TOTAL PAGES: 2

22NDU416 / 18NDU17

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(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 Identify the carbon four (C4) epimer of monosaccharides
(i) Galactose (ii) Fructose
(iii) Ribose (iv) Xylose

2 The P:O ratio for NADH mitochondrial oxidation is
(i) 2 (ii) 3
(iii) 4 (iv) 6

3 Choose the defense proteins from the following
(i) Insulin (ii) Actin
(iii) Immunoglobulin (iv) Albumin

4 Erythrocytes have a life span of
(i) 100 days (ii) 80days
(iii) 120days (iv) 200days

5 Indicate the coenzyme used for energy expenditure process
(i) Pantothenic acid (ii) Niacin
(iii) Thiamine (iv) Acetyl coA

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a Outline the structure and properties of sucrose.
OR
b Summarize how many ATPs are produced from one glucose molecule.

7 a How lipoproteins are classified? Give its properties.
OR
b Explain the high energy compounds with example?

8 a Describe the denaturation process of protein.
OR
b Outline Transamination reactions.

9 a Sketch the structures of 1) 6-aminopurine 2) 2,4 dioxypyrimidine
3) D - Ribose
OR
b Bring out any three functions of hemoglobin.

10 a Give the significance of Michaelis mention equation.
OR
b State the principle of Paper chromatography.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11 a Differentiate Starch and Glycogen.

OR

b Enumerate TCA cycle? Give its regulation.

12 a Summarize cholesterol biosynthesis pathway.

OR

b Outline ETC cycle and oxidative phosphorylation.

13 a Elaborate amino acids classification.

OR

b Discuss Urea cycle reactions with neat diagram.

14 a Explain the structure and functions of different types of RNAs.

OR

b Explain the catabolic pathway of Hemoglobin.

15 a Outline the IUBAC classification of Enzymes with example.

OR

b Discuss about the detoxification reactions.

Z-Z-Z

END