

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2023
(Fourth Semester)

Branch – NUTRITION, FOOD SERVICE MANAGEMENT & DIETETICS

BIOCHEMISTRY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 ----- is a ketosugar
(i) Glucose (ii) Maltose
(iii) Lactose (iv) Fructose
- 2 ----- is a compound lipid
(i) Triglyceride (ii) Glycerol
(iii) Fatty acid (iv) Phospholipid
- 3 ----- is an aromatic aminoacid
(i) Glycine (ii) Methionine
(iii) Tyrosine (iv) Alanine
- 4 Pyrimidine base Uracil is present in-----
(i) DNA (ii) Ribosome
(iii) RNA (iv) Polyome
- 5 TPP acts as coenzyme in----- reaction
(i) Transamination (ii) Transmethylation
(iii) Transketolation (iv) Transsulfuration

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Bring out the significance of HMP shunt pathway.
OR
b How will you classify carbohydrates?
- 7 a Give the structure of cephalin and lecithin.
OR
b Classify lipoproteins.
- 8 a Explain denaturation of proteins.
OR
b Compare essential, semi-essential and non-essential aminoacids.
- 9 a Sketch the structure of Adenine and uracil.
OR
b Explain the functions of ATP.
- 10 a Describe the role of enzymes and co-enzymes in metabolism with example.
OR
b Classify enzymes.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks

(5 x 6 = 30)

- 11 a Briefly elucidate the interrelationship between carbohydrate, lipid and protein metabolism.
OR
b Outline the steps involved in glycolysis.
- 12 a Explain oxidative phosphorylation.
OR
b Enumerate the steps involved in β oxidation of fatty acids.
- 13 a Discuss about the bonds involved in the structure of protein.
OR
b Differentiate between deamination and transamination.
- 14 a DNA has a double-helical structure. Justify.
OR
b Identify the steps involved in haemoglobin synthesis.
- 15 a Highlight the role of B-vitamins as co-enzymes.
OR
b Trace the factors influencing rate of enzyme action.

Z-Z-Z

END