

B.L.D.E. Association's
S.B. Arts and K.C.P. Science College
Vijayapur
DEPARTMENT OF CHEMISTRY

One Day Work Shop Report - 2019-20

Topic:

Curriculum Design and Development

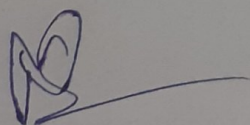
Date: 28/07/2019

VENUE

IQAC Room

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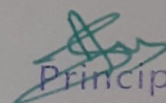
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Head
Dept. of Chemistry
SB Arts & KCP Sc. College,
Vijayapur.



IQAC, Co-ordinator
S.B.Arts & K.C.P.Science College,
Vijayapur.



Principal,
S.B. Arts and KCP Science College
VIJAYAPUR

About Workshop:

In order to improve the quality of higher education UGC has decided to introduce CBCS in higher education system and it has also proposed a model syllabus which will be same all over the country and has given the option to universities to add or change or modify in this referred syllabi around 20%. The Rani Channamma University has decided to introduce this CBCS in all the colleges coming under its affiliation. Prior to this, a draft syllabi is proposed BoS meeting of the university. To discuss about this draft syllabus a one day workshop is organized by IQAC in our college on 28th July 2019 at Seminar Hall. This workshop was meant for the following subject faculty : Physics, Chemistry, Botany, Zoology and Statistics.

Inauguration of the workshop is done by Prof. ~~M.B.~~ Mulimani, Principal, TGP Science College, Jamakhandi by watering the plant.



Inauguration of the workshop is done by Prof. M.B. Mulimani. Sir.

Dr. Z. S. Qureshi , Principal , Anjuman Degree College, Vijayapur was the Chief Guest of the function. Dr. K.G.Pujari, Principal ,S.B.Arts and K.C.P Science College, Vijayapur, was the President of the function. Various degree college faculties were participated in this workshop.



Chief Guest speech by Dr. Mett Sir.

Chemistry subject workshop took place in IQAC chamber at 11' o Clock , after the common inaugural function of the workshop. The participants were highly enthusiastic and gave their valuable suggestions about new system and also suggested some changes in Chemistry draft syllabus.



Lingad Gudi Rd, Bangaramma Sajjan Campus, Vijayapura, Karnataka 586103, India

Vijayapura
Karnataka
India

2019-07-28(Sun) 11:59



23°C

73°F

Discussing about syllabus change.

Head
Dept. of Chemistry
SB Arts & KCP Sc. College
Vijayapur.

IQAC, Co-ordinator
S.B.Arts & K.C.P.Science College,
Vijayapur.

Principal,
S.B. Arts and KCP Science College
VIJAYAPUR

B.L.D.E. Associations

SB ARTS AND KCP SCIENCE COLLEGE, VIJAYAPUR-586103

One day workshop on Curriculum and Designing in Chemistry on 28th July 2019
Participants' Attendance

Sl.No	Participants name	Institution	Mobile No	E mail ID	Signature
1	Ms. Malati Channagnd	"	7203702327	channaganmaladati@gmail.com	<i>[Signature]</i>
3	Prof. Samba Biradar	S.B. Arts & KCP Sci College	9626656181	sambabiradar9595@gmail.com	<i>[Signature]</i>
4	Prof. Neela G. Inchal	S.B. Arts & KCP Sci College	7026145525	neelainchal95@gmail.com	<i>[Signature]</i>
5	Prof. Muttar K. Halli	S.B. Arts & KCP Sci College	9980195442	muttar.k.halli@kcp.ac.in	<i>[Signature]</i>
6	Dr. S. Simekh	Anjuman Degree College Bijapur	944879232	sahamulohiq@rediffmail.com	<i>[Signature]</i>
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8	Prof. M.S. Soucha	Anjuman Degree College Bijapur	9493459406	souchem01@gmail.com	<i>[Signature]</i>
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12	Prof. Shabina Biradar	S.B. Arts & KCP Sci College	8374018534	shabina.shaukh@gmail.com	<i>[Signature]</i>
13	Prof. Vanitha Ryavanna	S.B. Arts & KCP Science College	7204871783	vanuchem92@gmail.com	<i>[Signature]</i>
14	Prof. C.S. Kaza Gresi	M.G.V.C. Arts, Commerce & Science College, Munddebihal	9113536123	umehbskngvc@gmail.com	<i>[Signature]</i>

Continued

Participants List:

S.No	Participants name	Institution	Mobile No	E mail ID	Signature
1	Prof. B. B. Manoj...	B.S. Arts & Science	9900000000	...	...
2	Prof. B. B. Manoj	B.S. Arts & Science	9900000000	...	...
3	Prof. B. B. Manoj	B.S. Arts & Science	9900000000	...	...
4	Prof. B. B. Manoj	B.S. Arts & Science	9900000000	...	...
5	Prof. B. B. Manoj	B.S. Arts & Science	9900000000	...	...
6	Prof. B. B. Manoj	B.S. Arts & Science	9900000000	...	...
7	Prof. B. B. Manoj	B.S. Arts & Science	9900000000	...	...
8	Prof. B. B. Manoj	B.S. Arts & Science	9900000000	...	...
9	Prof. B. B. Manoj	B.S. Arts & Science	9900000000	...	...

B.Sc Chemistry Draft Syllabus:

B Sc Semester I

CHEMISTRY-DSC 2A: ATOMIC STRUCTURE, BONDING, GENERAL ORGANIC CHEMISTRY & ALIPHATIC HYDROCARBONS

(Credits: Theory-04, Practicals-02)
Theory: 50 Lectures

Section A: Inorganic Chemistry-1 (25 Periods)

Atomic Structure: Review of: Bohr's theory and its limitations, dual behaviour of matter and radiation, de Broglie's relation, Heisenberg Uncertainty principle. Hydrogen atom spectra. Need of a new approach to Atomic structure.

What is Quantum mechanics? **Time independent Schrodinger equation and meaning of various terms in it.** Significance of ψ and ψ^2 , Schrödinger equation for hydrogen atom. Significance of quantum numbers, orbital angular momentum and quantum numbers ml and ms . Shapes of s , p and d atomic orbitals, nodal planes. Discovery of spin, spin quantum number (s) and magnetic spin quantum number (ms).

Rules for filling electrons in various orbitals, Electronic configurations of the atoms. Stability of half-filled and completely filled orbitals, concept of exchange energy. Relative energies of atomic orbitals, Anomalous electronic configurations.

(12 Periods)

Chemical Bonding and Molecular Structure

Ionic Bonding: Ionic bonding, lattice energy Statement of Born-Landé equation for calculation of lattice energy, Born-Haber cycle and its applications, polarizing power and polarizability. Fajan's rules, ionic character in covalent compounds, bond moment, dipole moment and percentage ionic character.

Covalent bonding: VB Approach: Shapes of some inorganic molecules and ions on the basis of VSEPR and hybridization with suitable examples of linear, trigonal planar, square planar, tetrahedral, trigonal bipyramidal and octahedral arrangements.

