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**NB—03—2023**

**FACULTY OF SCIENCE**

**B.Sc. (Second Year) (Third Semester) EXAMINATION**

**NOVEMBER/DECEMBER, 2023**

**(New Pattern)**

**BIOTECHNOLOGY**

**Paper-CCBT-1C**

**(Metabolism)**

**(Wednesday, 29-11-2023)**

**Time : 2.00 p.m. to 5.00 p.m.**

*Time—3 Hours*

*Maximum Marks—75*

**N.L. :— (i) All questions are compulsory.**

**(ii) All questions carry equal marks.**

**(iii) Represent your answers with well labelled diagrams and pathways wherever necessary.**

**1. Describe in detail Non-cyclic Photophosphorylation. 15**

*Or*

**(a) Explain C<sub>4</sub> Pathway. 8**

**(b) Explain CAM. 7**

**2. Describe in detail Electron Transport Chain (ETC) ? 15**

**P.T.O.**

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Or

- (a) Explain TCA cycle. 8
- (b) Write a note on anaerobic respiration. 7
3. Describe in detail Urea cycle and its metabolic disorders. 15
- Or
- (a) Describe oxidation saturated fatty acid with an example. 8
- (b) Write a note on odd chain fatty acid ? 7
4. Describe in detail synthesis of saturated fatty acid. 15
- Or
- (a) Write a note on mitochondrial system of chain elongation. 8
- (b) Explain fatty acid synthase complex. 7
5. Write short notes on (any *three*) : 3×5=15
- (i) C<sub>2</sub> Pathway
- (ii) EMP Pathway
- (iii) Transamination and Deamination of amino acid
- (iv) Regulation of fatty acid synthesis
- (v) Cyclic Photophosphorylation.

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