

**HARIMOHAN GHOSE COLLEGE****Department of Chemistry****Teaching Plan****Semester –I\_ General/Pass Course**

Semester	Paper	Topic	Faculty Name	Session
I	CC1/GE1 (TH)	(i) Kinetic theory of gases and real gases (ii) Liquids (iii) Chemical Kinetics (iv) Atomic Structures (v) Chemical Periodicity	Mrs. Pampa Ghosh	July-Dec
		(vi) Acids and bases (vii) Fundamentals of Organic Chemistry (viii) Stereochemistry Nucleophilic Substitution and Elimination Reactions	DR Nilufa Khatun	
	CC1/GE1 (PR)	(i) Acid-Base Titration (ii) Redox titration	DR Nilufa Khatun & Mrs. Pampa Ghosh	

**Semester –II\_ General/Pass Course**

Semester	Paper	Topic	Faculty Name	Session
II	CC2/GE2 (TH)	(i) Chemical Thermodynamics (ii) Chemical Equilibrium (iii) Solutions (iv) Phase Equilibria (v) Solids (1 <sup>st</sup> part)	Mrs. Pampa Ghosh	January - June
		(vi) Solids (2nd part) (vii) Aliphatic Hydrocarbons (vii) Error Analysis and Computer Applications (viii) Redox reactions	DR Nilufa Khatun	
	CC2/GE2 (PR)	(i) Study of kinetics (ii) Study of viscosity and surface tension of unknown liquid (iii) Determination of solubility of sparingly soluble salt (iv) Preparation of buffer solutions	DR Nilufa Khatun & Mrs. Pampa Ghosh	

**Semester –III\_General/Pass Course**

Semester	Paper	Topic	Faculty Name	Session
III	CC3/GE3 (TH)	(i) Chemical Bonding and Molecular Structure (ii) Transition Elements (3d series) (iii) Aromatic Hydrocarbons (iv) Organometallic Compounds (v) Aryl Halides	DR NilufaKhatun	July- December
		(vi) Comparative study of p-block elements (vi) Coordination Chemistry (vii) Ionic Equilibria (viii) Conductance (viii) Electromotive force	Mrs. Pampa Ghosh	
	CC3/GE3 (PR)	Qualitative semimicro analysis of mixtures containing two radicals	DR NilufaKhatun & Mrs. Pampa Ghosh	
	SEC-B1 (SEC-3)	<u>Pharmaceuticals Chemistry</u> Drugs and pharmaceuticals Fermentation	DR NilufaKhatun & Mrs. Pampa Ghosh	

**Semester –IV\_General/Pass Course**

<b>Semester</b>	<b>Paper</b>	<b>Topic</b>	<b>Faculty Name</b>	<b>Session</b>
<b>IV</b>	<b>CC4/GE4 (TH)</b>	(i) Alcohols, Phenols and Ethers (ii) Crystal Field Theory (iii) Quantum Chemistry & Spectroscopy	DR NilufaKhatun	January - June
		(iv) Carbonyl Compounds (v) Carboxylic Acids and Their Derivatives (vi) Amines and Diazonium Salts Amino Acids and Carbohydrates	Mrs. Pampa Ghosh	
	<b>CC4/GE4 (PR)</b>	(i) Qualitative Analysis of Single Solid Organic Compound(s)  (ii) Identification of a pure organic compound	DR NilufaKhatun & Mrs. Pampa Ghosh	
	<b>SEC-B2 (SEC-4)</b>	<u>Pesticide Chemistry</u>  General introduction of pesticides, synthesis, and technical manufactures, uses of representatives pesticides	Mrs. Pampa Ghosh	

**Semester –V\_General/Pass Course**

<b>Semester</b>	<b>Paper</b>	<b>Topic</b>	<b>Faculty Name</b>	<b>Session</b>
<b>V</b>	<b>DSE-A2 (TH)</b>	<u>Inorganic materials industrial importance</u> (i) Silicate Industries (ii) Fertilizers (iii) Surface Coatings (iv) Batteries (v) Alloys (vi) Catalysis (vii) Chemical explosives	Mrs. Pampa Ghosh	July - December
	<b>DSE-A2 (PR)</b>	(i) Analysis of fertilizers and alloys (ii) Determination of composition of cement & dolomite (iii) Preparation of pigments	DR NilufaKhatun	
	<b>SEC-A2 (SEC-2)</b>	<u>Analytical clinical biochemistry</u> (i) Carbohydrates (ii) Proteins (iii) Enzymes (iv) Lipids (v) Lipoproteins (vi) Structure and biological roles of DNA and RNA (vii) Diagnostic approach of Blood and Urine	DR NilufaKhatun	

**Semester –VI\_General/Pass Course**

<b>Semester</b>	<b>Paper</b>	<b>Topic</b>	<b>Faculty Name</b>	<b>Session</b>
<b>VI</b>	<b>DSE-B1 (TH)</b>	<u>Green chemistry and chemistry of natural products</u> (i) Introduction to Green Chemistry (ii) Principles of Green Chemistry Designing of green chemical synthesis (iii) Examples of Green Synthesis (iv) Future Trends in Green Chemistry	DR NilufaKhatun	January - June
		(v) Alkaloids (vi) Terpenes	Mrs. Pampa Ghosh	
	<b>DSE-B1 (PR)</b>	Organic products synthesis by green methods	DR NilufaKhatun	