MO Approach: Rules for the LCAO method, bonding and antibonding MOs and their characteristics for $s-s$, $s-p$ and $p-p$ combinations of atomic orbitals, nonbonding combination 10 of orbitals, MO treatment of homonuclear diatomic molecules of 1st and 2nd periods (including

idea of *s-p* mixing) and heteronuclear diatomic molecules such as CO, NO and NO⁺. Comparison of VB and MO approaches. (13 Lectures)

Section B: Organic Chemistry-1 (25 Periods)

Fundamentals of Organic Chemistry

Physical Effects, Electronic Displacements: Inductive Effect, Electromeric Effect, Resonance and Hyperconjugation. Cleavage of Bonds: Homolysis and Heterolysis. Structure, shape and reactivity of organic molecules: Nucleophiles and electrophiles. Reactive Intermediates: Carbocations, Carbanions and free radicals. Strength of organic acids and bases: Comparative study with emphasis on factors affecting pK values. Aromaticity: Benzenoids and Hückel's rule.

(8 Lectures)

Stereochemistry

Conformations with respect to ethane, butane and cyclohexane. Interconversion of Wedge Formula, Newmann, Sawhorse and Fischer representations. Concept of chirality (upto two carbon atoms). Configuration: Geometrical and Optical isomerism; Enantiomerism, Diastereomerism and Meso compounds). Threo and erythro; D and L; *cis-trans* nomenclature; CIP Rules: R/ S (for upto 2 chiral carbon atoms) and E/Z Nomenclature (for upto two C=C systems).

(10 Lectures)

Aliphatic Hydrocarbons

Functional group approach for the following reactions (preparations & reactions) to be studied in context to their structure.

Alkenes: *Preparation:* Elimination reactions: Dehydration of alkenes and dehydrohalogenation of alkyl halides (Saytzeff's rule); *cis* alkenes (Partial catalytic hydrogenation) and *trans* alkenes (Birch reduction). *Reactions:* *cis*-addition (alk. KMnO₄) and *trans*-addition (bromine), Hydration, Ozonolysis, oxymercuration-demercuration, Hydroboration-oxidation.

Alkynes: *Preparation:* Acetylene from CaC₂ and conversion into higher alkynes; by dehalogenation of tetra halides and dehydrohalogenation of vicinal-dihalides.

Reactions: formation of metal acetylides, addition of bromine and alkaline KMnO₄, ozonolysis and oxidation with hot alk. KMnO₄. (7

Lectures)

Reference Books:

- Lee, J.D. *Concise Inorganic Chemistry* ELBS, 1991.
- Cotton, F.A., Wilkinson, G. & Gaus, P.L. *Basic Inorganic Chemistry*, 3rd ed., Wiley.

- Douglas, B.E., McDaniel, D.H. & Alexander, J.J. *Concepts and Models in Inorganic Chemistry*, John Wiley & Sons.
- Huheey, J.E., Keiter, E.A., Keiter, R.L. & Medhi, O.K. *Inorganic Chemistry: Principles of Structure and Reactivity*, Pearson Education India, 2006.
- Graham Solomon, T.W., Fryhle, C.B. & Snyder, S.A. *Organic Chemistry*, John Wiley & Sons (2014).
- McMurry, J.E. *Fundamentals of Organic Chemistry*, 7th Ed. Cengage Learning India Edition, 2013.
- Sykes, P. *A Guidebook to Mechanism in Organic Chemistry*, Orient Longman, New Delhi (1988).
- Eliel, E.L. *Stereochemistry of Carbon Compounds*, Tata McGraw Hill education, 2000.
- Finar, I.L. *Organic Chemistry* (Vol. I & II), E.L.B.S.
- Morrison, R.T. & Boyd, R.N. *Organic Chemistry*, Pearson, 2010.
- Bahl, A. & Bahl, B.S. *Advanced Organic Chemistry*, S. Chand, 2010.

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CHEMISTRY LAB: DSC 2A LAB:

ATOMIC STRUCTURE, BONDING, GENERAL ORGANIC CHEMISTRY & ALIPHATIC
 HYDROCARBONS 50

Lectures

Section A: Inorganic Chemistry - Volumetric Analysis

1. Estimation of sodium carbonate and sodium hydrogen carbonate present in a mixture.
2. Estimation of oxalic acid by titrating it with KMnO_4 .
3. Estimation of water of crystallization in Mohr's salt by titrating with KMnO_4 .
4. Estimation of Fe (II) ions by titrating it with $\text{K}_2\text{Cr}_2\text{O}_7$ using internal indicator.
5. Estimation of Cu (II) ions iodometrically using $\text{Na}_2\text{S}_2\text{O}_3$.

Section B: Organic Chemistry

1. Estimation of Phenol, Aniline and amide

Reference Books:

- Svehla, G. *Vogel's Qualitative Inorganic Analysis*, Pearson Education, 2012.
- Mendham, J. *Vogel's Quantitative Chemical Analysis*, Pearson, 2009.
- Vogel, A.I., Tatchell, A.R., Furnis, B.S., Hannaford, A.J. & Smith, P.W.G., *Textbook of Practical Organic Chemistry*, Prentice-Hall, 5th edition, 1996.
- Mann, F.G. & Saunders, B.C. *Practical Organic Chemistry* Orient-Longman, 1960.

B Sc Semester II

CHEMISTRY-DSC 2B: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY

(Credits: Theory-04, Practicals-02)

Theory: 50

Lectures

Section A: Physical Chemistry-1 (25 Lectures)

Chemical Energetics

Review of thermodynamics **and the Laws of Thermodynamics**. Important principles and definitions of thermochemistry. Concept of standard state and standard enthalpies of formations, integral and differential enthalpies of solution and dilution. Calculation of bond energy, bond dissociation energy and resonance energy from thermochemical data. Variation of enthalpy of a reaction with temperature – Kirchoff's equation. Statement of Third Law of thermodynamics and calculation of absolute entropies of substances.

(8 Lectures)

Chemical Equilibrium:

Free energy change in a chemical reaction. Thermodynamic derivation of the law of chemical equilibrium (Van't Hoff. Reaction isotherm). Distinction between ΔG and ΔG° , Le Chatelier's principle. Relationships between K_p , K_c and K_x for reactions involving ideal gases. **Variation of equilibrium constant with temperature.**

(7 Lectures)

Ionic Equilibria:

Strong, moderate and weak electrolytes, degree of ionization, factors affecting degree of ionization, ionization constant and ionic product of water. Ionization of weak acids and bases, pH scale, common ion effect. Salt hydrolysis-calculation of hydrolysis constant, degree of hydrolysis and pH for different salts. Buffer solutions. Solubility and solubility product of sparingly soluble salts – applications of solubility product principle.

(10 Lectures)

Section B: Organic Chemistry-2 (25 Lectures)

Functional group approach for the following reactions (preparations & reactions) to be studied in context to their structure.

Aromatic hydrocarbons

Preparation of benzene: from phenol, by decarboxylation, from acetylene, from benzene sulphonic acid.

