

**STELLA MARIS COLLEGE, (AUTONOMOUS), CHENNAI.**

**M.Sc. BIOTECHNOLOGY**

**END SEMESTER EXAMINATION, NOVEMBER 2021  
BIOCHEMISTRY**

**SUBJECT CODE: 19BY/PC/BC14  
CLASS: I M. Sc**

**TIME: 3 HOURS  
MAX MARKS: 100**

**SECTION - A**

**ANSWER ALL QUESTIONS**

**15 x 2= 30**

1. Define covalent bond.
2. What is the function of lysosomes?
3. What is isotonic solution?
4. What is homeostasis?
5. Define polar molecule.
6. What is Bicarbonate deficit?
7. Define epimers.
8. Write the difference between hemiketal and hemiacetal formation.
9. List any two aliphatic amino acids with structure.
10. What is lycopene?
11. Define cofactor give example.
12. What is proenzyme?
13. What is gluconeogenesis?
14. Define Transamination.
15. What is salvage pathway?

**SECTION – B**

**ANSWER ALL QUESTIONS**

**5 x 10=50**

16. (a) Give an account on steps in cell fractionation.  
(or)  
(b) Comment on cellular markers.
17. (a) Explain how body fluids are regulated by hormones?  
(or)  
(b) Briefly explain acidosis.
18. (a) Write a short note on disaccharides.  
(or)  
(b) Explain the classification of DNA.
19. (a) Give an account on enzyme specificity.  
(or)  
(b) Briefly explain how enzyme quantity is controlled.

20. (a) How ATP is synthesized in TCA cycle? Explain.

(or)

(b) Comment on conversion of urea to ammonia and the enzymes involved.

### **SECTION – C**

**ANSWER ANY ONE QUESTION**

**1 x 20= 20**

20. Discuss the fate of glucose and enzyme regulation in glycolysis and HMP shunt.

22. Explain biosynthesis and oxidation of fatty acids in human body.