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I SEMESTER B.Sc. EXAMINATION – MARCH/APRIL 2022

SCHEME: SEMESTER- CBCS

018

BIOTECHNOLOGY

BIOMOLECULES AND MICROBIOLOGY

Time: 03 Hours **Max Marks: 80**

Instructions to Candidates: Draw diagrams wherever necessary.

I Answer any SIX of the following **6x2=12**

1. Define peptide bond.
2. What are homo polysaccharides?
3. Define saturated fatty acids.
4. What are nucleosides and nucleotides?
5. Define lyophilization.
6. Define pure culture.
7. What are antibiotics?
8. Define food spoilage.

II Write Short notes on any SIX of the following: **6x3=18**

9. What are epimers? Give example.
10. Write the structure and role of oxytocin.
11. Write Biological role of lipids.
12. Write the structure and role of cephalin.
13. Explain the structure of Watson and Crick model of DNA.
14. Explain Growth curve of bacteria.
15. Write the Nonliving characters of virus.
16. Explain biological nitrogen fixation with suitable example.

III Answer any FOUR of the following: **4x5=20**

17. Explain the structure of starch.
18. Explain Quarternary structure of protein with an example.
19. Explain the physical and chemical properties of oils and fats.
20. Explain the structure of t-RNA.
21. Write the contributions of Pasteur and Robert Koch.
22. Explain the working principle of SEM.

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IV **Answer any THREE of the following:** 3x10=30

23. Explain the structure and functions of Glycolipids.

24. Write short notes on

    a) Reducing and nonreducing sugar.

    b) Coulter Counter Counting method.

25. Explain physical and chemical sterilization.

26. Explain causative agent, symptoms and control measures of Downy mildew and Rabies.

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