Reactions of benzene : Electrophilic substitution: nitration, halogenation and sulphonation. Friedel-Craft's reaction (alkylation and acylation). Side chain oxidation of alkyl benzenes.

(6 Lectures)

Alkyl and Aryl Halides

Alkyl Halides: Types of Nucleophilic Substitution (S_N^1 , S_N^2 and S_N^1) reactions. Elimination reactions E1 and E2

Preparation: from alkenes and alcohols.

Reactions: hydrolysis, nitrite & nitro formation, nitrile & isonitrile formation. Williamson's ether synthesis

Aryl Halides *Preparation:* (Chloro, bromo and iodo-benzene case): from phenol, Sandmeyer & Gattermann reactions.

Reactions (Chlorobenzene): Aromatic nucleophilic substitution (replacement by -OH group) and effect of nitro substituent. Benzyne Mechanism: KNH_2/NH_3 (or $NaNH_2/NH_3$).

Reactivity and Relative strength of C-Halogen bond in alkyl, vinyl and aryl halides. (6

Lectures)

Alcohols, Phenols and Ethers

Alcohols: *Preparation:* Preparation of 1°, 2° and 3° alcohols: using Grignard reagent, Ester hydrolysis, Reduction of aldehydes, ketones, carboxylic acid and esters.

Reactions: With sodium, HX (Lucas test), esterification, oxidation (with PCC, alk. $KMnO_4$, acidic dichromate, conc. HNO_3). Oppeneauer oxidation *Diols:* oxidation of diols. Pinacol-Pinacolone rearrangement.

Phenols: (Phenol case) *Preparation:* Cumene hydroperoxide method, from diazonium salts.

Reactions: Electrophilic substitution: Nitration, halogenation and sulphonation. Reimer-Tiemann Reaction.

Ethers (aliphatic and aromatic): Cleavage of ethers with HI.

Aldehydes and ketones (aliphatic and aromatic): (Formaldehyde, acetaldehyde, acetone and benzaldehyde)

Preparation: from acid chlorides and from nitriles.

Reactions – Reaction with HCN, ROH, NaHSO₃, NH₂-G derivatives, Iodoform test. Aldol Condensation, Cannizzaro's reaction, Wittig reaction, Benzoin condensation. Clemensen reduction. (13 Lectures)

Reference Books:

- Graham Solomon, T.W., Fryhle, C.B. & Snyder, S.A. *Organic Chemistry*, John Wiley & Sons (2014).
- McMurry, J.E. *Fundamentals of Organic Chemistry*, 7th Ed. Cengage Learning India Edition, 2013.
- Sykes, P. *A Guidebook to Mechanism in Organic Chemistry*, Orient Longman, New Delhi (1988).
- Finar, I.L. *Organic Chemistry* (Vol. I & II), E.L.B.S.
- Morrison, R.T. & Boyd, R.N. *Organic Chemistry*, Pearson, 2010.
- Bahl, A. & Bahl, B.S. *Advanced Organic Chemistry*, S. Chand, 2010.
- Barrow, G.M. *Physical Chemistry* Tata McGraw-Hill (2007).
- Castellan, G.W. *Physical Chemistry* 4th Ed. Narosa (2004).
- Kotz, J.C., Treichel, P.M. & Townsend, J.R. *General Chemistry* Cengage Learning India Pvt. Ltd., New Delhi (2009).
- Mahan, B.H. *University Chemistry* 3rd Ed. Narosa (1998).
- Petrucci, R.H. *General Chemistry* 5th Ed. Macmillan Publishing Co.: New York (1985).

CHEMISTRY LAB- DSC 2B LAB:

CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY

60 Lectures

Section A: Physical Chemistry

Thermo chemistry

1. Determination of heat capacity of calorimeter for different volumes.
2. Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide.
3. Determination of enthalpy of ionization of acetic acid.
4. Determination of integral enthalpy of solution of salts (KNO₃, NH₄Cl).

Ionic equilibria

pH measurements (Demo)

a) Measurement of pH of different solutions like aerated drinks, fruit juices, shampoos and soaps (use dilute solutions of soaps and shampoos to prevent damage to the glass electrode) using pH-meter.

b) Preparation of buffer solutions: (i) Sodium acetate-acetic acid

(ii) Ammonium chloride-ammonium hydroxide

Measurement of the pH of buffer solutions and comparison of the values with theoretical values.

Section B: Organic Chemistry

1. Purification of organic compounds by crystallization (from water and alcohol) and distillation.
2. Criteria of Purity: Determination of melting and boiling points.
3. Bromination of Phenol/Aniline, Mechanism to be discussed. Recrystallisation, determination of melting point and calculation of quantitative yields to be done.

Preparations:

1. Preparation of p-bromoacetanilide from acetanilide
2. Preparation of m-dinitrobenzene from nitrobenzene

Reference Books

- Vogel, A.I., Tatchell, A.R., Furnis, B.S., Hannaford, A.J. & Smith, P.W.G., *Textbook of Practical Organic Chemistry*, Prentice-Hall, 5th edition, 1996.
- Mann, F.G. & Saunders, B.C. *Practical Organic Chemistry* Orient-Longman, 1960.
- Khosla, B. D.; Garg, V. C. & Gulati, A. *Senior Practical Physical Chemistry*, R. Chand & Co.: New Delhi (2011).

B Sc Semester III

CHEMISTRY-DSC 2C: SOLUTIONS, PHASE EQUILIBRIUM, CONDUCTANCE, ELECTROCHEMISTRY & FUNCTIONAL GROUP ORGANIC CHEMISTRY-II

(Credits: Theory-04,
Practicals-02)

Theory: 50 Lectures

Section A: Physical Chemistry-2 (25 Lectures)

Solutions

Thermodynamics of ideal solutions: Ideal solutions and Raoult's law, deviations from Raoult's law – non-ideal solutions. Vapour pressure-composition and temperature-composition curves of ideal and non-ideal solutions. Distillation of solutions.

Partial miscibility of liquids: Critical solution temperature; effect of impurity on partial miscibility of liquids. Immiscibility of liquids- Principle of steam distillation. Nernst distribution law and its applications, solvent extraction.

(6 Lectures)

Phase Equilibrium

Phases, components and degrees of freedom of a system, criteria of phase equilibrium. Gibbs Phase Rule and its thermodynamic derivation. Phase diagrams of one-component systems (water and sulphur) and two component systems involving eutectics, congruent and incongruent melting points (KI/H₂O, Bi-Cd).

(6 Lectures)

Conductance

Conductivity, equivalent and molar conductivity and their variation with dilution for weak and strong electrolytes. Kohlrausch law of independent migration of ions. Transference number and its experimental determination using Hittorf and Moving boundary methods. Ionic mobility. Applications of conductance measurements: determination of degree of ionization of weak electrolyte, solubility and solubility products of sparingly soluble salts, ionic product of water, hydrolysis constant of a salt. Conductometric titrations (only acidbase).

(6 Lectures)

Electrochemistry

Reversible and irreversible cells. Concept of EMF of a cell. Measurement of EMF of a cell. Nernst equation and its importance. Types of electrodes. Standard electrode potential.

