Reg. No ..... Name **18P247**

M Sc DEGREE END SEMESTER EXAMINATION - APRIL 2018

SEMESTER 2 : ZOOLOGY

COURSE : **16P2ZOOT08 ; BIOCHEMISTRY**

(For Regular - 2017 Admission & Supplementary - 2016 Admission)

Time : Three Hours Max. Marks: 75

Section A
Answer any 8 (2 marks each)

1. Comment on the monosaccharide which does not have an asymmetric carbon atom.
2. Name the chemical bonds involved in protein folding.
3. What causes rancidity of lipids?
4. What is Gelatin? Mention its biological source.
5. Mention the uses of restriction endonucleases.
6. Point out the significance of DNA methylation in bacteria.
7. How does covalent modification affect the activity of an enzyme?
8. Indicate how pentose phosphate pathway is regulated within cells.
9. Discuss the role of glutamate in cells.
10. What are 'Ketone bodies'? Where are they formed? Name them.
11. Outline the steps involved in the degradation of dietary nucleic acids.
12. How is AMP degraded in cells?

(2 x 8 = 16)

Section B
Answer any 7 (5 marks each)

13. With suitable diagrams discuss optical isomerism present among carbohydrates.
14. Write notes on the following: Keratin, Collagen, Elastin and Resilin.
15. Comment on molecular chaperons. Describe the function of any three.
16. Give a description of the chemical nature and functional importance of Vitamin D, Bile acids, Ergosterol, and Terpenes.
17. DNA replication differs in prokaryotes and eukaryotes. Substantiate the statement.
18. Comment on allosteric regulation of enzyme activity.
19. Glycogen metabolism is under stringent hormonal control. Substantiate.
20. Critically evaluate the pathways of phenyl alanine metabolism.
21. Explain the role of SREBP in cholesterol biosynthesis.
22. Describe the salvage pathways of purine nucleotides.

(5 x 7 = 35)

Section C
Answer any 2 (12 marks each)

23. Discuss the biological origin and functions of any six heteropolysaccharides.
24. Comment on the characteristic reactions of lipids.
25. Present a detailed account on protein interactions that regulate DNA transcription.

26. Explain how glycogen is mobilized in cells. Indicate the mode of regulation of glycogen phosphorylase activity.

(12 x 2 = 24)