

**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**



**M.Sc. DEGREE EXAMINATION – ZOOLOGY**

**FOURTH SEMESTER – APRIL 2023**

**PZO 4501 – MICROBIOLOGY AND IMMUNOLOGY**

Date: 29-04-2023

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

**Part A**

**Answer ALL the questions**

**(10×2=20 Marks)**

1. Microorganism arise from spontaneously – Justify.
2. What is “Endosymbiotic Theory”?
3. Differentiate Obligate from facultative growth.
4. How will you differentiate defined media from differential media?
5. What is potential energy?
6. Differentiate plasmid from cosmid.
7. What is transformation?
8. Comment on stem cell applications.
9. Mention the SOS mechanism.
10. Comment on primary lymphoid organ.

**Part B**

**Answer any FOUR questions**

**(4×10=40 Marks)**

11. Describe Whittaker’s five kingdom classification.
12. Give an account on gram positive and gram negative cell wall.
13. What are the types of RNA? and describe the role of RNA in biosynthesis
14. Describe the types of immunodeficiency.
15. Write notes on hematopoietic stem cell.
16. Illustrate the vaccination schedule

**Part C**

**Answer any TWO questions**

**(2×20=40 Marks)**

17. Explain microbial nutrition and growth.
18. Describe bacterial transformation and conjugation.
19. Summarize the DNA repair mechanism and recombination.
20. Write an essay on T lymphocyte development.

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