UNDERGRADUATE SEMESTER-III EXAMINATIONS, 2021

Subject: ZOOLOGY   **Course ID: 32613**
Course Code: SH/ZOO/303/C-7
Course Title: FUNDAMENTALS OF BIOCHEMISTRY

Full Marks: 25   **Time: 1Hr 15 Min**

The figures in the margin indicate full marks

Answer all the questions.

UNIT I

1. Answer *any five* of the following questions: 1X5=5

a) Define Zymogen. Give an Example.
b) Give an example each of basic and acidic amino acids .
c) What are snRNAs?
d) What do you mean by substrate level phosphorylation in Kreb's cycle? ?
e) What do you mean by optical isomerism ?
f) What are gangliosides ?
g) Name an inhibitor which can inhibit electron transport chain at NADH dehydrogenase stage .
h) Define Gluconeogenesis .

UNIT II

2. **Answer *any two* of the following questions:**   **5X2=10**

    a) **If G+C content of a DNA sample is 48%, what will be the proportion of the four different nucleotides ? What is C value ? Why is it regarded as a paradox ?**   **(2+1+2)**

    b) **Discuss the sequence of reactions of Pentose Phosphate Pathway . Write the significance of PPP.**   **(4+1)**

    c) **Describe the process of Oxidative and non oxidative deamination with suitable example .**   **(2.5 + 2.5)**

    d) **Write the Michaelis – Menten equation of enzyme kinetics . Write the important factors on which the rate of enzyme catalysed reaction depends . (1+4)**

UNIT III

3. **Answer *any one* of the following questions:**   **10 X 1=10**

    a) **What do you mean by oxidative decarboxylation ? Describe the electron transport system in mitochondrial membrane .**   **(2+8=10)**

    b) **What do you mean by essential fatty acid ? Give an example .Write the steps of reaction of the breakdown of Palmitic acid by beta-oxidation pathway. Calculate the net yield of ATP in the above process.**   **(1+1+6+2=10)**

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