

LOYOLA COLLEGE (AUTONOMOUS)

CHENNAI-600034.



DEPARTMENT OF CHEMISTRY

Minutes of meeting
BOARD OF STUDIES FOR UG SYLLABUS

Board of studies meeting for discussing UG syllabus of the Department of Chemistry was held on 4th February 2016 in YD hall in the department of chemistry.

The meeting started at 11 am, with a prayer by Dr.George Johnson, and then he introduced the members of the board and welcomed them.

Following are the officials of the Board:

University Nominee : Dr.Mary George
 Industrial representative : Dr.B.Kuppan
 External Members : 1. Dr.JebakumarJeevanandam from Govt.Arts College,Nandanam
 2. Dr.Rajendran from Thiyagarayacollege, Chennai.
 3. Dr.Kumaran from D.G.VaishnavaCollege,Chennai.
 Students Representative : 1. Ms.MonicaSwetha from 2nd M.Sc., Chemistry
 2. Mr.Carlson Alexander from 3rd B.Sc., Chemistry.

And all the members of the staff in the Department were present(Attendance is enclosed).

UG papers were discussed one by one, following are the papers discussed and the corrections are noted down.

Title of the paper	Type	Hrs/Week	Corrections
Chemistry of Hydrocarbons	MC	3	<ul style="list-style-type: none"> • Unit 1, Geometry of hydrocarbons- methane, ethane, acetylene, benzene to be specified. • Carbene and benzyne intermediates to be included. • Unit 5.2-Ortho –para ratio to be included.
Stereochemistry and organic functional groups-1	MC	4	<ul style="list-style-type: none"> • 1.3-atropisomerism to be included. • 2.2 –phenols must include monohydric and dihydric too. But reactions w.r.t to monohydric phenols only. • 4.2-Organometallic reagents to be specified. • 5.1-sulpha drugs is shifted to pharmaceutical chemistry.
Organic functional group-II	MC	5	<ul style="list-style-type: none"> • Order of rearrangement reactions changed.
Synthetic organic chemistry and heterocyclic compounds	MC	7	<ul style="list-style-type: none"> • 5.2-skraup synthesis included. • 4.3-quinoline and isoquinoline to be removed. • Preparation and properties of pyridine to be included.
Organic qualitative analysis	MC	3	<ul style="list-style-type: none"> • Salicylic acid to be included.
Applied chemistry lab	MC	4	<ul style="list-style-type: none"> • Estimation of compounds in consumer products was included as unit 1, and then followed by computer and the preparation of consumer products. • Few practicals from food chemistry was included in the first unit

Industrial chemistry	SK	6	<ul style="list-style-type: none"> • 5.2- silicone and inorganic polymers • 1.1-nuclear energies.
Inorganic qualitative analysis	MC	4	<ul style="list-style-type: none"> • Interfering radicals such as arsenate and chromate is removed.
Spectroscopy	MS	6	<ul style="list-style-type: none"> • Objective – understand the various types of spectroscopy. • Born-oppenheimer approximation to be included. • 2.3-solvent effect was added • 3.1-principle of IR spectroscopy • 3.2-stokes and antistokes line to be added • 4.1-advantages and disadvantages of TMS • Two more reference books were added
Thermodynamics	MC	4	<ul style="list-style-type: none"> • Difference between classical and statistical thermodynamics was included. • One more reference book added
Electrochemistry	MC	3	<ul style="list-style-type: none"> • 2.3-transport number • Electrochemical series and its application is included.
Phase equilibria and kinetics	MC	5	<ul style="list-style-type: none"> • 5.2-turn over number • One more reference book was included.
Quantum chemistry and physical process	MC	6	<ul style="list-style-type: none"> • 1.1-Wein's law, Stephen,Boltzmann's law included. • 2.1-Application of symmetry operations included. • 3.1-IC,ISC to be included • Comparison of thermal and photochemical reactins • Stern-volmer derivation included • Properties such as Tyndall effect and Brownian movements included.
Analytical Chemistry	MC	3	<ul style="list-style-type: none"> • Application of buffer in biological systems. • 3.1-solubility product • 3.2-Von –Weimann ratio included.
Material Science	ES	6	<ul style="list-style-type: none"> • 2.2-Determination by Gouy balance • 2.3- Meisner effect is removed • 4.1-Degree of polymerisation included. • 5.4 is deleted • 1.2-carbon nano tubes included.
Basic concepts in Inorganic Chemistry	MC	3	<ul style="list-style-type: none"> • 2.1- balancing by oxidation number method