Electrochemical series. Thermodynamics of a reversible cell, calculation of thermodynamic properties: ΔG , ΔH and ΔS from EMF data.

Calculation of equilibrium constant from EMF data. Concentration cells with transference and without transference. Liquid junction potential and salt bridge. **Applications of EMF.** pH determination using glass electrode and quinhydrone electrode. Potentiometric titrations - qualitative treatment (acid-base and oxidation-reduction only).

(7 Lectures)

Section B: Organic Chemistry-3 (25 Lectures)

Functional group approach for the following reactions (preparations & reactions) to be studied in context to their structure.

Carboxylic acids and their derivatives

Carboxylic acids (aliphatic and aromatic)

Preparation: Acidic and Alkaline hydrolysis of esters.

Reactions: Hell – Vohlard - Zelinsky Reaction.

Carboxylic acid derivatives (aliphatic):

Preparation: Acid chlorides, Anhydrides, Esters and Amides from acids.

Reactions: Reformatsky Reaction, Perkin condensation. (5

Lectures)

Amines and Diazonium Salts

Amines (Aliphatic and Aromatic):

Preparation: from alkyl halides, Gabriel's Phthalimide synthesis, Hofmann Bromamide reaction.

Reactions: Hofmann vs. Saytzeff elimination, Carbylamine test, Hinsberg test, with HNO_2 , Schotten – Baumann Reaction. Electrophilic substitution (case aniline): nitration, bromination, sulphonation.

Diazonium salts: *Preparation:* from aromatic amines.

Reactions: conversion to benzene, phenol, dyes. (5

Lectures)

Amino Acids, Peptides and Proteins:

Preparation of Amino Acids: Strecker synthesis using Gabriel's phthalimide synthesis, Zwitterion, Isoelectric point and Electrophoresis.

Reactions of Amino acids: ester of $-\text{COOH}$ group, acetylation of $-\text{NH}_2$ group, complexation with Cu^{2+} ions, ninhydrin test.

Overview of Primary, Secondary, Tertiary and Quaternary Structure of proteins.

Determination of Primary structure of Peptides by degradation (thiohydantoin and with carboxypeptidase enzyme). Synthesis of simple peptides by Bergman method

(7 Lectures)

Carbohydrates: Classification, and General Properties, Glucose and Fructose (open chain and cyclic structure), Determination of configuration of monosaccharides, absolute configuration of Glucose and Fructose, Mutarotation, ascending and descending in monosaccharides. Structure of disacharrides (sucrose, cellobiose, maltose, lactose) and polysacharrides (starch and cellulose) excluding their structure elucidation.

(8 Lectures)

Reference Books:

- Barrow, G.M. *Physical Chemistry* Tata McGraw-Hill (2007).
- Castellan, G.W. *Physical Chemistry* 4th Ed. Narosa (2004).
- Kotz, J.C., Treichel, P.M. & Townsend, J.R. *General Chemistry*, Cengage Learning India Pvt. Ltd.: New Delhi (2009).
- Mahan, B.H. *University Chemistry*, 3rd Ed. Narosa (1998).
- Petrucci, R.H. *General Chemistry*, 5th Ed., Macmillan Publishing Co.: New York (1985).
- Morrison, R. T. & Boyd, R. N. *Organic Chemistry*, Dorling Kindersley (India) Pvt. Ltd. (Pearson Education).
- Finar, I. L. *Organic Chemistry (Volume 1)*, Dorling Kindersley (India) Pvt. Ltd. (Pearson Education).
- Finar, I. L. *Organic Chemistry (Volume 2)*, Dorling Kindersley (India) Pvt. Ltd. (Pearson Education).
- Nelson, D. L. & Cox, M. M. *Lehninger's Principles of Biochemistry* 7th Ed., W. H. Freeman.
- Berg, J.M., Tymoczko, J.L. & Stryer, L. *Biochemistry*, W.H. Freeman, 2002.

**CHEMISTRY LAB-DSC 2C LAB:
SOLUTIONS, PHASE EQUILIBRIUM, CONDUCTANCE, ELECTROCHEMISTRY &
FUNCTIONAL ORGANIC
CHEMISTRY-II**

60

Lectures

Section A: Physical Chemistry

Conductance

- I. Determination of cell constant
- II. Determination of equivalent conductance, degree of dissociation and dissociation constant of a weak acid.
- III. Perform the following conductometric titrations:
 - i. Strong acid vs. strong base
 - ii. Weak acid vs. strong base

Potentiometry

Perform the following potentiometric titrations:

- i. Strong acid vs. strong base
- ii. Weak acid vs. strong base
- iii. Potassium dichromate vs. Mohr's salt

Determination of viscosity

First order and second order kinetics

Determination Surface tension

Section B: Organic Chemistry

I Systematic Qualitative Organic Analysis of Organic Compounds possessing monofunctional groups (-COOH, phenolic, aldehydic, ketonic, amide, nitro, amines) and preparation of one derivative.

Reference Books:

- Vogel, A.I., Tatchell, A.R., Furnis, B.S., Hannaford, A.J. & Smith, P.W.G., *Textbook of Practical Organic Chemistry*, Prentice-Hall, 5th edition, 1996.
- Mann, F.G. & Saunders, B.C. *Practical Organic Chemistry* Orient-Longman, 1960.
- Khosla, B. D.; Garg, V. C. & Gulati, A. *Senior Practical Physical Chemistry*, R. Chand & Co.: New Delhi (2011).
- Ahluwalia, V.K. & Aggarwal, R. *Comprehensive Practical Organic Chemistry*, Universities Press.

B Sc Semester IV

CHEMISTRY-DSC 2D: COORDINATION CHEMISTRY, STATES OF MATTER & CHEMICAL KINETICS

(Credits: Theory-04, Practicals-02)

Theory: 50 Lectures

Section A: Inorganic Chemistry-2 (20 Lectures)

Transition Elements (3d series)

General group trends with special reference to electronic configuration, variable valency, colour, magnetic and catalytic properties, ability to form complexes and stability of various oxidation states (Latimer diagrams) for Mn, Fe and Cu.

Lanthanoids and actinoids: Electronic configurations, oxidation states, colour, magnetic properties, lanthanide contraction, separation of lanthanides (ion exchange method only).

(8 Lectures)

Coordination Chemistry

Valence Bond Theory (VBT): Inner and outer orbital complexes of Cr, Fe, Co, Ni and Cu (coordination numbers 4 and 6). Structural and stereoisomerism in complexes with coordination numbers 4 and 6.

Drawbacks of VBT. IUPAC system of nomenclature.

(7

Lectures)

Crystal Field Theory

Crystal field effect, octahedral symmetry. Crystal field stabilization energy (CFSE). Crystal field effects for weak and strong fields. Tetrahedral symmetry. Factors affecting the magnitude of D. Spectrochemical series. Comparison of CFSE for *Oh* and *Td* complexes. Tetragonal distortion of octahedral geometry. Jahn-Teller distortion, Square planar coordination.

