

## 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 [4 + 8]

1. Oxidation and Reduction
2. Oxidation Numbers
3. Balancing Redox reactions