

Reg. No

Name

M. Sc DEGREE END SEMESTER EXAMINATION - MARCH 2020
SEMESTER 2 : ZOOLOGY
COURSE : 16P2ZOOT08 : BIOCHEMISTRY
(For Regular - 2019 Admission & Supplementary 2018/2017/2016 Admissions)

Time : Three Hours

Max. Marks: 75

Section A

Answer any 8 (2 marks each)

1. What is Agar-agar? Mention its use in biochemistry.
2. Comment on the chemical nature of catecholamines.
3. How are bile acids formed in the body?
4. Brief on Chargaff's rule
5. Compare & contrast different DNA binding proteins
6. Mention how enzyme activity is regulated by proteolytic cleavage.
7. Mention the symptoms of 'Lactose intolerance'.
8. What are the different types of 'Lactase deficiency'?
9. Which of the amino acids are both ketogenic and glucogenic?
10. Name any two saturated and unsaturated fatty acids.
11. Outline the steps involved in the degradation of dietary nucleic acids.
12. Give an account of Antioxidants. In what way it is significant to body 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. Describe the scheme of classification for lipids.
16. What is meant by Saponification number, Iodine number, Polenske number and Reichert-Meissl number of lipids?
17. What is the significance of denaturation & renaturation in a DNA molecule
18. Prepare an explanatory note on ribozymes.
19. Glycogen metabolism is under stringent hormonal control. Substantiate.
20. Schematically represent the sources and fate of amino acids in the body.
21. Describe the regulatory mechanism of Ketogenesis.
22. Explain the degradation pathways of pyrimidine nucleotides in cells.

(5 x 7 = 35)

Section C**Answer any 2 (12 marks each)**

23. Explain peptide bond formation and discuss the chemical reactions that indicate the presence of proteins.
24. Double reciprocal Plot is a linear form of Michaelis menton plot. Substantiate the statement in terms of K_m & V_{max} values
25. Discuss the steps involved in Galactose metabolism. Comment on glucuronate synthesis and utility.
26. Give a diagrammatic representation of fatty acid synthase complex. Add a note on its structure and function.

(12 x 2 = 24)