(10 Lectures)

Section B: Physical Chemistry-3 (20 Lectures)

Kinetic Theory of Gases

Derivation of the kinetic gas equation. Deviation of real gases from ideal behaviour, compressibility factor, causes of deviation. van der Waals equation of state for real gases. Boyle temperature (derivation not required).

Critical phenomena, critical constants and their calculation from van der Waals equation. Andrews isotherms of CO₂. Maxwell Boltzmann distribution laws of molecular velocities and molecular energies (graphic representation – derivation not required) and their importance. Temperature dependence of these distributions. Most probable, average and root mean square velocities (no derivation). Collision cross section, collision number, collision frequency, collision diameter and mean free path of molecules. **Viscosity of gases** and effect of temperature and pressure on coefficient of viscosity (qualitative treatment only).

(7 Lectures)

Liquids

Surface tension and its determination using stalagmometer. Viscosity of a liquid and determination of coefficient of viscosity using Ostwald viscometer. Effect of temperature on

CHEMISTRY LAB-DSC 2D LAB: COORDINATION CHEMISTRY, STATES OF MATTER &

CHEMICAL KINETICS

50 Lectures

Section A: Inorganic Chemistry

Semi-micro qualitative analysis using H_2S of mixtures - not more than four ionic species (two anions and two cations and excluding insoluble salts) out of the following:

Cations : NH_4^+ , Pb^{2+} , Cu^{2+} , Fe^{3+} , Al^{3+} , Ni^{2+} , Mn^{2+} , Zn^{2+} , Ba^{2+} , Ca^{2+} , K^+

Anions : CO_3^{2-} , S^{2-} , NO_3^- , Cl^- , Br^- , I^- , SO_4^{2-} ,

(Spot tests should be carried out wherever feasible)

1. Estimate the amount of nickel present in a given solution as bis(dimethylglyoximate) nickel(II) or aluminium as oximate in a given solution gravimetrically.
2. Draw calibration curve (absorbance at λ_{max} vs. concentration) for various concentrations of a given coloured compound ($KMnO_4$ / $CuSO_4$) and estimate the concentration of the same in a given solution.
3. Determine the composition of the Fe^{3+} -salicylic acid complex solution by Job's method.
4. Estimation of (i) Mg^{2+} or (ii) Zn^{2+} by complexometric titrations using EDTA.
5. Estimation of total hardness of a given sample of water by complexometric titration.
6. Determination of concentration of Na^+ and K^+ using Flame Photometry.

Section B: Physical Chemistry

(I) Surface tension measurement (use of organic solvents excluded).

a) Determination of the surface tension of a liquid or a dilute solution using a stalagmometer.

b) Study of the variation of surface tension of a detergent solution with concentration.

(II) Viscosity measurement (use of organic solvents excluded).

a) Determination of the relative and absolute viscosity of a liquid or dilute solution using an Ostwald's viscometer.

b) Study of the variation of viscosity of an aqueous solution with concentration of solute.

(III) Chemical Kinetics

Study the kinetics of the following reactions.

1. Initial rate method: Iodide-persulphate reaction

2. Integrated rate method:

- a. Acid hydrolysis of methyl acetate with hydrochloric acid.
- b. Saponification of ethyl acetate.
- c. Compare the strengths of HCl and H₂SO₄ by studying kinetics of hydrolysis of methyl acetate

Reference Books:

- Svehla, G. *Vogel's Qualitative Inorganic Analysis*, Pearson Education, 2012.
- Mendham, J. *Vogel's Quantitative Chemical Analysis*, Pearson, 2009.
- Khosla, B. D.; Garg, V. C. & Gulati, A. *Senior Practical Physical Chemistry*. R. Chand & Co.; New Delhi (2011).

surface tension and coefficient of viscosity of a liquid (qualitative treatment only).

(5 Lectures)

Solids

Forms of solids. Symmetry elements, unit cells, crystal systems, Bravais lattice types and identification of lattice planes. Laws of Crystallography - Law of constancy of interfacial angles, Law of rational indices. Miller indices. X-Ray diffraction by crystals, Bragg's law. Structures of NaCl, KCl and CsCl (qualitative treatment only). Defects in crystals. **Glasses and liquid crystals and their applications.** (7 Lectures)

Chemical Kinetics

The concept of reaction rates. Effect of temperature, pressure, catalyst and other factors on reaction rates. Order and molecularity of a reaction. Derivation of integrated rate equations for zero, first and second order reactions (both for equal and unequal concentrations of reactants). Half-life of a reaction. General methods for determination of order of a reaction.

Concept of activation energy and its calculation from Arrhenius equation. Theories of Reaction Rates: Collision theory and Activated Complex theory of bimolecular reactions. Comparison of the two theories (qualitative treatment only).

(8 Lectures)

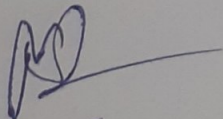
Reference Books:

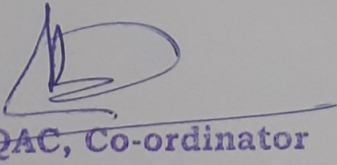
- Barrow, G.M. *Physical Chemistry* Tata McGraw-Hill (2007).
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- Mahan, B.H. *University Chemistry* 3rd Ed. Narosa (1998).
- Petrucci, R.H. *General Chemistry* 5th Ed. Macmillan Publishing Co.: New York (1985).
- Cotton, F.A. & Wilkinson, G. *Basic Inorganic Chemistry*, Wiley.
- Shriver, D.F. & Atkins, P.W. *Inorganic Chemistry*, Oxford University Press.
- Wulfsberg, G. *Inorganic Chemistry*, Viva Books Pvt. Ltd.
- Rodgers, G.E. *Inorganic & Solid State Chemistry*, Cengage Learning India Ltd., 2008.


➤ Outcome of the Workshop / Suggestions proposed for the Draft syllabus:

Semester	Addition/ Suggestion to Draft
First Semester	<p>Theory:</p> <ol style="list-style-type: none"> 1. Energy consideration to ionic compounds should be included. 2. Alkanes basics to be included <p>Practicals:</p> <ol style="list-style-type: none"> 1. Standardisation of solution to be included.
Second semester	<p>Theory:</p> <ol style="list-style-type: none"> 1. Mechanism of reactions to be added in aromatic hydrocarbons. 2. In alkyl halides, S_N^1, S_N^2 reaction mechanism to be added. 3. In alcohols, phenols and ethers unit, mechanism of Aldol condensation, Cannizzaro's reaction, Wittig reaction, Benzoin condensation and Clemmensen reduction to be included.
Third semester	<p>Theory:</p> <ol style="list-style-type: none"> 1. In electrochemistry unit, types of electrode to be added. 2. Preparation of Carboxylic acids from alkyl halides has to be corrected as preparation of carboxylic acids from halides. 3. In amino acids, Peptides and proteins unit, before studying structure of proteins, classification of proteins should be included. 4. In carbohydrates unit, study of anomers, epimers and epimerization w.r.t to monosaccharides should be included.

