

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2017
(Fourth Semester)

Branch - **BIOCHEMISTRY**

METABOLISM -1

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

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

- 1 What do you mean by anabolism?
- 2 Define Perfusion.
- 3 Define free energy.
- 4 What are Coenzymes?
- 5 What is Fermentation?
- 6 Name the end products of aerobic and anaerobic glycolysis.
- 7 Name two inhibitors of electron transport chain.
- 8 Define gluconeogenesis.
- 9 Name the two phases of HMP shunt.
- 10 Write the structure of glucuronic acid.

SECTION - B (25 Marks)

Answer **ALL** Questions

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

- 11 a How will you study metabolism using tissue slices?
OR
b Brief on marker enzymes.
- 12 a List out the role of ATP.
OR
b Comment on Oxygenases and Dehydrogerases.
- 13 a Explain the malate - aspartate shuttle.
OR
b Explain the entry of lactose in metabolism.
- 14 a Brief on anaplerosis.
OR
b Explain the reactions of Electron transport chain.
- 15 a Write the reactions of glycogenesis.
OR
b Explain the regulation of glycoger metabolism by covalent modification.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Discuss the use of tracers and bacterial mutants in studying metabolism.
- 17 What is bioenergetics? Explain the endergonic and exergonic reactions with suitable examples.
- 18 Elaborate the pathway of anaerobic glycolysis.
- 19 Discuss the reactions of TCA cycle with its energetics.
- on Fvnnin tVie reactions of nentose nhoshnate pathway with its importance.