 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

 **M.Sc.** DEGREE EXAMINATION - **ZOOLOGY**

FOURTH SEMESTER – **NOVEMBER 2012**

# ZO 4811 - BIOTECHNOLOGY

 Date : 06/11/2012 Dept. No. Max. : 100 Marks

 Time : 1:00 - 4:00

**SECTION – A**

**Answer ALL questions:** (10×2= 20)

01. Distinguish bioleaching from bioremediation.

02. Name the filter paper being used in southern blotting and northern blotting.

03. State Wallac rule on melting temperature.

04. Sketch Ti Plasmid.

05. Distinguish monoclonal from polyclonal antibodies.

06. What are molecular markers? Name any two of them.

07. What are base cutters? Mention the types.

08. What are magic bullets? State the importance.

09. What are shuttle vectors? Mention their application.

10. Expand: a) PCB b) HRCS

**SECTION – B**

**Answer any FOUR of the following briefly:**  (4×10= 40)

11. How do microbes oxidize Fe2+ into Fe3+ ? Mention its significance?

12. What are the criticisms raised against GMO?

13. “Heart of fermentation is bioreactor” – Substantiate.

14. What are the significant decisions taken by Govt of India regarding patent

 system?

15. What are the risks and ethics involved in gene therapy?

16. Describe any two cloning vectors.

**SECTION – C**

**Answer any TWO of the following in detail:**  (2×20=40)

17. How do you resort to animal cell culture and organ culture? What are their applications?

18. What are the strategies and tools involved in DNA computing?

19. Elucidate the strategies involved in large scale production of enzymes.

20. Discuss the impact of biotechnology on Agricultural crops.

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