

II. Fill in the blanks:

11. Bicarbonate buffer maintains the pH of the extracellular fluid between _____ and _____.
12. _____ organisms obtain free energy by coupling their metabolism to the breakdown of complex organic molecules in their environment.
13. In sickle anemia the subunit composition of hemoglobin is _____.
14. _____ is a general method of detoxification.
15. Synthesis of glucose from non-carbohydrate sources is called _____.

III. Answer the following in one or two lines:

16. What is proteomics?
17. Give the structure of ATP as the magnesium complex.
18. What are micelles?
19. Distinguish between coenzymes and cofactors.
20. What is Hypoglycemia ?



STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 86
(For candidates admitted during the academic year 2006-07)

SUBJECT CODE : CH/PC/BC23

M.Sc. DEGREE EXAMINATION, APRIL 2007
BRANCH IV – CHEMISTRY
SECOND SEMESTER

COURSE : CORE

PAPER : BIOCHEMISTRY

TIME : 2 HRS & 30 MINS

MAX. MARKS :80

SECTION – B

ANSWER ANY FIVE QUESTIONS.

(5x8=40)

1. Explain the biological importance of phosphate and protein buffers.
2. “ATP is the energy current of biological systems”. Justify.
3. Describe the structure of collagen triple helix.
4. Enumerate the factors affecting enzyme action.
5. Describe the steps involved in aerobic glycolysis.
6. Explain the Krebs-Hensliet cycle.
7. Distinguish between allosteric and feedback regulation of enzyme activity.
8. Describe the structure and function of tRNA.

SECTION – C

ANSWER ANY TWO QUESTIONS.

(2x20=40)

9. Write notes on:
 - a) Metabolic Acidosis (5)
 - b) Interconversion of adenine nucleotide (5)
 - c) β -pleated sheets of protein structure (5)
 - d) Applications of enzyme immonilization (5)
10.
 - a) Give a detailed account on β -oxidation of fatty acids. (10)
 - b) Describe the structure of Hemoglobin. (5)
 - c) Explain the basis of high group transfer potential of ATP. (5)
11. Explain the following:
 - a) Transamination and oxidative deamination. (10)
 - b) Consequences of abnormal structur of function of proteins. (4)
 - c) Methods of enzyme immobilization. (6)



