C 4697 (Pages : 2) Name.......................................

Reg. **No...............................**

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2016

(CUCSS)

General Biotechnology

GB 2C1—METABOLISM AND BASIC ENZYMOLOGY

(2010 Admissions)

Time : Three Hours   Maximum : 36 Weightage

Section A

Answer **all** *questions.*
Each question carries weightage 1.

1. What are abzymes ?

2. Give an idea about the subunit composition of ATP synthase.

3. What is the significance of pentose phosphate pathway ?

4. What do you know about amphibolic pathways ?

5. Distinguish between enzyme activity and specific activity.

6. What is the function of ribonucleotide reductase ?

7. Write a note on chemiosmotic hypothesis.

8. Distinguish between the action of ligases and lyases.

9. Why ATP liberates high amount of energy on hydrolysis ?

10. Discuss about pyruvate dehydrogenase complex.

(10 x 1 = 10 weightage)

Section B

Answer any **seven** *questions.*
Each question carries weightage 2.

11. Discuss about the usefulness of Lineweaver-Burk plot in studying mechanisms, of enzyme inhibition.

12. Discuss about the electron flow between electron carriers of ETC.

Turn over

13. What are the different methods to immobilize enzymes ? Discuss about the applications of immobilized enzymes.

14. Discuss about the biodegradation of pyrimidine bases.

15. Describe beta-oxidation of fatty acids. How many steps of β-oxidation are needed for the oxidation of stearic acid ?

16. Write a note on Urea cycle.

17. What are the factors that affect enzyme activity ?

18. Discuss about the regulation of citric acid cycle.

19. Discuss about the degradation of phenyl alanine and tyrosine.

20. Give a note on the role of enzymes in disease diagnosis.

(7 x 2 = 14 weightage)

Section C

Answer any **two** *questions.*
Each question carries weightage 6.

21. Glycolysis and gluconeogenesis are reciprocally regulated. How ?

22. Discuss about cholesterol biosynthesis.

23. Write an essay on regulation of enzyme activity.

(2 x 6 = 12 weightage)