			<ul style="list-style-type: none"> • HSAB concept included • 5.4-IF7 included
Chemical bonding and Main group elements	MC	3	<ul style="list-style-type: none"> • Chemical force to be replaced with apt word • Solubility of ionic compounds on the basis of lattice energy. • 3.1-hydrides of group VIIA included • Stability of DNA molecule is removed. • Unit 3.4 removed and combined with 3.2 • 4.2-specify the compounds like sodium carbonate • 4.3 to be removed • Extraction of silicon is removed • 5.5-sulphides of phosphorous is removed • 5.6- salts are removed • 5.7 is removed • 2.4 merged with 2.2 • Only seven crystal systems and 14 bravais lattices included. • 2.5-indexing of x-ray lines to be removed.
Coordination chemistry	MC	4	<ul style="list-style-type: none"> • Unit 1- ORD and CD removed • 2.1-Evidences of CFSE included • 2.3 is removed • 3.1- dissociative and associative removed • 3.2-trans effect compounds to be specified. • 4.3 is removed • 5.1 –mechanism of oxygen transport removed.
Transition elements and nuclear chemistry	MC	7	<ul style="list-style-type: none"> • General properties to be added with 1.2 • 1.3-displacement of metals, reduction by carbon and metal. • Tungsten extraction is removed. • 4.3-important particles to be specified. • Pulse radiolysis to be included.
Chemistry for Biologists-I	AL	4	<ul style="list-style-type: none"> • No major corrections
Chemistry for Biologists-II	AL	4	<ul style="list-style-type: none"> • 1.2-Denaturation and renaturation, • Tests for proteins biuret, ninhydrin included. • 1.1-peptide linkage and peptide synthesis • 1.3-no derivation

			<ul style="list-style-type: none"> • 2.2 to be removed • 4.1-tests for carbohydrates included • 5.2-isoprene rule to be included
Chemistry for Biologists Lab-1	AL	2	<ul style="list-style-type: none"> • No major corrections
Chemistry for Biologists Lab-2	AL	2	<ul style="list-style-type: none"> • 1.3-Demo only
General chemistry for physics-1	AL	4	<ul style="list-style-type: none"> • Unit-1 Atomic structure • 4.2-stark-Einstein law • Florescence, phospherensce and chemiluminescence
General chemistry for physics-2	AL	4	<ul style="list-style-type: none"> • Isotopes in Medicine, agriculture and industry to be included
General chemistry for physics-1 Lab	AL	2	<ul style="list-style-type: none"> • No major change
General chemistry for physics-II Lab	AL	2	<ul style="list-style-type: none"> • No major change
Chemistry of Consumer products and Food Chemistry	ES	6	<ul style="list-style-type: none"> • 1.1-medicinal, shaving soaps removed • 2.2-hair dye removed • 2.3-composition of nail polish-preparation not required. • 3.1-different modes of cooking-to be specified. • 3.3-mode of action.
Medicinal and pharmaceutical chemistry	ES	6	<ul style="list-style-type: none"> • 1.3-types, causes and preventive measurements • Test for blood sugar • 5.4-known and unknown receptors
Biochemistry and Natural products	ES	6	<ul style="list-style-type: none"> • 4.2-isoprene rule and special isoprene rule to be included. • J.L.Jain was removed from reference and made as Book for study.

The meeting ended at around 8PM. Dr.George Johnson thanked everyone for the time they spent and the way they completed the task. He specially thanked all the external members for their valuable suggestions and assured them all the corrections specified by them will be incorporated.

RESTRUCTURING – 2016
BOARD OF STUDIES MEETING – UG held on 04th February 2016

Attendance

	Name	Signature
University Nominee	Dr. Mary George	Mary George
Subject Experts	Dr. A. Rajendran	A. Rajendran
	Dr. Jebakumar Jeevansandam	J. Jebakumar
	Dr. R. Kumaran	R. Kumaran
Industrial Representative	Dr. B. Kuppen	B. Kuppen
Student Representatives	Mr. Carlson Alexander	Carlson A.
	Ms. Monica Swetha Bosco	Monica
Head of the Department	Dr. M. George Johnson	M. George Johnson
Staff Members	Dr. J. R. Devadasan	J. R. Devadasan
	Dr. D. Suresh Kumar	AAA
	Dr. A. Jeya Rajendran	A. Jeya Rajendran
	Dr. A. John Marin Xavier	A. John Marin Xavier
	Prof. Justin A. Baskar	FDP
	Dr. J. Judith Vijaya	J. Judith Vijaya
	Dr. S. Anuja Manikandan	S. Anuja Manikandan
	Dr. M. F. Valan	M. F. Valan
	Dr. M. Jacob	M. Jacob
	Dr. Sweetlin R. Ruhavathi	S. Ruhavathi
	Dr. N. Arockia Sany	N. Arockia Sany
	Dr. S. John Mary	S. John Mary
	Dr. A. Vijays kumar	A. Vijays kumar
	Prof. P. Vijaykumar	P. Vijaykumar
	Dr. M. Amal Raj	M. Amal Raj

