

COURSE CODE - 1030202

UG DEGREE EXAMINATION - JAN 2009

B.SC (CHE)/B.SC (MPC)

ORGANIC AND INORGANIC CHEMISTRY

(For the Candidates Admitted from Calendar Year 2007)

Time: 3 hours

Max. Marks 75

Section-A

Answer All the Questions:

15X1=15

1. Benzene is a _____ chemical.
2. Define corrosive chemical
3. In H₂ molecule _____ type of bond is present.
4. Ionisation potential is _____
5. Bond order of He₂ molecule is _____
6. What is electronegativity?
7. Expansion of SN¹ is _____
8. In periodic table, electronegativity of the elements _____ along the group.
9. Hydrogen bond is _____ than covalent bond.
10. Structure of naphthalene is _____
11. The catalyst used in Friedal – Craft' alkylation is _____
12. Benzene structure is _____
13. State second law of thermodynamics.
14. Kirchoff's equation is _____
15. Shape of a p-orbital is _____

Section – B

Answer any Five Questions:

5X6=30

16. a. Describe first aid procedure for accidents involving acids and alkalis.
(Or)
b. Discuss the waste disposal method.
17. a. Explain the Born-Haber cycle.
(Or)
b. Give the simple Schrodinger equation and explain the importance of Ψ and Ψ^2 .
18. a. Explain Heisenberg uncertainty principle.
(Or)
b. What is Reimer-Tiemer reaction? Explain with example.
19. a. Explain the diagonal relationship between Be and Al.
(Or)
b. Distinguish bonding, anti-bonding and non-bonding molecular orbitals.
20. a. Discuss the SN¹ and SN² reactions with examples.
(Or)
b. Derive the relationship between C_p and C_R

Section – C

Answer any Two Questions

2X15=30

21. How will you synthesis naphthalene? and explain its chemical properties.
22. Write the postulates of VSEPR theory and explain the theory with two examples.
23. Explain the mechanism of Kolb and diazo-coupling reacting.
24. Discuss the relative reactivity of methyl, ethyl, isopropyl, t-butyl and benzyl halides.
25. Explain the Chemical thermodynamics and thermodynamic functions