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**School of Biological and Life sciences**

Bachelor of Science Honours in Microbiology  
Mid Term Examination - May 2024

Duration : 90 Minutes

Max Marks : 50

**Sem II - P1UC201T - Microbial Physiology and Metabolism***General 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) What are anaerobic bacteria? Give example. K2 (2)
- 2) What is fermentation, and how does it differ from aerobic respiration? K1 (3)
- 3) Define uniport transport. K2 (4)
- 4) Explain substrate level phosphoryation with suitable example. K2 (6)
- 5) How do bacteria perceive and respond to external signals? K3 (6)
- 6) Explain the reaction catalysed by pyruvate dehydrogenase enzyme. K3 (9)
- 7) Discuss the concentration gradient influence on nutrient transport in prokaryotic cells? K4 (8)
  
- 8) Explain glycolysis and calculate the amount of ATP synthesised after glucose undergoes glycolysis. K4 (12)

**OR**

Provide a detailed account of glycolysis mentioning the steps, enzymes and energy yield per molecule of glucose utilized. K4 (12)