QP CODE: 23145368

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Reg No : .....

Name : .....

M Sc DEGREE (CSS) EXAMINATION, DECEMBER 2023

First Semester

M Sc ZOOLOGY

CORE - ZL010103 - BIOCHEMISTRY

2019 ADMISSION ONWARDS

5B666D84

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. What is oxidative and substate level phosphorylation?
2. Describe the biochemical defect in galactosemia.
3. Briefly describe α helices.
4. Describe the synthesis of any two biologically important componds from tryptophan.
5. Name the following two fatty acids:
   $CH_3(CH_2)_{10}COOH$
   $CH_3(CH_2)_5CH=CH(CH_2)_7COOH$
6. What is iodine number?
7. Explain why increasing the NaCl concentration increases the temperature at which the two strands of DNA melt apart?
8. Explain Zinc finger motif
9. What coenzymes are present in the *Pyruvate dehydrogenase* complex?
10. What do you mean by enzyme specificity?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Describe the structures and biological roles of disaccharides.
12. Explain payoff phase of glycolysis.

13. Write on the classification and properties of proteins.

14. Explain Urea cycle.

15. Comment on the biological functions of prostaglandins.

16. Write short note on the regulation of fatty acid oxidation.

17. Explain briefly catabolism of purines.

18. Describe the different kinds of enzyme inhibitors.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Write an essay on minor metabolic pathways

20. Human genetic diseases result from specific enzyme deficiencies. There are several inborn errors of aminoacid metabolism. Phenylketonuria is one of them. Describe in detail about the diseases that result from the defects in phenylalanine degradation.

21. Write an account on free radicals, antioxidants and free radical scavenging system.

22. Explain the control of enzyme activity.

(2×5=10 weightage)