



K19P 0124

Reg. No. :

Name :

**IV Semester M.Sc. Degree (Reg./Suppl./Imp.) Examination, April 2019
(2014 Admission onwards)**

ZOOLOGY

ZOO 4C12 : Biotechnology and Bioinformatics

Time : 3 Hours

Max. Marks : 60

I. Answer **any two** of the following :

- 1) Explain DNA sequencing. Give an account of Sanger and Coulson method of DNA sequencing.
- 2) Write an essay on the various enzymes used in genetic engineering.
- 3) Explain polymerase chain reaction and gene amplification. Add a note on applications.
- 4) Discuss the potential hazards and impacts of biotechnology on society. **(2×12=24)**

II. Answer **any two** of the following :

- 5) Discuss the history of molecular biotechnology.
- 6) Explain DNA profiling. Comment on its applications.
- 7) Write an essay on generalized and specialized biological databases.
- 8) Give an account of gene therapy. Mention its future prospects. **(2×8=16)**

III. Answer **any four** of the following :

- 9) Comment on genomics.
- 10) Write a note on transgenic animals.
- 11) Explain chromosome walking.
- 12) Write on applications of bioinformatics.
- 13) Comment on pBR 322.
- 14) Describe gene silencing. **(4×5=20)**