Minutes of meeting
BOARD OF STUDIES FOR PG SYLLABUS

Board of studies meeting for discussing PG syllabus of the Department of Chemistry was held on 6th February 2016 in YD hall in the department of chemistry.

The meeting started at 11 am, with a prayer by Dr.George Johnson, and then he introduced the members of the board and welcomed them.

Following are the officials of the Board:

University Nominee : Dr.Mary George
 Industrial representative : Dr.B.Kuppan
 External Members : 1. Dr.KhajaMohideen, New College, Chennai.
 2. Dr.SanjeevBabu,Gurunanak College, Chennai.
 3. Dr.Balasubramaniam,Univeristy of

Madras .

Students Representative : 1. Ms.MonicaSwetha from 2nd M.Sc., Chemistry

And all the members of the staff in the Department were present(Attendance is enclosed).

PG papers were discussed one by one, following are the papers discussed and the corrections are noted down.

Title of the paper	Type	Hrs/Week	Corrections
Quantum Chemistry	MC	6	<ul style="list-style-type: none"> • 1.3-normalized functions, Eigen functions and Eigen values to be included. • 1.4-Hamiltonian and angular momentum operators are included. • 1.5-hydrogen atomic spectrum added. • 1.6-time dependent and time independent. • 5.3- c2h included. • 5.4-electronic spectra of formaldehyde and ethylene.
Surface Chemistry and Catalysis	ES	4	<ul style="list-style-type: none"> • 5.3-XPS, Auger electron spectroscopy, SPR, XRF principle and application included. • 2.1-Use of CMC for the synthesis of zeolites, metal organic frameworks • 1.4-biomolecule's surface reaction included. • 4.2- lactones included.
Thermodynamics and Chemical Kinetics	MC	6	<ul style="list-style-type: none"> • 5.1-Rice herzfield- pyrolysis of acetaldehyde included. • 4.3-kinetics –competitive, uncompetitive and non competitive specified. • Michelis-menton equation • 5.1-Chain length included.
Physical Chemistry practical-I	MC	4	<ul style="list-style-type: none"> • 1.study of adsorption of acetic acid • 6. determination of association number of benzoic acid, included. • Experiments-1,5,7,8,11,13,14,15,17,2 and 3 are there and other experiments are removed.

Electrochemistry	MC	6	<ul style="list-style-type: none"> • 2.1-electrokinetic phenomenon, electro osmosis included • Electrokinetics by kiesy is added as a book for study.
Physical Chemistry practical-II	MC	4	<ul style="list-style-type: none"> • Number of experiments to be fixed as 12.
Molecular spectroscopy	MC	6	<ul style="list-style-type: none"> • 4.6-principle of solid state NMR. • Unit -4 is NMR and EPR • 2.3-Organic complex compounds and factors affecting electronic transitions included.
Materials science	ID	6	<ul style="list-style-type: none"> • 1.4-fluorescence and phosphorescence included. • 4.3-needs revision based on Bill Meyer book. • 5.2-titanium oxide is included, Powder XRD is included. • TEM for nano materials included
Analytical Chemistry	MC	5	<ul style="list-style-type: none"> • 2.1-principles of TLC,Paper and column chromatography techniques. • 3.3-is removed • 1.2-ANOVA to be included. • 2.3-principle of preparative and analytical HPLC included.
Organic reaction mechanism and Stereochemistry	MC	6	<ul style="list-style-type: none"> • Hoffmann and related rearrangements needs to be specified. • 2.2- related rearrangement is removed • 3.2-lead tetra acetate • 4.3-pro-R,pro-S,side phase, rephrase,D,L,R,S included. • 4.4-problems related to optical purity is included. • 4.1-common objects removed. • 5.2-examples to be specified. • Morrison,Boyd, Bhatacharjee and Claiden, Greeves book are included in all organic papers.
Organic reaction mechanism and Heterocyclic compounds	MC	5	<ul style="list-style-type: none"> • 1.2- is removed • 3.1-different notations like SN1CA, which are not common must be checked in authentic books, if not it can be removed.
Organic synthesis and photochemistry	MC	5	<ul style="list-style-type: none"> • 3.1-Sharpless asymmetric epoxidation included. • Sodium cyanoborohydride and derivatives of lithium aluminium hydride are added. • 1.1-for reterosynthesis, few compounds to be included.

