

**(For candidates admitted during the academic year 2004 –05 & thereafter)**

**SUBJECT CODE: CH/AO/BC33**

### THIRD SEMESTER

REG.NO .....

**COURSE : ALLIED OPTIONAL**  
**PAPER : BIOCHEMISTRY**  
**TIME : 30 MINUTES**

**MAX.MARKS : 30**

**SECTION – A** **(30x1=30)**

**Answer all the questions.**

**I Choose the correct answer:**

- Lewis acid is an
  - electron donor
  - electron acceptor
  - hydrogen donor
  - hydrogen acceptor
- The extra cellular fluid has one of the following as a predominant anion.
  - $Cl^-$
  - $HPO_4^{2-}$
  - $HCO_3^-$
  - $SO_4^{2-}$
- Maltose is a
  - non reducing monosaccharide
  - reducing monosaccharide
  - non reducing disaccharide
  - reducing disaccharide
- Which one of the following is different from the rest
  - sucrose
  - maltose
  - lactose
  - glucose
- Which of the following is non saponifiable lipid.
  - phospholipids
  - acyl glycerol
  - cholesterol
  - spingolipids.
- In anaerobic hydrogen transfer of EM pathway the end porudct is
  - pyruvate
  - lactate
  - acetyl CoA
  - phosphoenol pyuvate
- In TCA cycle the following is formed
  - 12 ATP
  - 15 ATP
  - 11 ATP and 1 GTP
  - 8 ATP
- Inactive form of an enzyme is
  - coenzyme
  - exoenzyme
  - endoenzyme
  - zymogen
- Which one of the following is a protein hormone
  - adrenaline
  - thyroxine
  - estrogen
  - insulin
- The number of hydrogen bonds between guanine and cytosine in DNA is
  - 2
  - 3
  - 4
  - 5

**II State whether true or false:**

11. The pH of blood is around 7.4
12. D-fructose is levorotatory.
13. Amylose gives blue color with iodine
14. Coenzymes are proteins
15. DNA contains uracil

**III Match the following:**

- |              |                 |
|--------------|-----------------|
| 16. Maltase  | a) unsaturation |
| 17. Coenzyme | b) m.RNA        |
| 18. Insulin  | c) non protein  |
| 19. Codon    | d) protein      |
| 20. Iodine   | e) enzyme       |

**IV Fill in the blanks:**

21. The normal post prandial blood sugar level is \_\_\_\_\_ mg.dl
22. soap is defined as an \_\_\_\_\_ salt of fatty acids.
23. Starch is made up of amylose and \_\_\_\_\_.
24. Salivary amylase is an \_\_\_\_\_ enzyme
25. Milk becoming curd is a \_\_\_\_\_ denaturation

**V Answer in a line or two:**

26. Define pH.
27. Dialysis
28. Define sap value
29. Nucleotide
30. Isoelectric point

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86**  
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**B.Sc. DEGREE EXAMINATION, NOVEMBER 2008**  
**THIRD SEMESTER**

**COURSE : ALLIED OPTIONAL**  
**PAPER : BIOCHEMISTRY**  
**TIME : 2½ HOURS**

**MAX.MARKS : 70**

**SECTION – B**

**Answer any five questions:**

**(5x6=30)**

1. How the pH on blood is maintained?
2. How will you separate a mixture of amino acids using TLC?
3. What are the various steps involved in the glycogenesis?
4. Define iodine value. How the iodine value of an oil is determined – explain.
5. Give an account of the classification of hormones.
6. Write a note on the types of RNAs and their functions.
7. Give the source and functions of thyroxine and insulin.

**SECTION – C**

**Answer any two questions:**

**(2x20=40)**

8. Give the complete sequence of TCA cycle. How many ATPs are formed on cycle.
9. a) Using column chromatography. How a protein mixture can be separated – explain.  
b) How di and polysaccharides are digested and absorbed.
10. a) What are the various factors affecting the enzyme reaction and how.  
b) What are the advantages of TLC.
11. a) Give a neat sketch of DNA proposed by Watson and Crick and give the salient features of their structure.  
b) Write a note on the digestion and absorption of protein.

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