

Exam Topic Summary

Unit 1 [14+14 marks]

1. Naming organic compounds
2. Properties of organic compounds
3. Reactions of organic compounds
4. Polymers

Unit 2 [10+11+8 marks]

1. History of atom
 - a. Basic
 - b. Bohr
 - c. Quantum
2. Quantum Numbers
3. Electron Configuration
4. Rules of Electron configuration
5. Periodic table and electron configuration
6. Bonding
7. Lewis structures
8. Hybridization
9. VSPER
10. Types of compounds
 - a. polar, non polar
 - b. intermolecular forces
11. Solids
 - a. Structure
 - b. Properties

Unit 3 [5+11, 6+7 marks]

1. Calorimetry
2. Enthalpy
3. molar Enthalpy
4. Representing Enthalpy change
5. Hess's Law
6. Enthalpy of Formation
7. Rates and mole ratio
8. Calculating rates
9. Factors affecting rates
10. Rate Law: Orders, Constant
11. Activation Energy
12. Rate determining step

Unit 4 [4+5, 12+9]

1. Equilibrium
2. Final [] values
3. Equilibrium Constant and its magnitude
4. LeChatelier
5. Reaction Quotient
6. Solubility Ksp
7. Trial Ion Product
8. Acids and Bases – theory (Arrhenius, Bronsted Lowry)
9. Strong vs Weak
10. pH, pOH
11. % ionization
12. Weak Acid and Weak Base constants
13. Salts
14. Titration
15. Buffer

Unit 5 [5 + 14]

1. Oxidation and Reduction
2. Oxidation Numbers
3. Balancing Redox reactions
4. Galvanic Cells
5. Reduction Potential