PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2019
(First Semester)

Branch - BIOCHEMISTRY

STRUCTURAL BIOCHEMISTRY

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer ALL questions
ALL questions carry EQUAL marks (10x1 = 10)

1 Which is shared in 'H_2'-bond?
(i) Proton (ii) Electron
(iii) Hydrogen (iv) Charge

2 If 40gms of NaOH is dissolved in 1 litre of water, then the normality will be
(i) 0.1N (ii) 0.0 IN
(iii) IN (iv) 0.001N

3 Identify the non-reducing sugar.
(i) Maltose (ii) Sucrose
(iii) Glucose * (iv) Glactose

4 Predict the prosthetic group in glycoproteins.
(i) Lipid (ii) Phosphoric acid
(iii) Carbohydrate (iv) Nucleic acid

5 Glutathine is a
(i) Polypeptide (ii) Tripeptide
(iii) Dipeptide (iv) Octapeptide

6 Myoglobin is
(i) Muscle protein (ii) Phosphoprotein
(iii) Chromo protein (iv) Lipoprotein

7 Pellagra is
(i) '4D' disease (ii) '2D' disease
(iii) '3D' disease (iv) Skin disease

8 Poor intake of calcium in food leads to
(i) Hyponatremia (ii) Anemia
(iii) Marasmus (iv) Tetany

9 Base pairs/tum present in B-DNA.
(i) 12 Bp (ii) 10 Bp
(iii) 14 Bp (iv) 20 Bp

10 transfer RNA contains
(i) 105 nucleotides (ii) 75 nucleotides
(iii) 200 nucleotides (iv) 90 nucleotides

Cont...

SECTION - B (35 Marks)

Answer ALL Questions

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

11 a Write notes on the terms (i) Molartiy (ii) Normality.

OR

b Explain the electrophilic mechanism in organic reactions.

12 a Discuss the structure, properties and functions of starch.

OR

b Explain the. structure, properties and functions of Maltose.

13 a Write a brief note on structure and functions of haemoglobin.

OR

b Give an account on "Denaturation of Proteins".

14 a Write notes on the following:

(i) Beri-Beri (ii) Osteomalacia (iii) Night blindness

OR

b Describe the structure, properties and reactions of fatty acids.

15 a Discuss the term

(i) Supercoiling of DNA and (ii) Circular DNA.

OR

b Explain the "clover leaf model of tRNA".

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 1 0 = 30)

16 What is a chemical bond? Describe the types of bonding involved in a chemical reaction.

17 Describe the "Classification of Carbohydrates".

18 Explain in detail about the "Classification of Amino Acids".

19 Explain the sources, functions, deficiency diseases of Calcium.

20 Discuss in detail about the various structures of DNA.

Z-Z-Z END