$ **PART C**Answer **any four** questions. Each question carries 5 marks

17. Give an account on the inheritance of polygenes.
18. Elucidate Mendel's monohybrid cross; define law of dominance and law of segregation.
19. Explain allelic interactions with suitable example.
20. Comment on the molecular basis of gene mutation.
21. Elucidate potential hazards of biotechnology.
22. Give a brief explanation of cytoplasmic inheritance.

 $(5 \times 4 = 20)$ **PART D**Answer **any two** questions. Each questions carries 10 marks

23. Write an essay on linkage with suitable examples.
24. Write an essay on Plasmid and Phage vectors.
25. Explain Sex linked inheritance. What are holandric and pseudo-autosomal genes?

26. Write an essay on animal cell culture.

(10 x 2 = 20)