

D 2712

(2 pages)

Name

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, JANUARY 2005

Microbiology

Paper II – MICROBIAL BIOCHEMISTRY

Time : Three Hours

Maximum : 80 Marks

Part A

Answer any fifteen questions.

Each question carries 2 marks.

1. Distinguish between an apoenzyme and a holoenzyme.
2. How phosphofructo kinase is allosterically regulated ?
3. Write the relation between absorbance, transmittance and concentration of a solution.
4. Write the coenzyme forms of niacin (structure),
5. What is reverse osmosis ? How it is useful in the desalination of water ?
6. Define isoelectric pH of a solution. Mention its significance.
7. Write the chemical nature of pectin. How pectinase is used in industry ?
8. Distinguish between TPP and AMP.
9. Write the principle of ion exchange chromatography. Name two cation exchange resins.
10. Write the biochemical reaction catalysed by hyaluronidase. Mention its physiological importance.
11. Distinguish between constitutive and inducible enzymes.
12. How liposome is formed ? Name two emulsifying agents.
13. How nitrosamines are formed ? Write the structures of any two.
14. Distinguish between salting in and salting out of proteins.
15. What is semi-synthetic penicillin ? How it is formed ? Write the structure of any one.
16. Write the structure of chitin, Mention its importance.
17. Write the principle of molecular exclusion chromatography.
18. Distinguish between dialysis and ultra filtration.
19. How enzyme activity is expressed ?
20. Write any two uses of amylase preparations.

(15 x 2 = 30 marks)

Turn over

Part B

*Answer any four questions.
Each question carries 5 marks.*

Write short notes on :-

21. Physiological functions of vitamin A.
22. **Aflatoxins.**
23. **Eadie Hotste** plots.
24. Steroid hormones.
25. **Peptido glycans.**
26. Vitamin **B₁₂.**

(4 x 5 = 20 marks)

Part C

*Answer any three questions.
Each question carries 10 marks.*

Discuss on :-

27. Cell free synthesis of DNA.
28. Primary structure of proteins.
29. Coenzymes is metabolic reactions.
30. Isolation and purification of enzymes.
31. Factors affecting velocity of an enzyme catalysed reaction.

(3 x 10 = 30 marks)