			<ul style="list-style-type: none"> • Unit 1 to be shifted as unit 3. • 1.2-convergent and divergent synthesis included.
Organic Laboratory techniques-I	MC	4	<ul style="list-style-type: none"> • No major corrections
Organic Laboratory techniques-II	MC	4	<ul style="list-style-type: none"> • In the 2nd experiment, only extraction and no estimation.
Biomolecules and natural products	ES	4	<ul style="list-style-type: none"> • 3.4 –it should be written as Watson and crick. • Morphine(SAR) to be included.
Applied Organic Chemistry	ES	4	<ul style="list-style-type: none"> • No major correction.
Scientific Research methodology	MC	5	<ul style="list-style-type: none"> • Unit 5 to be combined with unit 3 • Unit 5 title must change as Scientific communication and seminar.
Project and Report	MC	15	<ul style="list-style-type: none"> • Same panel of staff for interim and final evaluation is removed. • Interim evaluation carries a weightage of 20%
Concepts in Inorganic Chemistry	MC	5	<ul style="list-style-type: none"> • 2.6 and 2.7 to be removed • 5.3 HSAB-class A and Class B included. • 1.1-periodicity included, rest everything removed.
Inorganic quantitative analysis	MC	4	<ul style="list-style-type: none"> • In experiment 4, preparation and estimation of any one metal ion.
Main group elements and nuclear chemistry	MC	5	<ul style="list-style-type: none"> • 1.1-graphene included • 5.1 to 5.4 completely removed • 3.1-structure and bonding of organometallic compounds. • Unit 3.4 is to be placed with 1.3 • 3.4-shline techniques and drying of solvents to be included.
Inorganic qualitative semi-micro analysis	MC	4	<ul style="list-style-type: none"> • In group III –thallium, titanium and uranium are included.
Coordination chemistry	MC	5	<ul style="list-style-type: none"> • 1.2-evidences of back bonding from vibration spectroscopy included • Units 1.2 to 1.5 to be merged as 1.2 • 3.3- long range electron transfer included • 3.6-Fischer-trocsc included • 4.3-macrocyclic complexes and supramolecular assemblies are specified. • 5.4-z-scheme included.

			<ul style="list-style-type: none"> • 5.3-copper proteins are included. • 2.4 to be removed • 1.2-Td, Oh,cubic and ttp are included.
Physical concepts in inorganic chemistry	ES	4	<ul style="list-style-type: none"> • Unit-1 includes 1.1 to 1.4 • Unit-2 includes 1.5 to 1.8, which changes as 2.1 to 2.4 • Subsequently other unit numbers are changed. • Unit 3.2 and 4.4 to be merged together.

The meeting ended at around 7PM. Dr.George Johnson thanked everyone for the time they spent and the way they completed the task and all the necessary corrections made will be incorporated.

RESTRUCTURING – 2016
BOARD OF STUDIES MEETING – PG held on 06th February 2016

Attendance		
	Name	Signature
University Nominee	Dr. Mary George	Mary George
Subject Experts	Dr. S. Balasubramanian	S. Balasubramanian
	Prof. K.G. Sanjeevi Babu	K.G. Sanjeevi Babu
Industrial Representative	Prof. Khaja Mohideen	Khaja Mohideen
	Dr. B. Kuppan	B. Kuppan
Student Representative	Ms. Monica Swetha Bosco	Monica Swetha Bosco
Head of the Department	Dr. M. George Johnson	M. George Johnson
Staff Members	Dr. J. R. Devadasan	J. R. Devadasan
	Dr. D. Suresh Kumar	AAA
	Dr. A. Jeya Rajendran	JRM
	Dr. A. John Maria Xavier	A. John Maria Xavier
	Prof. Justin A. Baskar	FDP
	Dr. J. Judith Vijaya	J. Judith Vijaya
	Dr. S. Anuja Manikandan	Anuja Manikandan
	Dr. M. F. Valan	M. F. Valan
	Dr. M. Jacob	AAA
	Dr. Sweelin R. Rajsvarhi	R. Rajsvarhi
	Dr. N. Arockia Samy	Arockia Samy
	Dr. S. John Mary	S. John Mary
	Dr. A. Vijaya kumar	A. Vijaya kumar
Prof. P. Vijaykumar	P. Vijaykumar	
Dr. M. Amal Raj	M. Amal Raj	