



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION - ZOOLOGY

FOURTH SEMESTER – APRIL 2013

ZO 4811/4809 - BIOTECHNOLOGY

Date : 30/04/2013

Dept. No.

Max. : 100 Marks

Time : 1:00 - 4:00

SECTION – A

Answer ALL questions

(10×2= 20)

01. Define genetic algorithm .
02. Distinguish XNA and LNA .
03. Sketch pBR 322
04. What are biolistics ?
05. Name any four restriction enzymes
06. What are the disadvantages of SCP ? .
07. Comment on Chimeric antibodies
08. Identify Bioreactor Probes
09. Differentiate oligo array from spotted array
10. Expand WIPO and PFGE

SECTION – B

Answer any FOUR questions briefly

(4X10= 40)

11. How does biosafety operate in India ?
12. Illustrate the sequential events of DNA finger printing
13. How do you decipher bioinformatics for biotechnology ?
14. Examine the processing phenomenon involved in biomining
15. What are the steps involved in biofertilizer processing ?
16. What are the methods involved in gene therapy.

SECTION – C

Answer any TWO questions in detail

(2X20= 40)

17. Trace the biochemical pathways involved in the production of penicillin and glutamic acid
18. What are the steps involved in the production of commercial microbial enzymes ?
19. Propose a protocol for organ culture and embryo culture with a note on their limitations and applications
20. State the applications of:
 - a) IPP and IPR
 - b) Polyclonal antibodies
 - c) Microarray and
 - d) Cryopreservation
