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School of Biological and Life sciences

Master of Science in Microbiology

Mid Term Examination - May 2024

Duration : 90 Minutes

Max Marks : 50

Sem II - P1PT203B - Physiology and Metabolism of MicrobesGeneral Instructions*Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

- 1) Identify the carbon, energy and electron source of a) Photolithoautotrophs b) Photoorganotrophs heterotrophs K2 (2)
- 2) Define substrate level phosphorylation. K1 (3)
- 3) Write short note on types of Microbial Fermentation reactions. K2 (4)
- 4) Briefly describe the role of fatty acid synthase complex in fatty acid synthesis. K2 (6)
- 5) Illustrate the regulatory steps of Glycolysis. K3 (6)
- 6) Explain the role of electron transport chain inhibitors and uncouplers. K3 (9)
- 7) Illustrate in detail the pentos phosphate pathway and its biological role. K4 (8)
- 8) What is redox potential? Elucidate the role of Cytochrome C, Ubiquinone and cytochrome oxidase in Electron Transport System. K4 (12)

OR

Draw a labelled diagram to exhibit the NADH₂ and FADH₂ oxidation in mitochondrial electron transport chain. K4 (12)