Reg. No..... (Pages 2) **K 6152**

Name.....

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

Part III—Subsidiary Biochemistry

Paper II—BIOCHEMISTRY

Time : Three Hours Maximum : 55 Marks

Part A

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

1. Define coenzymes with an example. How are they different from cofactor ?
2. Write the Michallis Menton equation. Define Km.
3. Define a sarcomere.
4. What are oxidoreductases ? Explain with an example.
5. Enumerate the proteolytic enzymes in the GIT. Explain their site of origin.
6. Write the reaction catalysed by HMG CoA reductase.
7. Explain the decarboxylation reaction of an amino acid.
8. Write a very brief account on Wald's visual cycle.
9. Give two physiological functions of vitamin B_{12}.
10. What are polysomes.
11. Define Diabetes mellitus. Enumerate the different types of diabetes.
12. Define total count and differential count.

(10 × 2 = 20 marks)

Part B

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

13. Explain competitive in hibition with examples.
14. Define and distinguish between oxidative phosphorylation and substrate level phosphorylation.
15. Write an account on the physiological functions of phospholipids.
16. Describe the physiological functions of vitamin D.
17. Write a brief account on how DNA undergoes replication.
18. What is hemophilia ? Explain briefly the basic pathology.
19. Write an account of fatty acid synthase complex system.

(5 × 5 = 25 marks)

Turn over

Part C

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

20. Explain the various steps involved when glucose is oxidised through the glycolytic pathway. Discuss the energetics involved in the pathway.

21. Describe in detail how a protein is synthesized in our body.

(1 × 10 = 10 marks)