Estd. June 1964

"Education for Knowledge, Science and Culture."
– Shikshanmaharshi Dr. Bapuji Salunkhe
Shri. Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)
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Department of Chemistry

Course Outcomes (COs): Chemistry

M. Sc. Part I Chemistry (Introduced in the year 2018-19)	
Semester I	
Inorganic Chemistry – I (CC- 1131A)	
CO No.	**On completion of the course, student will be able to:**
CO1	Learn the symmetry elements and symmetry operations of various inorganic compounds.
CO2	Understand the spatial arrangement and nature of bonding in case of main group compounds.
CO3	Acquire the knowledge of bio inorganic chemistry and transition elements.
CO4	Study the electronic, electric and optical behaviour of Inorganic materials.
Organic Chemistry - I (CC- 1132A)	
CO No.	**On completion of the course, student will be able to:**
CO1	Understand the structure and reactivity of various reactive intermediates as well as stereochemistry of nucleophilic substitution reactions in aliphatic compounds..
CO2	Identify the Electrophilic substitution reactions with respect to aromatic, introduction of benzenoid and non benzenoid aromatic compounds.
CO3	Grasp knowledge of new reactions with respect to its stereochemistry and applications as well as specificity of elimination reactions.
CO4	Assimilate stereochemical aspects of chiral compounds containing heteroatoms and introduction to allenes and spiranes.
Physical Chemistry - I (CC- 1133A)	
CO1	Inculcate phenomenon of Molecular spectroscopy.

CO2	Study the aspects of polymers and rubber.
CO3	Develop the concept of Colloids and surface phenomena.
CO4	Learn new concepts in thermodynamics and related properties.
Analytical Chemistry - I (CC- 1134A)	
CO1	Learn concepts of quality control and quality assurance related to analytical chemistry.
CO2	Acquire the new hyphenated techniques in chromatography.
CO3	Grasp new analytical techniques related to electrochemistry such as voltametry, amperometry and polarography etc.
CO4	Adopt research methodology and nanomaterials.
Semester II	
Inorganic Chemistry – II (CC- 1137B)	
CO No.	**On completion of the course, student will be able to:**
CO1	Learn the features of non – transition elements.
CO2	Adapt knowledge related to organometallic chemistry, transition elements, transition metal complexes
CO3	Study related to lanthanides and actinides
CO4	Get familiar with spectroscopic term symbols, nuclear and radiochemistry
Organic Chemistry – II (CC- 1138B)	
CO No.	**On completion of the course, student will be able to:**
CO1	Assimilate the reaction mechanism with various name reactions, C-alkylation and acylation.
CO2	Learn oxidation, hydroboration and enamines.
CO3	Study reduction reactions with help of various reducing agents and functional group protection.
CO4	Get familiar with the concept of retrosynthetic analysis and organometallic chemistry w.r.t. organic synthesis
Physical Chemistry – II (CC- 1139B)	
CO1	Acquire knowledge related to atomic structure of many electron system.
CO2	Get familiar with basics of resonance energy transfer and fluorescence quenching.
CO3	Apply electrochemistry basics to determination of activity and activity coefficients of an electrolytes.

CO4	Understand the kinetics approach for simultaneous reactions.
Analytical Chemistry – II (CC- 1140B)	
CO1	Grasp the fundamentals of molecular spectroscopy.
CO2	Apply basics of spectroscopy in structure determination of organic compounds
CO3	Use of heat energy in structure determination.
CO4	Get familiar with modern techniques such as AAS, ICPS.

Dr. (Mrs). S, D, Shirke
HEAD
DEPARTMENT OF CHEMISTRY
VIVEKANAND COLLEGE KOLHAPUR
(EMPOWERED AUTONOMOUS)