

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2019
(Fifth Semester)

Branch - **BIOCHEMISTRY**

METABOLISM - II

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 State the importance of Carnitine in fatty acid metabolism.
- 2 What are polyunsaturated fatty acid? Give examples.
- 3 Write the structure of phosphatidic acid.
- 4 What are Sphingolipids? Give examples.
- 5 Write a note on Decarboxylation.
- 6 Define Transamination.
- 7 What are Uricotelic animals?
- 8 Explain the process of Phosphoribosylation.
- 9 What is Glutathione? Mention its importance.
- 10 Specify the role of Cytochrome P450 in the metabolism of drugs.

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Write short notes on Alpha oxidation. Mention its significance.
OR
b Highlight the reaction steps of oxidation of fatty acid with odd numbered carbon atoms.
- 12 a Explain the biosynthesis of gangliosides with suitable examples.
OR
b How is Triachylglycerol degraded in liver and adipose tissue?
- 13 a Bring out the fate of amino acid during oxidative and non oxidative deamination.
OR
b How is Tyrosine catabolised? Explain.
- 14 a Explain how AMP and GMP is formed from inosine mono phosphate.
OR
b Illustrate the reactions steps in the catabolism of purine nucleotides.
- 15 a Outline the biosynthesis of creatine.
OR
b Explain the role of SAM in biological methylation.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Describe the Extramitochondrial (denovo) synthesis of fatty acids with reference to Palmitic acid.
- 17 What are sterols? Describe in detail the biosynthesis of cholesterol from AcetylCoA.
- 18 Elaborate the reactions involved in the detoxification of ammonia by Urea cycle.
- 19 Describe the denovo biosynthesis of various pyrimidine nucleotides.