

Chemistry (Hons)

(Semester- I)

Paper- 1 (Inorganic Chemistry-1)

Text Book: Inorganic Chemistry- Cotton & Wilkinson
Concise Inorganic Chemistry- J D Lee

Serial No.	Topic/Sub-topic	Expected No. of Lectures
1	Atomic Structure	14
2.	Periodicity of Elements	16
3.	Chemical Bonding	15

Paper- 2 (Physical Chemistry)

Text Book: Physical Chemistry- Moore
Physical Chemistry- Puri & Sharma

S. No.	Topic	Expected No. of Lecture
1.	Gaseous State	15
2.	Ionic Equilibria	25

Semester- II

Paper- 3 (Organic Chemistry-1)

Text Book: Organic Chemistry- I L Finar
Organic Chemistry- Bahl & Bahl

S. No.	Topic	Expected No. of Lectures
1.	Basic of Organic chemistry	06
2.	Stereo Chemistry	12
3.	c-c sigma bond	8
4.	c-c pi bond	8
5.	Aromatic Hydrocarbon	8

Paper- 4 (Physical Chemistry)

Text Book: Physical Chemistry- Puri & Sharma
Physical Chemistry- A Peter & J Paula

S. No.	Topic	Expected No. of Lecture
1.	Chemical Thermodynamics	15
2.	Chemical Equilibrium	12
3.	Solution and Colligative Proper	12

Semester- III**Paper- 5 (Inorganic Chemistry)**

Text Book: Concise Inorganic Chemistry- J D Lee
Advance Inorganic Chemistry- Cotton & Wilkinson

S. No.	Topic	Expected No. of Lectures
1.	Acid Bases	12
2.	Chemistry of S & P Block Elements	15
3.	Noble Gases	12

Paper- 6 (Organic Chemistry)

Text Book: Organic Chemistry- I L Finar
Organic Chemistry- Bahl & Bahl

S. No.	Topic	Expected No. of Lectures
1.	Chemistry of Halogenated Hydrocarbons	12
2.	Alcohol, Phenol and Epoxides	12
3.	Carbonyl Compound	10
4.	Carboxylic Acids & Derivatives	10

Paper- 7 (Physical chemistry)

Text Book: Physical Chemistry- P.W. Atins & Paula
Physical Chemistry- G.W. Castellan

S. No.	Topic	Expected No. of Lectures
1.	Phase Equilibria	9
2.	Chemical kinetics	9
3.	Catalysis	9
4.	Surface Chemistry	9

Semester- IV

Paper- 8 (Inorganic Chemistry)

Text Book: Advance Inorganic Chemistry- F.A. Cotton & G. Wilkinson
Concise Inorganic Chemistry- J.D. Lee

S. No.	Topic	Expected No. of Lectures
1.	Coordination Chemistry	12
2.	Transition Elements	12
3.	Lanthanoids & Actinoids	13

Paper- 9 (Organic Chemistry)

Text Book: Organic Chemistry- I.L. Finar
Organic Chemistry- Bahl & Bahl

S. No.	Topic	Expected No. of Lectures
1.	Nitrogen containing, functional groups	12
2.	Polynuclear Hydrocarbon	12
3.	Heterocyclic Compounds	12

Semester- V

Paper- 10 (Physical Chemistry)

Text Book: Physical Chemistry- G.M. Barrow
Physical Chemistry- Puri & Sharma

S. No.	Topic	Expected No. of Lectures
1.	Conductance	20
2.	Electro-Chemistry	22

Paper- 11 (Organic chemistry)

Text Book: Principles of Bio-chemistry- D.L. Nelson & M.M. Cox
Organic Chemistry- I.L. Finar

S. No.	Topic	Expected No. of Lectures
1.	Nucleic Acid	9
2.	Amino Acid, Peptide & Proteins	10
3.	Enzymes	9
4.	Pharmaceuticals compounds	11

Paper- 12 (Physical Chemistry)**Text Book:** Introductory Quantum Chemistry- A.K. Chandra

S. No.	Topic	Expected No. of Lectures
1.	Quantum chemistry	13
2.	Molecular Spectroscopy	14
3.	Photochemistry	12

Paper- DSE-1**Text Book:** Qualitative Analysis- Vogel A.I.

S. No.	Topic	Expected No. of Lectures
1.	Basic Principles involved in cations and anions and solubility products	10
2.	Detection of anion in mixtures	11
3.	Quantitative Analysis	10
4.	Gravimetric Analysis	12

Paper- DSE-2**Text Book:** Qualitative Analysis- Vogel A.I.

S. No.	Topic	Expected No. of Lectures
1.	Analytical methods in chemistry, optical methods of analysis....	10
2.	Chemical methods of determination of functional group in organic chemistry	7
3.	Estimation of functional group	8
4.	Determination of molecular weight	6
5.	Conduct metric Titration	6
6.	Potentiometric Titration	6

Semester- VI

Paper- 13 (Inorganic Chemistry)

Text Book: Qualitative Inorganic Analysis- B.D. Khosla, Rishi Garg

S. No.	Topic	Expected No. of Lectures
1.	Theoretical Principles in Qualitative Analysis	10
2.	Inorganic Polymers	11
3.	Bio-inorganic chemistry	10
4.	Catalysis of organometallic compounds	11

Paper- 14 (Organic chemistry)

Text Book: Organic Chemistry- A.I. Vogel

S. No.	Topic	Expected No. of Lectures
1.	Organic Spectroscopy	13
2.	Dyes	12
3.	Terpenes	13

Paper- DSE-3 (Green chemistry)

Text Book: New Trends in Green Chemistry- V.K. Ahluwalia, M.R. Kidwai

S. No.	Topic	Expected No. of Lectures
1.	Introduction to green chemistry	10
2.	Principle of green chemistry & designing a chemical synthesis	10
3.	Example of green synthesis/reaction	11
4.	Future trends in green chemistry	11

Paper- DSE-4

Text Book: A Textbook of Engineering chemistry- S.S. Dara

S. No.	Topic	Expected No. of Lectures
1.	Industrial gases & inorganic chemicals	20
2.	Environments and its segments	15