

**D.K.M. COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1**  
**SEMESTER EXAMINATIONS**  
**APRIL - 2019**  
**BIO-ORGANIC CHEMISTRY**

**15CBC2A**

**Time : 3 Hours**

**Max. Marks : 75**

**SECTION – A (10 x 2 = 20)**

**Answer ALL the questions.**

1. Draw the linear and ring structure of glucose.
2. Is sucrose a reducing sugar? Justify your answer.
3. What are zwitter ions?
4. Give two examples of amino acids with structure.
5. How proteins are classified based on solubility?
6. What is a Peptide bond?
7. Give the structure of one polyunsaturated fatty acid.
8. Define Iodine number.
9. What is phosphodiester linkage?
10. Mention any two functions of bile salts.

**SECTION – B (5 x 5 = 25)**

**Answer any FIVE of the following questions.**

11. Discuss briefly about the chemical properties of carbohydrates.
12. Write the importance of chemical properties of amino acids.
13. What are the biological importance of Peptides? Explain with examples.
14. What are fatty acids? Write about the types, structure and functions of fatty acids.
15. Write about the properties of DNA.
16. Explain about denaturation and renaturation of proteins.
17. Explain the structure of tRNA with diagram.
18. What are the Biological importance of Lipids?

**SECTION – C (3 x 10 = 30)**

**Answer ALL the questions.**

19. (a) What are polysaccharides? Discuss in detail about the occurrence, structure and properties of Starch.

(Or)

- (b) Give a detailed account on classification of amino acids.

20. (a) Explain the primary, secondary and tertiary structure of proteins.

(Or)

- (b) What are compound lipids? Discuss about the occurrence, chemistry and biological functions.

21. (a) Write in detail about the structure of DNA and its biological functions.

(Or)

- (b) List out the differences between DNA and RNA.