



K20U 0865

Reg. No. : .....

Name : .....

**IV Semester B.Sc. Degree (CBCSS-Reg./Sup./Imp.) Examination, April 2020**  
**(2014 Admn. Onwards)**  
**COMPLEMENTARY COURSE IN CHEMISTRY**  
**4C04 CHE (BS) : Chemistry (For Biological Sciences)**

Time : 3 Hours

Max. Marks : 32

**SECTION – A**

Answer **all** questions. **Each** question carries **1** mark.

1. What is meant by Zwitter ion ?
2. Give two examples bicyclic heterocycles.
3. What are anomers ?
4. What is the diseases caused by the deficiency of Vitamin B<sub>12</sub> ?
5. Name two Zn containing enzymes. (1×5=5)

**SECTION – B**

Answer **any four** questions. **Each** question carries **2** marks.

6. What is the importance of hydrogen bonding in biological systems ?
7. Explain the Sorenson formal titration.
8. Give the structure of cortisone and thyroxine.
9. Explain the electrophilic substitution reaction of thiophene.
10. Explain the term epimerization.
11. Give one method for the preparation of quinoline. (2×4=8)

P.T.O.



## SECTION – C

Answer **any three** questions. **Each** question carries **3** marks.

12. Explain the role of Zn in biological systems.
13. What is meant by biosynthesis of protein ? Explain.
14. Explain the tests for proteins.
15. Compare the structure of DNA and RNA.
16. How will you convert glucose into fructose ? **(3×3=9)**

## SECTION – D

Answer **any two** questions. **Each** question carries **5** marks.

17. Explain the structure and functions of haemoglobin and myoglobin.
18. Give the preparation and properties and structure of pyridine.
19. a) How are proteins classified ? **2**  
b) Discuss the separation of amino acids. **3**
20. a) Explain mechanism of enzyme action.  
b) Write a note on enzyme deficiency diseases. **(5×2=10)**