

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Sixth Semester)

Branch- ZOOLOGY

BIOCHEMISTRY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Which of the following is an example of monosaccharide?
(i) Galactose (ii) Sucrose
(iii) Lactose (iv) Maltose
- 2 Fats after absorption, present in the circulation as
(i) Chylomicron (ii) HDL
(iii) VLDL (iv) LDL
- 3 What is an apoenzyme?
(i) It is a protein portion of an enzyme
(ii) It is a non-protein group
(iii) It is a complete, biologically active conjugated enzyme
(iv) It is a prosthetic group
- 4 A phosphodiester bond is present in
(i) Nucleic acids in a nucleotide
(ii) Monosaccharides in a polysaccharide
(ii) Amino acids in a polypeptide
(iv) Fatty acids in a diglyceride
- 5 Urea cycle provides intermediate for which pathway?
(i) Glycolysis (ii) HMP-shunt
(iii) TCA cycle (iv) Gluconeogenesis

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Explain the classification of monosaccharides.
OR
b Sketch the structure of Lactose.
- 7 a Elaborate the biological functions of fatty acids.
OR
b Explain the structure and biological functions of water.
- 8 a Outline the classifications of aminoacids.
OR
b Elaborate the enzyme pattern in myocardial infarction.

Cont...

- 9 a Elaborate the classification of nucleic acids.
OR
b Summarize the chromatography.
- 10 a Elaborate the β -oxidation of fatty acids.
OR
b Explain the deamination process.

SECTION -C (30 Marks)Answer **ALL** questions**ALL** questions carry **EQUAL** Marks

(5 x 6 = 30)

- 11 a Explain the detailed classification of carbohydrates.
OR
b Discuss the chemical reaction of carbohydrates.
- 12 a Summarize the classification of lipids.
OR
b Discuss the biological buffers and their significance.
- 13 a Elaborate the structure of proteins.
OR
b Discuss the factors affecting the enzyme reactions.
- 14 a Sketch the structure of DNA and explain its salient features.
OR
b Describe the principle and applications of electrophoresis.
- 15 a Explain the glycolytic pathways and its energetics.
OR
b Elaborate the urea cycle.

Z-Z-Z

END