B.L.D.E.Association's

S.B.Arts and K.C.P. Science College

Vijayapur

PG DEPARTMENT OF CHEMISTRY

Programme Outcomes (Pos) ,

Programme Specific Outcomes(PSOs)

and Course Outcomes (Cos)

B.L.D.E. Association's

S.B. Arts and K.C.P Science College Bijapur

Post Graduate Department of Chemistry

POS 20119-2020

Subject: Organic Chemistry

PO1: In advance elementary/ fundamental knowledge.

PO2 : Critical thinking, scientific methods to design, carry out analytical the results of experiments and get awareness of the impact of chemistry on environment, society,etc. .

PO3:Higher education, competitive, Reputed Research laboratory .

PO4: Industrial application.

PSO1-to develop strong and compete knowledge in theoretical and practical chemistry.

PSO2-Able to explain Theory, Principle, Postulates, Methods, explaining instrumentation, Derivation, calculations and to calculate the physical and electrochemical parameters

PSO3: To recognize the various laws and theories and solving numerical problems.

PSO4: To develope various technical and analytical skills through laboratory training.

POS5: To create awareness the importance. And impact of chemistry on environment.

Sem 1st: Organic Chemistry

CO1: Concept of hybridization : sp3, sp2, sp – with examples.

CO2: Electronic effects : Inductive, electronic, resonance and hyperconjugation.

CO3: Classification of organic reagents and reactions.

CO4: Reactive Intermediates : carbocations, carbanions, free radicals, carbenes, nitrenes, and arynes- their formation, stability, structure and reactions.

CO5: Organic acid and bases : Effect of substituents with examples

CO6: **Addition reactions:** Addition to Carbon-Carbon double bond.

CO7: Elimination reactions: E1, E2, E1CB mechanisms.

CO8: substitution reactions:

CO9: STEREOCHEMISTRY

PCO1: Preparation p-bromo aniline from aniline.

PCO2: Preparation of p-nitro aniline from aniline.

PCO3: Preparation of benzoic acid from benzaldehyde.

PCO4: Preparation of phenyl azo beta naphthol.

PCO5: Preparation of 1-phenyl-3-methyl-pyrazolone.

COURSE : M.Sc I Semester (Theory&Practical)

Course Code : **Subject: Organic Chemistry**

Course Outcomes	**PO1**	**PO2**	**PO3**	**PO4**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	2	3	2	2	2	3	3	-	-
CO2	1	2	3	1	3	3	3	1	-
CO3	-	2	1	3	3	3	3	1	-
CO4	2	3	1	-	3	2	3	1	-
CO5	3	3	-	-	3	3	3	-	-
CO6	1	3	2	1	3	3	3	-	-
CO7	2	3	1	3	3	3	3	-	-
CO8	-	3	1	1	3	3	3	--	-
CO9	-	3	1	1	3	3	3	--	-
CO10	-	3	1	1	3	3	3	--	-
PCO1	2	3	-	3	-	-	-	3	3
PCO2	2	2	-	3	-	-	-	3	3
PCO3	2	2	-	3	-	-	-	3	3
PCO4	2	2	-	3	-	-	-	3	3
PCO5	2	2	-	3	-	-	-	3	3

M Sc 2nd Sem

CO1: C-C bond forming reactions.

CO2: C-N bond forming reactions.

CO3: C-O bond forming reactions.

CO4: C-Cl bond forming reaction: Hell-Volhard-Zelinski reaction.

CO5: Oxidation reactions.

CO6: Reduction reactions.

CO7: Rearrangement reactions involving migration to electron deficient carbon

CO8: Rearrangement reactions involving migration to electron deficient nitrogen

CO9: 3-Membered heterocyclic compounds

CO10: 4-Membered heterocyclic compounds with one and two hetero atoms.

CO11: 6-Membered heterocyclic compounds with one and two hetero atoms

PCO1: ANALYSIS OF BINARY ORGANIC MIXTURE

PCO2: Chromatographic techniques.

COURSE : M.Sc II Semester (Theory&Practical)
Course Code : Subject: Organic Chemistry

Course Outcomes	PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	3	-	3	3	3	-	-
CO2	3	3	2	2	3	3	2	-	-
CO3	3	2	3	3	3	3	3	-	-
CO4	-	2	-	-	3	3	3	-	-
CO5	1	3	1	-	3	3	3	-	-
CO6	2	3	2	2	3	3	3	-	-
CO7	-	1	1	3	3	3	3	-	-
CO8	1	3	2	3	3	3	3	--	-
CO9	2	3	2	2	3	3	3	--	-
CO10	1	3	3	3	3	3	3	--	-
CO11	2	2	-	2	2	2	3	3	3
PCO1	2	2	-	3	-	-	-	3	3
PCO2	2	2	-	3	-	-	-	3	3

M Sc3rd sem

CO1: REAGENTS IN ORGANIC SYNTHESIS

CO2: PHOTOCHEMISTRY

CO3: Norrish type I and Norrish type II reactions

CO4: Pericyclic Reactions: Classification of pericyclic reactions.

