QP CODE: 21002064

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Reg No : .....

Name : .....

M Sc DEGREE (CSS) EXAMINATION, NOVEMBER 2021

First Semester

Faculty of Science

M Sc ZOOLOGY

CORE - ZL010103 - BIOCHEMISTRY

2019 ADMISSION ONWARDS

A65762C4

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. A major function of liver is to maintain a nearly constant level of glucose in the blood.Explain.
2. Describe the biochemical defect in galactosemia.
3. Explain briefly what happens when an egg is boiled.
4. How are aminoacids classified based on the fate of their carbon skeletons?
5. What are eicosanoids? Mention their roles.
6. What is the metabolic significance of Malondialdehyde (MDA)?
7. An enzyme from the Human Immunodeficiency Virus (HIV) can synthesize DNA from an RNA template. Explain how this enzyme activity contradicts Crick's Central dogma?
8. Explain hyperchromic effect.
9. What are coenzymes?Give few examples.
10. Explain Flux analysis.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Explain oxidative and substrate level phosphorylation with examples.
12. Describe pentose phosphate pathway.
13. Comment on thevdifferent anaplerotic reactions related to TCA cycle. Mention their importance.

14. Proper folding of proteins is essential for their biological activity. All the proteins have an inherent ability to fold. Why then is there a need for molecular chaperons and chaperonins in cells? What different roles do they play in the protein folding mechanism?
15. Glycerol establishes a metabolic link between carbohydrate metabolism and and lipid metabolism. Justify.
16. List the various classes of lipoproteins.Describe their lipid transport functions.
17. Explain catabolism of pyrimidines.
18. Explain the kinetics of enzyme inhibition.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Write an account of the type, structure and function of biologically importantant disaccharides .
20. Explain the fate of carbon skeleton of aminoacids.
21. Write down an essay on the different classes of lipids. Also write on the biological importance and role of lipids.
22. Write an essay about mechanism of enzyme action.

(2×5=10 weightage)