

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024  
(Fifth Semester)

Branch - **BIOCHEMISTRY**

**INTERMEDIARY METABOLISM**

Time : Three Hours

Maximum : 50 Marks

**SECTION – A (5 Marks)**

Answer ALL Question

ALL questions carry EQUAL Marks

(5x 1= 5)

- 1) Which of the following is the Complex II of ETS?  
i) NADH dehydrogenase                      ii) Succinate dehydrogenase  
iii) Cytochrome bc<sub>1</sub>                              iv) ATP synthase
- 2) Number of Oxygen molecules required during glycolysis of one glucose molecule  
i) Zero    ii) One  
iii) Two    iv) Three
- 3) Identify the simple lipid from the following?  
i) Lecithin    ii) Fatty acid  
iii) Triacylglycerol                              iv) Steroids
- 4) In which form the nitrogen is incorporated into an amino acid?  
i) Nitrite    ii) Glutamate  
iii) Nitrate    iv) Ammonium ion
- 5) What is the final product of purine degradation in mammals?  
i) Guanine    ii) Inosine  
iii) Uric acid                                        iv) Hypoxanthine

**SECTION B (15 Marks)**

Answer ALL Question

ALL questions carry EQUAL Marks

(5x 3=15)

- 6) a) Differentiate between Exergonic reaction from Endergonic reaction.  
(OR)  
b) Brief on Chemiosmotic Hypothesis.
- 7) a) State the consequences of Pasteur effect.  
(OR)  
b) Paraphrase on Anaplerotic reaction.
- 8) a) Elucidate the Synthesis of Unsaturated Fatty Acids.  
(OR)  
b) How is Cholesterologenesis carried out?
- 9) a) Narrate the significance of Transamination.  
(OR)  
b) Sketch the Catabolism of Tryptophan.
- 10) a) Brief on the Inhibitors of Pyridimine Synthesis.  
(OR)  
b) State the importance of Biological methylation.

Cont...

**SECTION C (30Marks)**Answer **ALL** Question**ALL** questions carry **EQUAL** Marks (5x 6 =30)

11. a) Outline the process of ETC.  
(OR)  
b) Give notes on i) ionophores ii) uncouplers.
12. a) State the TCA cycle reactions and energetics.  
(OR)  
b) Explain Glucouronic acid Pathway.
13. a) How are unsaturated fatty acids oxidized?  
(OR)  
b) Infer Biosynthesis and degradation of TAG.
14. a) Differentiate between Oxidative and nonoxidative Deamination.  
(OR)  
b) Sketch on Urea Cycle.
15. a) Discuss on Salvage Pathway of nucleotide biosynthesis.  
(OR)  
b) Appraise the Inhibitors of purine and pyridimine metabolism.

Z-Z-Z

END