	<p>Practicals:</p> <ol style="list-style-type: none"> 1. Surface tension 2. Viscosity experiments have to be deleted as students will do same experiments in fourth semester and related theory is prescribed in fourth semester theory part.
<p>Fourth Semester</p>	<p>Theory:</p> <ol style="list-style-type: none"> 1. Teaching hours of Kinetic theory of gases should be increased to 9 hrs from 7 hrs. 2. Teaching hours of Liquids unit should be reduced to 3 hrs from 5 hrs. <p>Practicals:</p> <ol style="list-style-type: none"> 1. Surface tension experiment should be deleted as it includes inhaling of organic liquids which is not good for students health.


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Principal,
 S.B. Arts and KCP Science College
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Teachers feedback on Curriculum Designing

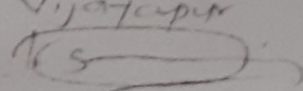
Programme: B.Sc (CBCS) Course

Write your answer using 4 or 3 or 2 or 1 or 0 in the End Box

1	What percentage of the existing curriculum is in tune with the local needs relevant to local needs?	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 40 to 54%	(0) Below 39%
2	Scope of the curriculum in imparting life skills	(4) Excellent	(3) Very Good	(2) Good	(1) Fair	(0) Poor
3	What % of the syllabus needs revision?	(4) 10%	(3) 20%	(2)	(1)	(0)
4	Curriculum is interesting, updated and relevant to the present scenario	(4) Strongly agree	(3) Agree	(2) Disagree	(1) Disagree	(0) Strongly disagree
5	What % of the subject curriculum is enhancing the analytical and thinking capabilities of stakeholders?	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 40 to 54%	(0) Below 39%
6	What % of the curriculum is relevant and appropriate for the present employment scenario?	(4) 100%	(3) 80%	(2)	(1)	(0)
7	What % of the syllabus has scope for students to undergo experiential and participatory learning?	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 40 to 54%	(0) Below 39%
8	Content is oriented towards innovation and creativity	(4) To a great extent	(3) Moderate	(2) Somewhat	(1) Very little	(0) None
9	What % of the syllabus is useful to students to face the competitive examinations at graduation?	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 40 to 54%	(0) Below 39%
10	What % of the curriculum is excellent in the present scenario compared to the curriculum designed by other universities?	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 40 to 54%	(0) Below 39%

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Signature


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B. E. D. E. A. S.
SB ARTS AND KCP SCIENCE COLLEGE, VIJAYAPUR

(Accredited by A. Grade by UGC)

Teachers feedback on Curriculum Designing

Programme: B.Sc (CBCS) Course

Write your answer using 4 or 3 or 2 or 1 or 0 in the End Box

1	<i>What percentage of the existing curriculum is meeting with the current scenario and relevant to local needs?</i>				
	(4) 85 to 100%	(3) ✓ 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
2	<i>Scope of the curriculum in imparting life skills</i>				
	(4) ✓ Excellent	(3) Very Good	(2) Good	(1) Fair	(0) Poor
3	<i>What % of the syllabus needs revision?</i>				
	(4) 10%	(3) ✓ 20%	(2) 40%	(1) 60%	(0) Above 80%
4	<i>Curriculum is interesting, updated and relevant to the present scenario</i>				
	(4) ✓ Strongly agree	(3) Agree	(2) Neutral	(1) Disagree	(0) Strongly disagree
5	<i>What % of the subject curriculum is enhancing the imagination and thinking power of stakeholders?</i>				
	(4) 85 to 100%	(3) 70 to 84%	(2) ✓ 55 to 69%	(1) 30 to 54%	(0) Below 30%
6	<i>What % of the curriculum is relevant and appropriate for gaining self employment?</i>				
	(4) 100%	(3) ✓ 80%	(2) 60%	(1) 40%	(0) Below 30%
7	<i>What % of the syllabus has scope for students to undergo experiential and participatory learning?</i>				
	(4) 85 to 100%	(3) ✓ 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
8	<i>Content is oriented towards innovation and creativity</i>				
	(4) To a great extent	(3) ✓ Moderate	(2) Somewhat	(1) Very little	(0) Not at all
9	<i>What % of the syllabus is useful to students to face the competitive examinations after graduation?</i>				
	(4) 85 to 100%	(3) ✓ 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
10	<i>What % of the curriculum is excellent in the present scenario compared to the curriculum designed by other universities?</i>				
	(4) 85 to 100%	(3) ✓ 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%

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Name and address of the college

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Signature

(Signature)

Continued

B. E. D. U. S.
SB ARTS AND KCP SCIENCE COLLEGE, VIJAYAPUR
 (Accredited at 'A' Grade in 3rd Cycle)

Teachers feedback on Curriculum Designing

Programme: B.Sc (CBCS) Course:

Write your answer using 4 or 3 or 2 or 1 or 0 in the End Box

1	What percentage of the existing curriculum is in tune with increasing global national and local needs?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
2	Scope of the curriculum in imparting life skills				
	(4) Excellent	(3) Very Good	(2) Good	(1) Fair	(0) Poor
3	What % of the syllabus needs revision?				
	(4) 10%	(3) 20%	(2) 30%	(1) 40%	(0) Above 40%
4	Curriculum is interesting, updated and relevant to the present scenario				
	(4) Strongly agree	(3) Agree	(2) Neutral	(1) Disagree	(0) Strongly disagree
5	What % of the subject curriculum is enhancing the imagination and thinking power of stakeholders?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
6	What % of the curriculum is relevant and appropriate for gaining self employment?				
	(4) 100%	(3) 80%	(2) 60%	(1) 40%	(0) Below 40%
7	What % of the syllabus has scope for students to undergo experiential and participatory learning?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
8	Content is oriented towards innovation and creativity				
	(4) To a great extent	(3) Moderate	(2) Somewhat	(1) Very little	(0) Not at all
9	What % of the syllabus is useful to students to face the competitive examinations after graduation?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
10	What % of the curriculum is excellent in the present scenario compared to the curriculum designed by other universities?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%

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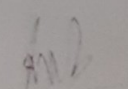
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Teachers feedback on Curriculum Designing

Programme: B.Sc (CBCS) Course:

Write your answer using 4 or 3 or 2 or 1 or 0 in the End Box

1	What percentage of the existing curriculum is a mix with national/global, national and relevant to local needs?	(4) 85 to 100%	(3) 70 to 84% ✓	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
2	Scope of the curriculum in imparting life skills	(4) Excellent	(3) Very Good	(2) Good ✓	(1) Fair	(0) Poor
3	What % of the syllabus needs revision?	(4) 10%	(3) 20%	(2) 30%	(1) 40% ✓	(0) Above 40%
4	Curriculum is interesting, updated and relevant to the present scenario	(4) Strongly agree	(3) Agree ✓	(2) Neutral	(1) Disagree	(0) Strongly disagree
5	What % of the subject curriculum is enhancing the imagination and thinking power of stakeholders?	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54% ✓	(0) Below 30%
6	What % of the curriculum is relevant and appropriate for gaining self employment?	(4) 100%	(3) 80%	(2) 60%	(1) 40% ✓	(0) Below 40%
7	What % of the syllabus has scope for students to undergo experiential and participatory learning?	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69% ✓	(1) 30 to 54%	(0) Below 30%
8	Content is oriented towards innovation and creativity	(4) To a great extent	(3) Moderate ✓	(2) Somewhat	(1) Very little	(0) Not at all
9	What % of the syllabus is useful to students to face the competitive examinations after graduation?	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54% ✓	(0) Below 30%
10	What % of the curriculum is excellent in the present scenario compared to the curriculum designed by other universities?	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69% ✓	(1) 30 to 54%	(0) Below 30%

