

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022
(Sixth Semester)

Branch – ZOOLOGY

BIOCHEMISTRY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

1. Milk sugar is:
(i) Mannose (ii) Galactose (iii) Glucose (iv) Lactose
2. Find the following is not a reducing sugar?
(i) Lactose (ii) Maltose (iii) Sucrose (iv) Fructose
3. When choline of lecithin is replaced by ethanolamine the product is
(i) Cephalin (ii) Spingomyelin (iii) Plasmalogens (iv) Lysolecithin
4. The calorific value of lipid is:
(i) 4.0 Kcal/gm (ii) 6.0 Kcal/gm (iii) 9.0 Kcal/gm (iv) 15 Kcal/gm
5. Which bond is present in the primary structure of protein?
(i) Ester bond (ii) Disulfide bond
(iii) Hydrogen bond (iv) Peptide bond
6. Rise of which serum enzyme activity 4-8 hours after acute myocardial infarction is characteristically seen?
(i) AST (ii) ALT (iii) LDH (iv) CK
7. RNA does not contain
(i) Uracil (ii) Adenine
(iii) Hydroxyl methyl cytosine (iv) ribose
8. Which pyrimidine nucleotide act as higher-energy intermediate.
(i) ATP (ii) UDPG (iii) UTP (iv) Cyclic AMP
9. All of the following compounds are intermediates of TCA cycle *except*:
(i) Malate (ii) Pyruvate (iii) Oxaloacetate (iv) Fumarate
10. The two nitrogen atoms in urea arise from:
(i) Ammonia and glutamine (ii) Glutamine and aspartic acid
(iii) Glutamine and glutamic acid (iv) Ammonia and aspartic acid

Cont...

SECTION - B (35 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 7 = 35)

11. a. Explain the occurrence and structure of lactose.

[OR]

b. Write in details about the Fischer's and Howorth projections of Glucose.

12. a. Analyze the structure and significance of water.

[OR]

b. Explain the biological functions of fatty acids.

13. a. Choose the explain myocardial infarction enzymes patterns and its significance.

[OR]

b. Describe the Denaturation of proteins.

14. a. Summaries the principles involved in the Electrophoresis.

[OR]

b. State the structure and biological role of nucleotides.

15. a. Describe the reaction of Transamination with examples.

[OR]

b. Sketch out the Glycolysis pathway.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

16. Explain the structure of starch.

17. Describe the structure and biological functions of phospholipids.

18. Classify the enzymes with examples.

19. Sketch and describe the structure of DNA.

20. Explain the steps involved in TCA cycle.

Z-Z-Z

END