



## The HNSB. LTD. Science College Himatnagar

### M.Sc. Sem 3 and 4 (Organic Chemistry)

New Syllabus

### Course Outcomes : 2020-21 & 2021-22

CHNN : 601	Enable the students to get knowledge of Nature of coloring matter, Terpenoids, Vitamins and Alkaloids
CHNN : 602	Students will able to update with the ideas of Unit process & Operations, safety hazards, Flowcharts, Patents, Soap & Detergents, Essential oils, animal fixatives, Fruit concentrates, Food additives, Preservatives, Vegetable oils, Cotton seeds oils, Agrochemicals & Pharmaceuticals, Pulping process, Sugar-Ethanol industries etc.
CHNN : 603	To inculcate knowledge of Naming of organic medicinal compounds, Information of drug related topics, Pharmacopeias, Diagnostic agents, Pharmaceutical aids, Antibiotics, Sulphadruugs, and CNS drugs, Cholinergic-Auticholinergic, Histamine – Antihistamine and Local Anesthetics.
CHNN : 604	Students will able to get knowledge of chemistry of 5 and 6 members Hetrocyclic compounds and Application of oxidation and reduction reagents.
CHNN : 605-B (ES)	Enable the students to get sufficient knowledge of various types of organic photochemistry reactions
CHNN : 606 & 607 (Laboratory course)	Students will able to gain knowledge of separation, purification & identification of semi solid ternary mixtures, two-three steps organic synthesis and quantitative analysis of penicillin, Amino acid etc.
CHNN : 701	To enable students with the knowledge of polysaccharide, Purine & Nucleic acid, conformational analysis of various compounds and steroids
CHNN : 702	Students will update with the knowledge of synthetic industries based on petroleum, paint, varnish, Explosives, Industrial polymers & about selected small scale industries.
CHNN : 703	To enable students to learn concept of chemotherapeutic drugs, Anti malarial, Antiamoebic, Antitubercular, Antifungal, Antiviral, CNS drugs, Cardiac drugs, Antidiabetic, Diuretic, Hypertensive, Anticancer, sedative, General & local Anesthetic Drugs.
CHNN : 704	Students will update with the knowledge of Molecular rearrangements of electron deficient Carbon, Nitrogen and Oxygen molecules, Chemistry of Organometallic compounds and Various type of Name reactions
CHNN : 705- A(ES)	To acquaint knowledge of various types of disconnection approach, protecting groups, Ring synthesis and synthesis of complex molecules
CHNN : 706 & 707 (Laboratory Course)	Student will gain knowledge of any types of ternary mixtures, quantitative analysis of isoniazide, ibuprofen and synthesis & characterization of two-three steps synthesis.



Head

Chemistry Department  
The H.N.S.B. Ltd., Science College  
Himatnagar-383001, Dist. S.K.



Convener  
I.O.A.C. Committee  
H.N.S.B. Ltd. Science College  
Himatnagar



Principal  
The H.N.S.B. Ltd., Science College  
Himatnagar-383001, Dist. S.K.

M.Sc. Sem. 3&4 (Physical)

P.G. DEPARTMENT OF CHEMISTRY **CO, PO & PSO**

<b>Programme Outcome</b>	Main outcomes of the programme is students will gains complete knowledge about all fundamental aspects of all the discipline of chemistry like industrial chemistry, medicinal chemistry etc. Students understand the basic concepts, fundamental principals & the scientific knowledge related to different scientific phenomena and their relevancies in the day to day life.
<b>Programme Specific Outcome</b>	At the completion of the M.Sc. Chemistry programme, the students will be able to work in the pure interdisciplinary & multidisciplinary areas of chemical sciences & its applications
<b>Course</b>	<b>Course Out Comes</b>
CHN : 601	Enable the students to get knowledge of Photochemistry, Adsorption, chemical and physical adsorption, Surfacentension and Langmuir equation, solid state chemistry, General principals, Experimental procedure, Copecipitation as a precursor to solid state reaction, kinetics of solid state reaction. Introduction degree of freedom for Phase equilibrium
CHN : 602	Students will able to update with the ideas of Unit the fundamentals of electro chemistry and numerical. A basic concept of polarization, over voltage. Application of electrolytic oxidation and reduction, strimming potential, Zeta potentials, mechanics of electron, penetration of electrons into classify forbidden reasons
CHN : 603	Students to get sufficient knowledge of Polymer Science. Introduction of Polymer, Kinetics of polymer, Coordination polymerization, Glasstrnsition temperature , relation between Tm,& Tg, The WLF equation methods for determination of glasstrnsition temperature, Polymer reaction and Polymer degradation
CHN : 604	Students able to oprating system of Specrophotometer and its application in Inndustrial base skill for Organic compounds,functional group ,ion peak in high ressoluton mass spectrometry. One more technique X-ray Diffraction for chemical analysis using X-ray absorption,liquid crystalsl, Disc shape liquid crystals, Instrumentation Photoacoustic spectroscopy(PAS) & Photo electron spectroscopy(PES)
CHN:605 SE	Students will able to gain knowledge of various Instruments like as Double beam atomic absorption Spectrometer, Fame photometry Instrument,Conductometric PH-measurements
CHN: 606 &607 (Labouratory Course)	Student will gain knowledge of Students will able to gain knowledge of various Instruments like as Spectrophotometer, Potentiometer, Conductometer, PH- meter, Chromatography tecquinec etc
CHN : 701	To enable students with the knowledge of kinetics of Photoperoxidation, mechanism of ene reaction , photosubstitution reaction,Solar energy conversion ans storage,chemiluminescence,chemical kinetics ,Spectroscopy study.
CHN : 702	Students will update with the knowledge of Principles of reactivity and selectivity, Structural effects on reactivity ,electrochemical reaction of special ,salvation and solvent effects ,capillary electrophoresis,coulometry and chronopotentiometry,polarography ,amperometry
CHN : 703	To enable students to Copolymerisation,step polymerization,crystallinity in polymer, polymer synthesis,rheology of polymer ,polymer processing, analysis and testing of polymer, thermal analysis and physical testing



CHN : 704	To enable students with the knowledge of Chemistr of Nanomaterials applicaton of nanomaterials, Green chemistry of oxidation -reduction saponification ,esterification nuclear chemistry aproches synthesis of radio isotopes of Na and C also application of radio isotopes etc.
CHN: 705A-SE	To acquaint knowledge of various types Chromatography such as HPLC,Adsorption Chromatography, Column Chromatography,Gel Permiation, Ion exchange chromatography etc.
CHN : 706 & 707 (Laboratory Course)	Student will gain knowledge of Students will able to gain knowledge of various Instruments like as Spectrophotometer, Potentiometer, Conductometer, PH- meter, Chromatography tecquinec etc

  
 Convener  
**IOAC** Committee  
 H.N.S.B. Ltd. Science College  
 Himatnagar

  
 Professor-in-Charge  
 Post-Graduate Centre,  
 Physical Chemistry  
 The H.N.S.B. Ltd., Science College  
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 Principal  
 The H.N.S.B. Ltd. Science College  
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