Reg. No.....

Name.....

K 6151

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

Part III—Subsidiary Biochemistry

BIOCHEMISTRY—Paper I

(Prior to 2004 admissions)

Time : Three Hours

Maximum : 55 Marks

Part A

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

1. Write the Bronsted's definition of acids and bases.
2. What is a buffer ? Explain the principle behind buffer action.
3. Define the terms ; surface tension and viscosity.
4. Explain an addition reaction.
5. What are anomers ? Explain their structures with examples.
6. Write the structure of maltore.
7. Write the principle of Benedict's reaction.
8. Write the basic structure of lecithin.
9. Define acid number.
10. What are the sulphur containing amino acid ? Explain.
11. Explain the principle behind zak's reaction used in qualitatively identifying cholesterol.
12. Write the structure of t-RNA.

(10 × 2 = 20 marks)

Part B

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

13. Write an account on denaturation of proteins.
14. Write the site of synthesis and chemical structure of testosterone and estradiol.
15. Define Henderson-Hasselbach equation. Explain with an example.
16. Write an account on colloids.
17. How is a ketohexose identified in the laboratory ? Explain with examples.
18. Write the structures of cholesterol and ergosterol.
19. Explain in detail the principle behind the osazone test used in identifying carbohydrates..

(5 × 5 = 25 marks)

Turn over

Part C

Answer any **one** *question.*
The question carries 10 *marks.*

20. Describe in detail the classification of lipids.

21. Explain the various methods employed in protein sequencing. Give a very brief account on the secondary structure of proteins.

(1 × 10 = 10 marks)