STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86
(For candidates admitted during the academic year 2004 –05 & thereafter)

SUBJECT CODE: CH/AC/BC32

B.Sc. DEGREE EXAMINATION, NOVEMBER 2007
BRANCH V(a) – PLANT BIOLOGY & PLANT BIOTECHNOLOGY
BRANCH VI(a) - ADVANCED ZOOLOGY & BIOTECHNOLOGY
THIRD SEMESTER

REG.NO ……..

COURSE : ALLIED CORE
PAPER : BIOCHEMISTRY - I
TIME : 30 MINUTES **MAX.MARKS : 30**

SECTION – A (30x1=30)
ANSWER ON THE QUESTION PAPER ITSELF.

Answer all the questions.

1. Choose the correct answer:

1. Lewise base is a
   a) electron donor b) electron acceptor c) proton donor d) proton acceptor

2. The technique used in the removal of smaller particle is
   a) gel filtration b) dialysis c) ultra centrifuge d) TLC

3. Enthalpy of a compound is equal to its
   a) heat of combustion b) heat of solution
   c) heat of formation d) heat of dilution

4. The E^0 value is negative. It means
   a) greater tendency to lose proton b) greater tendency to lose electron
   c) greater tendency to accept electron d) greater tendency to accept proton

5. Spontaneous reaction shows
   a) free energy is more in the product b) free energy is less in the product
   c) no free energy change d) none

6. Sucrose is a
   a) reducing monosaccharide b) non reducing monosaccharide
   c) reducing disaccharide d) non reducing disaccharide

7. During glycolysis, number of ATP formed in an aerobic condition are
   a) 6 b) 8 c) 10 d) 2

8. Glycolysis takes place at
   a) mitochondria b) nucleus c) cytoplasm d) endoplasmic reticulum

9. Which one of the following is involved in glycogenesis
   a) FAD b) GTP c) FMN d) UTP

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10. In TCA cycle the following energy compounds are formed
    a) 12 ATP
    b) 11 ATP and 1 GTP
    c) 12 ATP and 1 GTP
    d) 11 ATP and 1 UTP

II State true or false :

11. BF3 is an Lewis acid
12. Insulin is a protein
13. D-Fructose is levo rotatory
14. Maltose is a reducing monosaccharide.
15. Amylopectin gives blue colour with iodine

III Match the following :

16.	Rf value	a) electrophoresis
17.	Isoelectric point	b) dialysis
18.	Smaller particle	c) TLC
19.	Arsenic	d) activator
20.	Magnesium ion	e) oxidative phosphorylation

IV Fill in the blanks:

21. Addition of a base or acid does not alter the pH of a _____.
22. Phenyl hydrazine reacts with glucose at the _____ and _____ carbons.
23. Conversion of glycogen into glucose is called _____.
24. All enzymes are _____.
25. The normal fasting blood sugar level is _____

V Answer the following in one or two sentences:

26. Lewis acid

27. Enthalpy.

28. In D-glucose the 'D' stand for.

29. Pectin.

30. Epimers.

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COURSE : ALLIED CORE
PAPER : BIOCHEMISTRY- I
TIME : 2 HOURS **MAX.MARKS : 70**

SECTION – B (5x10=50)

ANSWER ANY FIVE QUESTIONS

1. How will you separate amino acid mixture using paper chromatography? Explain.
2. Give an account on oxidative phosphorylation.
3. Explain the sequence of glycogenesis.
4. How will you elucidate the structure of glucose?
5. Give an account gluconeogenesis.
6. How are enzymes classified?
7. Explain the mechanism of enzyme action proposed by Fisher and Koshland.

SECTION – C (1x20=20)

ANSWER ANY ONE QUESTION

8 Write a note on the following.
   a) electron transport chain.
   b) Factors affecting the enzyme action.

9. Give the complete sequence of Krebs cycle and how many ATPs are formed in one cycle.