Reg. No..... (Pages 2) **K 6150**

Name.....

FIRST YEAR B.Sc. DEGREE EXAMINATION, APRIL/MAY 2005

Part III—Subsidiary—Biochemistry

BIOCHEMISTRY Paper—I

(2004 Admissions)

Time : Three Hours Maximum : 55 Marks

Part A

Answer any **ten** *questions.*
Each question carries 2 *marks.*

1. Write the Henderson-Hassel balch equation.
2. How will you make 100 ml of 1N NaOH ?
3. Name some biologically important emulsifying agents and their mechanism of action.
4. Define Svedberg unit.
5. Define mutarotation.
6. Write the structures of tyrosine and tryptophan.
7. What is the difference between adenosine and adenylate ?
8. Write the structures of cortisol and epinephrine.
9. Write notes on the synthesis and biological functions of prealbumin.
10. Define iodine number and highlight its significance.
11. Outline the principle of affinity chromatography.
12. How will you differentiate starch from glycogen in the laboratory ?
13. What are the force that stabilise the tertiary and quaternary structures of proteins ?

(10 × 2 = 20 marks)

Part B

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

14. Give an account of the principle and the procedure for separating proteins by PAGE.
15. Discuss the properties and biological significance of colloids.
16. Explain why glucose and fructose give the same osazone.
17. Write the structures of different types of phospholipids and their biological functions.
18. Give an account of the classification of proteins.

(3 × 5 = 15 marks)

Turn over

Part C

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

19. (a) Watson-Crick model of DNA structure.

    (b) Plasma Proteins.

20. Describe the principle, instrumentation and applications of GLC.

21. Give an account of the chemical reactions of carbohydrates.

(2 × 10 = 20 marks)