K17U 1951

Reg. No. : .....

Name : .....

III Semester B.Sc. Degree (CBCSS – Reg./Sup./Imp.) Examination, November 2017
(2014 Admn. Onwards)
COMPLEMENTARY COURSE IN CHEMISTRY
3C03CHE (BS) : Chemistry
(For Biological Science)

Time : 3 Hours Max. Marks : 32

SECTION – A

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

1. Define specific rotation.
2. What are polydentate ligands ? Give example.
3. Distinguish between closed and isolated systems.
4. What are homopolymers ?
5. What are free radicals ? **(1×5=5)**

SECTION – B

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

6. Explain the term spontaneous and non-spontaneous process.
7. Explain geometrical isomerism with a suitable example. What are the causes of geometrical isomerism ?
8. State and illustrate Hoffman's rule.
9. What are the postulates of Werners theory ?
10. Explain the structure of ethylene.
11. Explain orientation effect with suitable example. **(2×4=8)**

P.T.O.

SECTION – C

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

12. Explain the mechanism of SN_2 reaction.

13. Explain isothermal, isochoric and isobaric processes.

14. Write a note on different types of polymerization with suitable examples.

15. What is meant by conformational isomerism ? Why is chair form of cyclohexane more stable than boat form ?

16. What are the different methods for resolution ? **(3×3=9)**

SECTION – D

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

17. a) State and explain second law of thermodynamics. **2**

    b) Explain the concept of entropy and free energy. **3**

18. Give an account of the various factors effecting stability of complexes.

19. Discuss the mechanism of various electrophilic substitutions reactions.

20. Write a note on the pollution due to plastic. What are biodegradable plastics ? What are their advantages ? **(5×2=10)**