CO5: Electrocyclic reactions.

CO6: Sulphonamides: Introduction, classification, synthesis and SAR studies

CO7: Antimalarials: Introduction, classification, synthesis and drug action

CO8: Analgesics: Introduction, classification, synthesis and drug action

CO9: Anti-inflammatory: Introduction, classification, synthesis and drug action

CO10: pharmacokinetics, pharmacodynamics

PCO1: Estimation of aniline and glucose.

PCO2: Determination of saponification value of oils.

PCO3: Determination of iodine value of oils.

COURSE : M.Sc III Semester (Theory&Practical)

Course Code : **Subject: Organic Chemistry**

Course Outcomes	PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	2	-	3	2	3	-	-
CO2	3	2	2	3	3	3	3	-	-
CO3	2	2	2	3	3	3	3	-	-
CO4	-	2	2	3	3	3	3	-	-
CO5	3	2	2	1	3	3	3	-	-
CO6	3	1	2	3	3	3	3	-	-
CO7	1	2	2	3	3	3	3	-	-
CO8	-	1	2	3	3	3	3	--	-
CO9	1	3	3	3	3	3	3	--	-
CO10	1	3	2	3	3	3	3	--	-
PCO1	3	3	-	2	2	2	3	3	3
PCO2	2	3	-	3	-	-	-	3	3
PCO3	3	2	-	3	-	-	-	3	3

M Sc IVth sem

CO1: Designing the synthesis based on retrosynthetic analysis.

CO2: Disconnection Approach: An introduction to synthons and synthetic equivalents

CO3: One Group C-C Disconnections.

CO4: Two Group C-C Disconnections.

CO5: BIOORGANIC POLYMERS.

CO6: ALKALOIDS AND TERPENOIDS.

CO7: STEROIDS, ANTIBIOTICS AND PROSTAGLANDINS.

CO8:Understaing Optical properties in solids.

PCO1: Isolation of nicotine from tobacco.

PCO2: Isolation of caffeine from tea.

PCO3: Isolation of piperine from pepper.

COURSE : M.Sc IV Semester (Theory&Practical)

Course Code : **Subject: Organic Chemistry**

Course Outcomes	PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	3	3	3	3	3	-	-
CO2	-	2	3	3	3	3	3	-	-
CO3	2	3	2	3	3	3	3	-	-
CO4	1	2	2	3	3	3	3	-	-
CO5	1	2	2	1	3	3	3	-	-
CO6	2	1	2	2	3	3	3	-	-
CO7	-	2	3	3	3	3	3	-	-
CO8	-	1	2	3	3	3	3	--	-
PCO1	3	3	-	2	2	-	-	2	3
PCO2	3	3	-	3	-	-	-	3	3
PCO3	3	3	-	3	-	-	-	3	3

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EVALUATION MAPPING

THEORY:

Marks Distribution : 1. Internal Assessment = 20 marks

2. University Examination = 80 marks

Sl No	Parameter	Percentage (%)
1	Knowledge	20
2	Understanding	25
3	Numericals	10
4	Descriptive	45

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Practical Examination

Marks Distribution : 1. Internal Assessment = 10 marks
2. University Examination = 40 marks

Class : M.Sc I Semester **Organic Practical-I**

Sl No	Parameter	Percentage
1	Accuracy	25
2	Technique / Systematic Percentage	05
3	Record Book	05
4	Viva - Voce	05

Class : M.Sc II Semester **Organic Practical-II**

Sl No	Parameter	Percentage
1	Preliminary	05
2	Analysis of binary mixture	15
3	Derivative preparation	10
4	Record Book	05
4	Viva-Voce	05

Class : M.Sc III Semester **Organic Practical-III**

Sl No	Parameter	Percentage
1	Accuracy	25
2	Technique / Systematic Percentage	05
3	Record Book	05
4	Viva - Voce	05

Class : M.Sc IV Semester **Organic Practical-IV**

Sl No	Parameter	Percentage
1	Accuracy	25
2	Technique / Systematic Percentage	05
3	Record Book	05
4	Viva - Voce	05

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