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: Inorganic 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: Inorganic Chemistry

CO1: Review of different types of chemical bonds with suitable examples.

CO2: Apply, apprase & adapt various laws of chemical bonds

CO3: Classification & Synthesis of Non transition elements .

CO4: Analyzing structure of Non transition elements

CO5:Complie & illustrate Coordination compounds

CO6:Outline of metal ligand bonds such as VBT, EAN, CFT & MOT

CO7: Determination of properties of dinuclear complexes.

CO8: Ability to understand chemistry of pi acid metal complexes

CO9: interpretation of structure & bonding in metal carbonyl, metal nitrosyl & dioxygen complexes

CO10: understanding chemistry of Acid Base.

PCO1: Analyzing & evaluating ore by volumetric titration.

PCO2: Determination of ore by calorimetric method.

PCO3: Estimation of calcium and magnesium carbonates in dolomite using EDTA titration,
and gravimetric analysis of insoluble residue

PCO4: Quantitative analysis of Alloy

PCO5: Determination of COD and BOD of polluted water

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

Course Code : **Subject: Inorganic Chemistry**

Course Outcomes	**PO1**	**PO2**	**PO3**	**PO4**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	3	3	2	3	1	3	3	-	-
CO2	1	1	3	1	3	3	3	1	-
CO3	-	2	1	3	3	3	3	1	-
CO4	-	3	1	-	3	3	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	2	-	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:Understaning Molecular symmetry & Group theory

CO2: Representation of groups

CO3: Applications of group theory

CO4: Reactions and kinetics of substitution in square planar complexes

CO5: discussion of reactions and kinetics of substitution in octahedral complexes

CO6:Examine solid state & structural chemistry

CO7:Explaination of Defects in solids

CO8:Constructing Structural transformation of solids

CO9: Adopt Knowledge of Nuclear chemistry

CO10: Adopt Knowledge of Nuclear radiation.

CO11: Health and Safety Aspects of Nuclear chemistry

PCO1: Qualitative analysis of Inorganic radicals

PCO2: Preparation of complexes

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

Course Code : Subject: Inorganic Chemistry

Course Outcomes	PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	2	-	3	3	3	-	-
CO2	1	3	2	2	3	3	3	-	-
CO3	3	2	3	3	3	3	3	-	-
CO4	-	3	-	-	3	3	3	-	-
CO5	1	3	1	-	3	3	3	-	-
CO6	2	3	2	2	3	3	3	-	-
CO7	-	3	1	3	3	3	3	-	-
CO8	1	3	2	3	3	3	3	--	-
CO9	2	3	2	2	3	3	3	--	-
CO10	1	3	1	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: Summarizing concept of electronic spectra of metal complexes

CO2:Interpreting concept of Magnetic properties of metal complexes

CO3: Understanding & Organizing organometallic chemistry

CO4:Building reacting of Homogeneous and heterogeneous catalysis

CO5: outline chemistry of Bioinorganic chemistry.

CO6: Discovering chemistry of Electron transfer proteins

CO7: understanding the role of Cytochromes in Biological nitrogen fixation

CO8:Importance of Essential and trace elements

CO9: biological functions of biometals

CO10: Understanding Chlorophyll and its role in photosynthesis

PCO1: Preparation of coordination compounds

PCO2: Characterization of Metal ion determination in metal complexes

PCO3: Anion Estimation in metal complexes

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

Course Code : **Subject: Inorganic Chemistry**

Course Outcomes	PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	2	-	3	3	3	-	-
CO2	1	2	3	3	3	3	3	-	-
CO3	1	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	2	2	-	2	2	2	3	3	3
PCO2	2	2	-	3	-	-	-	3	3
PCO3	2	2	-	3	-	-	-	3	3

M Sc IVth sem

CO1:Extend of chemistry of Non aquous solvents & their reactions

CO2: understanding Chemistry of f-block metals

CO3: Definition and classification of fuels,

CO4: characteristics of fuels

CO5: Nature and properties of super conductivity material

CO6: Demonstrating Ionic conductivity with NaCl & AgCl

CO7: Establishing mechanism of ferro and antiferro magnetic ordering

CO8:Understaing Optical properties in solids.

PCO1:Experimental setup for Use of Cation and Anion resins column set up.

PCO2:Determination of SO_3 of Cement Gravimetrically

PCO3: separation and estimation using spectrophotometric/volumetric/gravimetric method

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

Course Code : **Subject: Inorganic Chemistry**

Course Outcomes	PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	3	3	3	3	3	-	-
CO2	-	1	3	3	3	3	3	-	-
CO3	2	3	1	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	1	2	3	3	3	3	3	-	-
CO8	-	1	2	3	3	3	3	--	-
PCO1	2	2	-	2	2	-	-	3	3
PCO2	2	2	-	3	-	-	-	3	3
PCO3	2	2	-	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 **Inorganic 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 **Inorganic Practical-II**

Sl No	Parameter	Percentage
1	Preliminary	05
2	Positive radical	15
3	Negative radicals	10
4	Record Book	05
4	Viva-Voce	05

Class : M.Sc III Semester **Inorganic 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 **Inorganic 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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