Name of the teacher	Prof. Abdulkhalab	Name and address of the college	Annamalai Degree College Vijayapur
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Continued

Teachers feedback on Curriculum Designing

Programme: B.Sc (CBCS) Course

Write your answer using 4 or 3 or 2 or 1 or 0 in the End Box

1	What percentage of the existing curriculum is found to be relevant to local needs?	(4) 85 to 100% <input checked="" type="checkbox"/>	(3) 70 to 84% <input type="checkbox"/>	(2) 55 to 69% <input type="checkbox"/>	(1) 40 to 54% <input type="checkbox"/>	(0) 0 to 39% <input type="checkbox"/>
2	Scope of the curriculum in improving life?	(4) Excellent <input checked="" type="checkbox"/>	(3) Very Good <input type="checkbox"/>	(2) Good <input type="checkbox"/>	(1) Fair <input type="checkbox"/>	(0) Poor <input type="checkbox"/>
3	What % of the syllabus needs revision?	(4) 10% <input checked="" type="checkbox"/>	(3) 20% <input type="checkbox"/>	(2) 30% <input type="checkbox"/>	(1) 40% <input type="checkbox"/>	(0) 50% <input type="checkbox"/>
4	Curriculum is interesting, updated and relevant to the present scenario?	(4) Strongly agree <input checked="" type="checkbox"/>	(3) Agree <input type="checkbox"/>	(2) Slightly agree <input type="checkbox"/>	(1) Slightly disagree <input type="checkbox"/>	(0) Disagree <input type="checkbox"/>
5	What % of the subject curriculum is enhancing the image of the institution perceived by stakeholders?	(4) 85 to 100% <input type="checkbox"/>	(3) 70 to 84% <input checked="" type="checkbox"/>	(2) 55 to 69% <input type="checkbox"/>	(1) 40 to 54% <input type="checkbox"/>	(0) 0 to 39% <input type="checkbox"/>
6	What % of the curriculum is relevant and appropriate for gaining self-employment?	(4) 100% <input type="checkbox"/>	(3) 80% <input type="checkbox"/>	(2) 60% <input checked="" type="checkbox"/>	(1) 40% <input type="checkbox"/>	(0) 20% <input type="checkbox"/>
7	What % of the syllabus has scope for students to undergo projects and self-learning?	(4) 85 to 100% <input type="checkbox"/>	(3) 70 to 84% <input type="checkbox"/>	(2) 55 to 69% <input checked="" type="checkbox"/>	(1) 40 to 54% <input type="checkbox"/>	(0) 0 to 39% <input type="checkbox"/>
8	Content is oriented towards innovation and creativity?	(4) To a great extent <input type="checkbox"/>	(3) Moderate <input checked="" type="checkbox"/>	(2) Slightly moderate <input type="checkbox"/>	(1) Slightly less <input type="checkbox"/>	(0) Less <input type="checkbox"/>
9	What % of the syllabus is useful to students to face the competitive examinations after graduation?	(4) 85 to 100% <input checked="" type="checkbox"/>	(3) 70 to 84% <input type="checkbox"/>	(2) 55 to 69% <input type="checkbox"/>	(1) 40 to 54% <input type="checkbox"/>	(0) 0 to 39% <input type="checkbox"/>
10	What % of the curriculum is excellent in the present scenario compared to the curriculum designed by other universities?	(4) 85 to 100% <input checked="" type="checkbox"/>	(3) 70 to 84% <input type="checkbox"/>	(2) 55 to 69% <input type="checkbox"/>	(1) 40 to 54% <input type="checkbox"/>	(0) 0 to 39% <input type="checkbox"/>

Name of the teacher	M. Muneer Sahab	Name and address of the college	Arjunan Jagra College Vijayapur
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College email			

Continued

B E D E A S
SB ARTS AND KCP SCIENCE COLLEGE, VIJAYAPUR

(Accredited at 'A' Grade in 2017)

Teachers feedback on Curriculum Designing

Programme: B.Sc (CBCS) Course:

Write your answer using 4 or 3 or 2 or 1 or 0 in the End Box

1	What percentage of the existing curriculum is in line with emerging global national and relevant to local needs?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
2	Scope of the curriculum in imparting life skills				
	(4) Excellent	(3) Very Good	(2) Good	(1) Fair	(0) Poor
3	What % of the syllabus needs revision?				
	(4) 10%	(3) 20%	(2) 30%	(1) 40%	(0) Above 40%
4	Curriculum is interesting, updated and relevant to the present scenario				
	(4) Strongly agree	(3) Agree	(2) Neutral	(1) Disagree	(0) Strongly disagree
5	What % of the subject curriculum is enhancing the imagination and thinking power of stakeholders?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
6	What % of the curriculum is relevant and appropriate for gaining self employment?				
	(4) 100%	(3) 80%	(2) 60%	(1) 40%	(0) Below 40%
7	What % of the syllabus has scope for students to undergo experiential and participatory learning?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
8	Content is oriented towards innovation and creativity				
	(4) To a great extent	(3) Moderate	(2) Somewhat	(1) Very little	(0) Not at all
9	What % of the syllabus is useful to students to face the competitive examinations after graduation?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
10	What % of the curriculum is excellent in the present scenario compared to the curriculum designed by other universities?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%

Name of the teacher	Dr. Z. S. Qureshi	Name and address of the college	Anjuman Ash. Sc. & Comm. College Vijayapur
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Continued

Teachers feedback on Curriculum Designing

Programme: B.Sc (CBCS) Course:

Write your answer using 4 or 3 or 2 or 1 or 0 in the End Box

1	What percentage of the existing curriculum is in tune with emerging global, national, regional and relevant to local needs?	(4) 85 to 100%	✓(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 29%
2	Scope of the curriculum in imparting life skill	✓(4) Excellent	(3) Very Good	(2) Good	(1) Fair	(0) Poor
3	What % of the syllabus needs revision?	(4) 10%	✓(3) 20%	(2) 30%	(1) 40%	(0) 50%
4	Curriculum is interesting, updated and relevant to the present scenario	✓(4) Strongly agree	(3) Agree	(2) Neutral	(1) Disagree	(0) Strongly disagree
5	What % of the subject curriculum is informing the management and thinking process of stakeholders?	✓(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 29%
6	What % of the curriculum is relevant and appropriate for student self employment?	(4) 100%	✓(3) 80%	(2) 60%	(1) 40%	(0) Below 29%
7	What % of the syllabus has scope for students to undergo experiential and participatory learning?	✓(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 29%
8	Content is oriented towards innovation and creativity	✓(4) To a great extent	(3) Moderate	(2) Somewhat	(1) Very little	(0) Not at all
9	What % of the syllabus is useful to students to face the competitive examinations at graduation?	(4) 85 to 100%	✓(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 29%
10	What % of the curriculum is excellent in the present scenario compared to the curriculum designed by other universities?	(4) 85 to 100%	✓(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 29%

