



K19U 0562

Reg. No. : .....

Name : .....

IV Semester B.Sc. Degree (CBCSS-Reg./Supp./Imp.) Examination, April 2019  
(2014 Admission Onwards)

**COMPLEMENTARY COURSE IN CHEMISTRY**  
**4C04 CHE (PS) : Chemistry (For Physical Sciences)**

Time : 3 Hours

Max. Marks : 32

**SECTION – A**

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

1. Define common ion effect.
2. State Ostwalds dilution law.
3. Expand DTA.
4. What are azeotropes ?
5. Write Braggs equation and explain the terms.

(1×5=5)

**SECTION – B**

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

6. What are ideal and non ideal solutions ?
7. Explain the term relaxation effect.
8. Give any two applications of AAS.
9. What are concentration cells ? Give example.
10. Why do real gases deviate from ideal behaviour ?
11. Construct the phase diagram of sulphur.

(2×4=8)

P.T.O.



## SECTION – C

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

12. Explain the principle and construction of standard hydrogen electrode.
13. Derive an expression for the hydrolysis of salt of strong acid and weak base.
14. Give an account of Pattinsons process.
15. Explain Debye Huckel theory of strong electrolytes.
16. Explain the RMS velocity, average velocity and most probable velocity. **(3×3=9)**

## SECTION – D

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

17. What are critical constants ? Explain their determination.
18. a) How are X rays useful in the study of crystals ?  
b) What are the applications of liquid crystals ?
19. Discuss the instrumentation and applications of TGA.
20. Draw and interpret the boiling point diagram for binary mixtures. **(5×2=10)**