



Organic

1. Some basic principles and techniques
2. Hydrocarbon
3. Haloalkanes and haloarenes
4. Alcohols, Phenols & ethers
5. Aldehydes, ketones & carboxylic acid
6. Amines
7. Biomolecules
8. Practical chemistry

How to deal with organic chemistry ?

a. International Union of Pure and Applied Chemistry (IUPAC)

b. Isomerism



Structural isomerism

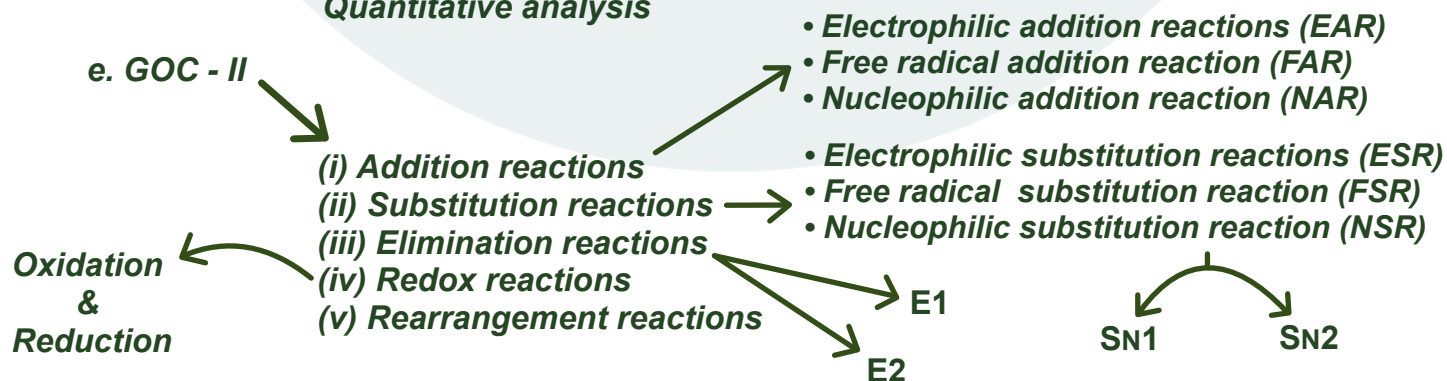
c. GOC - I
(A)

- Fission of a covalent bond
- Electron movement in organic reactions
- Inductive effect (I - effect)
- Resonance
- Mesomeric effect (M - effect)
- Aromaticity
- Electromeric effect
- Hyperconjugation

d. GOC - I
(B)

- Methods of purification of organic compounds
 - (i) Sublimation
 - (ii) Crystallisation
 - (iii) Distillation
 - (iv) Differential extraction
 - (v) Chromatography
- Qualitative analysis
- Quantitative analysis

e. GOC - II



f. Biomolecules

g. Practical chemistry



Inorganic

1. Classification of elements and periodicity in properties
2. Chemical bonding and molecular structure
3. P block
4. D & F block
5. Coordination compounds
6. Practical chemistry

Physical

1. Mole concept
2. Structure of atom
3. Thermodynamics
4. Equilibrium
5. Redox reaction
6. Solution
7. Electrochemistry
8. Chemical kinetics
9. Practical chemistry

PHYSICS

1. Basic mathematics
 - Trigonometry
 - Co-ordinate geometry
 - Differentiation
 - Integration ————— Calculus
 - Graphs and their equations
 - Algebra
 - Vectors
2. Physical world
3. Unit and measurement
4. Kinematics - motion in a straight line
5. Kinematics - motion in a plane
6. Laws of motion
7. Work power and energy
8. System particles and rotational motion
9. Gravitation
10. Mechanical properties of solids
11. Mechanical properties of fluids
12. Thermal properties of matter
13. Thermodynamics
14. Kinetic theory of gases
15. Oscillation
16. Waves



17. *Electrostatics - electric charge and field*
18. *Electrostatics - electrostatic potential and capacitance*
19. *Current electricity*
20. *Moving charges and magnetism*
21. *Magnetism and matter*
22. *Electromagnetic induction*
23. *Alternating current*
24. *Electromagnetic waves*
25. *Ray optics*
26. *Waves optics*
27. *Dual nature of radiation and matter*
28. *Atoms*
29. *Nuclei*
30. *Semiconductor*
31. *Experimental physics*
32. *Derivation (Boards)*

BIOLOGY

Botany

1. *The living world*
2. *Biological classification*
3. *Plant kingdom*
4. *Morphology of flowering plants*
5. *Anatomy in flowering plants*
6. *Cell the unit of life*
7. *Cell cycle and division*
8. *Photosynthesis in higher plants*
9. *Respiration in plants*
10. *Plant growth and development*
11. *Sexual reproduction in flowering plants*
12. *Principle inheritance and variation*
13. *Molecular basis of inheritance*
14. *Microbes in human welfare*
15. *Organism and population*
16. *Ecosystem*
17. *Biodiversity and conservation*
18. *Practical biology*



Zoology

- 1. Animal kingdom***
- 2. Tissue - structural organisation in animals***
- 3. Biomolecules***
- 4. Breathing and exchange of gases***
- 5. Body fluids and circulation***
- 6. Excretory products and their elimination***
- 7. Locomotion and movement***
- 8. Neural control and coordination***
- 9. Chemical coordination and integration***
- 10. Human reproduction***
- 11. Reproductive health***
- 12. Evolution***
- 13. Biotech - I principles and processes***
- 14. Biotech - II & its application***
- 15. Practical biology***