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 Studies in English,
 Vijayapur
 Signature

Continued

Teachers feedback on Curriculum Designing


Programme: B.Sc (CBCS) Course

Write your answer using 4 or 3 or 2 or 1 or 0 in the End Box

1	What percentage of the existing curriculum is relevant to the present scenario and relevant to local needs?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
2	Scope of the curriculum in imparting life skills				
	(4) Excellent	(3) Very Good ✓	(2) Good	(1) Fair	(0) Poor
3	What % of the syllabus needs revision?				
	(4) 10%	(3) 20% ✓	(2) 30%	(1) 40%	(0) 50%
4	Curriculum is interesting, updated and relevant to the present scenario				
	(4) Strongly agree	(3) Agree ✓	(2) Neutral	(1) Disagree	(0) Strongly disagree
5	What % of the subject curriculum is enhancing the imagination and thinking power of stakeholders?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69%	(1) 30 to 54% ✓	(0) Below 30%
6	What % of the curriculum is relevant and appropriate for training self employment?				
	(4) 100%	(3) 80% ✓	(2) 60%	(1) 40%	(0) Below 30%
7	What % of the syllabus has scope for students to undertake experiential and participatory learning?				
	(4) 85 to 100%	(3) 70 to 84%	(2) 55 to 69% ✓	(1) 30 to 54%	(0) Below 30%
8	Content is oriented towards innovation and creativity				
	(4) To a great extent	(3) Moderate	(2) Somewhat ✓	(1) Very little	(0) None at all
9	What % of the syllabus is useful to students to face the competitive examinations after graduation?				
	(4) 85 to 100%	(3) 70 to 84% ✓	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
10	What % of the curriculum is excellent in the present scenario compared to the curriculum designed by other universities?				
	(4) 85 to 100%	(3) 70 to 84% ✓	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%

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Continued

B. E. D. E. A. S.
SB ARTS AND KCP SCIENCE COLLEGE, VIJAYAPUR

(Accredited at 'A' Grade in 3rd Cycle)

Teachers feedback on Curriculum Designing

Programme: B.Sc (CBCS) Course:

Write your answer using 4 or 3 or 2 or 1 or 0 in the End Box

1	What percentage of the existing curriculum is in tune with emerging global, national, and relevant to local needs?				
	(4) 85 to 100%	(3) ✓ 70 to 84%	(2) 55 to 69%	(1) 30 to 54%	(0) Below 30%
2	Scope of the curriculum in imparting life skills				
	(4) Excellent	(3) ✓ Very Good	(2) Good	(1) Fair	(0) Poor
3	What % of the syllabus needs revision?				
	(4) 10%	(3) ✓ 20%	(2) 30%	(1) 40%	(0) Above 40%
4	Curriculum is interesting, updated and relevant to the present scenario				
	(4) Strongly agree	(3) ✓ Agree	(2) Neutral	(1) Disagree	(0) Strongly disagree
5	What % of the subject curriculum is enhancing the imagination and thinking power of stakeholders?				
	(4) 85 to 100%	(3) 70 to 84%	(2) ✓ 55 to 69%	(1) 30 to 54%	(0) Below 30%
6	What % of the curriculum is relevant and appropriate for gaining self employment?				
	(4) 100%	(3) ✓ 80%	(2) 60%	(1) 40%	(0) Below 40%
7	What % of the syllabus has scope for students to undergo experiential and participative learning?				
	(4) 85 to 100%	(3) 70 to 84%	(2) ✓ 55 to 69%	(1) 30 to 54%	(0) Below 30%
8	Content is oriented towards innovation and creativity				
	(4) To a great extent	(3) Moderate	(2) ✓ Somewhat	(1) Very little	(0) Not at all
9	What % of the syllabus is useful to students to face the competitive examinations after graduation?				
	(4) 85 to 100%	(3) 70 to 84%	(2) ✓ 55 to 69%	(1) 30 to 54%	(0) Below 30%
10	What % of the curriculum is excellent in the present scenario compared to the curriculum designed by other universities?				
	(4) 85 to 100%	(3) 70 to 84%	(2) ✓ 55 to 69%	(1) 30 to 54%	(0) Below 30%

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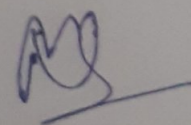
Teachers feedback on Curriculum Designing

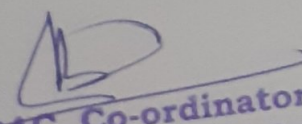
Programme: B.Sc (CBCS) Course:


Write your answer using 4 or 3 or 2 or 1 or 0 in the End Box

1	What % of the existing curriculum is on time with the learning objectives and learning needs of students?	(4) 85 to 100%	(3) ✓ 70 to 84%	(2) 55 to 69%	(1) 40 to 54%	(0) Below 39%
2	Scope of the curriculum in imparting the skills	(4) Excellent	(3) ✓ Very Good	(2) Good	(1) Fair	(0) Poor
3	What % of the syllabus needs revision?	(4) 0%	(3) ✓ 20%	(2) 30%	(1) 40%	(0) 50%
4	Curriculum is interesting, updated and relevant to the present scenario	(4) Strongly agree	(3) ✓ Agree	(2) Neutral	(1) Disagree	(0) Strongly disagree
5	What % of the subject curriculum is enhancing the imagination and thinking power of stakeholders?	(4) 85 to 100%	(3) ✓ 70 to 84%	(2) 55 to 69%	(1) 40 to 54%	(0) Below 39%
6	What % of the curriculum is relevant and appropriate for gaining self employment?	(4) 100%	(3) ✓ 80%	(2) 60%	(1) 40%	(0) Below 39%
7	What % of the syllabus has scope for students to undergo experiential and participatory learning?	(4) 85 to 100%	(3) ✓ 70 to 84%	(2) ✓ 55 to 69%	(1) 40 to 54%	(0) Below 39%
8	Content is oriented towards innovation and creativity	(4) To a great extent	(3) ✓ Moderate	(2) ✓ Somewhat	(1) Very little	(0) None at all
9	What % of the syllabus is useful to students to face the competitive examinations at graduation?	(4) 85 to 100%	(3) ✓ 70 to 84%	(2) 55 to 69%	(1) 40 to 54%	(0) Below 39%
10	What % of the curriculum is excellent in the present scenario compared to the curriculum designed by other universities?	(4) 85 to 100%	(3) ✓ 70 to 84%	(2) ✓ 55 to 69%	(1) 40 to 54%	(0) Below 39%

Name of the teacher	P.S. Hiremath	Name and address of the college	Com. B.H.S Arts & T & P Sci college Jamathandi
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