

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATIONS DECEMBER 2024
(Fifth semester)

Branch – BIOCHEMISTRY

INTERMEDIARY METABOLISM

Time: Three Hours

Maximum: 50 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 The magnitude of proton motive force depends on _____
i) Energy charge of cell ii) Permeability of membrane
iii) Number of ribosomes in cell iv) None of the mentioned
- 2 The enzyme aconitase is responsible for _____
i) polymerization ii) degradation
iii) assembly iv) isomerization
- 3 Which of these amino acids are not optically active?
i) Cysteine ii) Lysine
iii) Arginine iv) Glycine
- 4 What is lipolysis?
i) Hydrolysis of triacylglycerol ii) Formation of lipids
iii) Breakdown of ketone bodies iv) Formation of ketone bodies
- 5 During purine synthesis the activity of amidotransferase enzyme is inhibited by the antitumor agent, mark the correct one.
i) Aminopterin ii) Methotrexate
iii) Texol iv) Azaserine

SECTION - B (35 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a. Write a role of ATP in metabolic reaction? Explain.

OR

b. Elucidate the important role of inophores.

- 7 a. Describe the pathway of HMP shunt.

OR

b. Give a note on glycogen metabolism.

- 8 a. Describe the biosynthesis of TAG.

OR

b. Establishment the synthesis of unsaturated fatty acids.

- 9 a. Discuss the biosynthesis of cysteine.

OR

b. Elucidate the mechanism of tryptophane.

Cont...

10 a. Write a note on sulphation process.

OR

b. List out inhibitors of purine metabolism.

SECTION - C (30 Marks)

Answer any **ALL** Questions

ALL Questions Carry **EQUAL** Marks

(5 X 6 = 30)

11. a. Describe the various phases in oxidative phosphorylation process.

OR

b. Mention the inhibitors of electron transport chain reaction.

12. a. Discuss the Embden Meyerhof pathway of glycolysis.

OR

b. Describe the significance and procedure of glucouronic acid cycle.

13. a. Elucidate the biosynthesis and catabolism of spingolipids.

OR

b. Describe the biosynthesis and degradation of phospholipids.

14. a. Outlined the cyclic pathway of urea.

OR

b. Enumerate the metabolism of alanine.

15. a. Explain the basic procedure of biosynthesis of purine.

OR

b. Evaluate the metabolism of nucleotide.

Z-Z-Z

END