

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86  
(For candidates admitted during the academic year 2010–11)

SUBJECT CODE: CH/AC/BC33

B.Sc. DEGREE EXAMINATION, NOVEMBER 2011  
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 : 20

SECTION – A (20x1=20)

ANSWER ON THE QUESTION PAPER ITSELF.

Answer all the questions.

I Choose the correct answer:

- Thin layer Chromatography is  
a) Liquid-liquid    b) Solid-liquid    c) Gas-liquid    d) none of the above
- Specific regions on the enzyme for binding with the substrate are called  
a) Active site    b) Catalytic site    c) substrate site    d) All the above
- Effective buffer in plasma is  
a) Haemoglobin    b) Citrate buffer    c) Phosphate buffer    d) Bicarbonate buffer
- High blood glucose is maintained by  
a) Glucagon    b) Insulin    c) Thyroxine    d) None of the above

II State whether the following statements are True or False:

- If the pH of blood is higher than normal, the condition is called acidosis.
- The tissue with highest glycogen content is kidneys & brain.
- As the substrate concentration increases the activity of the enzyme concentration also increases.
- ATP is the universal currency of free energy in biological system.

III Match the following:

- |                          |   |                      |
|--------------------------|---|----------------------|
| 9. Catalytic site        | - | ETC                  |
| 10. Glycogenesis         | - | Heteropolysaccharide |
| 11. Chondroitin sulphate | - | enzyme               |
| 12. ATP                  | - | Glycogen storage     |



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**COURSE : ALLIED CORE**  
**PAPER : BIOCHEMISTRY- I**  
**TIME : 2 HOURS**

**MAX.MARKS : 80**

**SECTION – B** **(4x10=40)**  
**ANSWER ANY FOUR QUESTIONS**

1. What is TLC? Give an account of this analytical technique and its applications.
2. Explain Electron Transport Chain of events.
3. Give an account of the maintenance of glucose level in blood.
4. Write a note on high energy compounds.
5. Explain glycolysis in detail.
6. Explain a. Fishers lock & key model  
b. Koshland's induced fit model.
7. How are carbohydrates classified. Explain with examples.

**SECTION – C** **(2x20=40)**  
**ANSWER ANY TWO QUESTIONS**

8. a. Explain PAGE in detail. (8)  
b. Write notes on dialysis. (5)  
c. Draw a schematic diagram and explain gas chromatography. (7)
9. Explain TCA cycle in detail.
10. Give an account of various factors that affects the enzyme action.
11. Explain Glycogenolysis & Glycogenesis.

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