LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION - ADVAN. ZOOLOGY & PLANT BIOLOGY&BIOTECH.

FOURTH SEMESTER - APRIL 2010

CH 4204 / 4202 - CHEMISTRY FOR BIOLOGISTS - II

Date & Time: 19/04/2010 / 9:00 - 12:00 Dept. No. Max. : 100 Marks

PART-A

Answer all the questions

 $(10\times2=20 \text{ Marks})$

- 1. What are fibrous proteins? Give an example.
- 2. Give equation for the action of heat on α aminoacid.
- 3. Write any two functions of wax.
- 4. Draw the structure of cholesterol.
- 5. Name the common bases present in DNA & RNA molecules.
- 6. What are mutations?
- 7. Define glycolysis.
- 8. Write the open structure of glucose.
- 9. What are mixed fertilizers?
- 10. How is lime sulphur prepared?

PART-B

Answer any **eight** questions

 $(8 \times 5 = 40 \text{ Marks})$

- 11. Explain the following terms a) iso electric point. b) de naturation of proteins.
- 12. Describe sanger's method for the sequential determination of amino acid.
- 13. What are enzymes? Give any four properties of enzymes.
- 14. Give an account of classification of lipids with suitable examples.
- 15. Write a note on rancidity of an oil.
- 16. Establish the bio synthesis of protein.
- 17. Describe the replication of DNA.
- 18. What is mutarotation? Explain it with the help of α -D-glucose.
- 19. Draw TCA cycle for the oxidation of acetylCoA.
- 20. Explain the manufacturing process of the following: a) Urea and b)D.D.T.
- 21. What are alkaloids? Write the functions of alkaloids.
- 22. Write a note on oxidative phosphorylation.

PART-C

Answer any four questions

 $(4\times10=40 \text{ Marks})$

- 23.a) Discuss the mechanism of enzyme action.
 - b) Mention the various factors affecting enzyme action.

(6+4)

- 24. Describe the various steps involve in hydrogenation of oil.
- 25. Establish the structure of DNA with a neat diagram.
- 26.a) What are carbohydrates? How are they classified?
 - b) What is invert sugar?

(7+3)

- 27.a) Illustrate the steps involved in the manufacture of 2,4-D.
 - b) What are macro & micro nutrients?

(6+4)

28. Explain any two of the following: a) Fungicides b) Organo phosphorus insecticides

c) Gammexane (5+5)