

B.Sc. (CBCS Pattern) Sem-III
011A - Biotechnology Paper-I : Cell Metabolism

P. Pages : 1

Time : Three Hours



GUG/W/22/11618

Max. Marks : 50

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1. Discuss ATP – ADP cycle in detail. **10**
- OR**
- a) Give brief account on creatinine phosphate. **2½**
- b) Write a note on redox potential. **2½**
- c) Discuss about phosphate potential. **2½**
- d) Discuss the concept of high energy bond with respect to phosphoenol pyruvate. **2½**
2. Give the detail account of glycolysis. **10**
- OR**
- a) Describe oxidative phosphorylation. **2½**
- b) Give the outline of TCA cycle. **2½**
- c) Explain the photophosphorylation in detail. **2½**
- d) Discuss about glycogenesis. **2½**
3. Describe β oxidation of fatty acid. **10**
- OR**
- a) Discuss about ketogenesis. **2½**
- b) Discuss about fatty acid synthase complex. **2½**
- c) Write a note on Niemann – Pick’s disease. **2½**
- d) Write a note on Tay-Sach’s disease. **2½**
4. Describe Urea cycle in detail. **10**
- OR**
- a) Give the structure of purines. **2½**
- b) Give an account on Transmethylation. **2½**
- c) Explain decarboxylation in brief. **2½**
- d) Explain pyrimidine synthesis in brief. **2½**
5. Solve **any ten** of the following.
- a) What is Enthalpy. **1**
- b) Give any two examples of high energy phosphate compound. **1**
- c) Define free energy. **1**
- d) Give full form of EMP. **1**
- e) Which is the last electron acceptor in ETC. **1**
- f) Define Glycogenolysis. **1**
- g) Give any two examples of Saturated fatty acid. **1**
- h) What is keto acidosis. **1**
- i) Give the names of ketone bodies. **1**
- j) What is transamination. **1**
- k) Enlist any two disorder of urea cycle. **1**
- l) Give the examples of purine. **1**
