

25061

M.Sc. DEGREE EXAMINATION, MARCH/APRIL 2019.

SECOND SEMESTER

Microbiology

Paper I – MICROBIAL PHYSIOLOGY AND METABOLISM

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Peptone
2. Acetogens
3. Anaplerotic reactions
4. Gluconeogenesis
5. Uncouplers
6. Butyrate fermentations
7. Salvage pathway
8. Assimilation of sulfur

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Write the classification of microorganisms based on carbon, energy and electron sources.

Or

10. Write a detailed account on major and minor nutritional elements and growth factors required for the growth of bacteria.

11. Explain about Hexose monophosphate shunt pathway.

Or

12. Discuss about photochemistry of PSI and PSII.

13. Compare electron transport chain in mitochondria and bacteria.

Or

14. Discuss about sulphate and nitrate respiration and their ecological roles.

15. Describe biosynthetic pathway of tryptophan.

Or

16. Narrate an elaborate account on Catabolism of amino acids.

