

ATTENDANCE SHEET - CUM- MINUTES OF BOARD OF STUDIES

Minutes of the meeting of the Board of Studies of CHEMISTRY (Subject)

Held on 10th Feb. 2018 (date) at _____ (time)

PRESENT

(Name)		(Signature)
1. Prof. S. Dass	(Chairperson)	
2. Prof. Rita Kakkar	(External Expert 1)	
3. Prof. V. D. Vankar	(External Expert 2)	
4. Prof. M. M. Srivastava	(Internal Member)	
5. " Rohit	(Internal Member)	
6. " Pankaj	(Internal Member)	On Leave
7. " Surab Kumar	(Internal Member)	
8. " K. M. Kumari	(Internal Member)	
9. " Shalini Srivastava	(Internal Member)	
10. Dr. Anila Lakhani	(Internal Member)	
11. " Radhika Singh		
Proposed changes in the existing system		
12. " Poojya Saini		
13. " Sudhar An Verma	(Internal Member)	
14. " Ranjit Kumar	(")	
15. Dr. Apurva Jaiswal	(")	
16. Dr. Naja Sambora	(")	
17. Dr. Sachin Saxena	(")	
18. Dr. Poojya Saini		

The Departmental Board of Studies (BOS) meeting of the Chemistry met on 10th February, 2018 at 11.30 AM in the Department of Chemistry, Faculty of Science. Prof. Y.D. Vankar, IIT Kanpur and Prof. Rita Kakkar, University of Delhi, Delhi were the external expert. The syllabus was discussed in detail and following additions/modifications were proposed in the existing syllabus. The proposed changes have been approved by Board of Faculty meeting held on 13th March 2017 at 11.00 am.

Existing syllabus	Proposal for change	Justification
<p>CHM 502 (Organic Chemistry I)</p> <p>UNIT 5: STEREOCHEMISTRY Conformational analysis of cycloalkanes, decalins, elements of symmetry, chirality, R-S constraints, molecules with more than one chiral centre, threo and erythro isomers, methods of resolution, optical purity, enantiotropic and diastereotopic atoms, groups and faces</p>	<p>UNIT 5: STEREOCHEMISTRY Conformational analysis of cycloalkanes, decalins, elements of symmetry, chirality, R-S constraints, molecules with more than one chiral centre, threo and erythro isomers, methods of resolution, optical purity, enantiotropic and diastereotopic atoms, groups and faces, Octant rule and axial halo ketone rule</p>	It will enhance the content of stereochemistry
<p>CHM 802 (Organic Chemistry II)</p> <p>UNIT 1: REAGENTS IN ORGANIC SYNTHESIS AND NAME REACTIONS Important name reaction - Cannizzaro reaction, Hell-Volhard Zelinsky reaction, Oppenauer oxidation, Parkin reaction and Birch reduction. Reagents - Aluminium isopropoxide, N-Bromosuccinimide, Lithium aluminium hydride, boron trifluoride, Raney Ni, Sodium borohydride, Periodic acid, Osmium tetroxide, Fenton's reagent and di-azo methane.</p>	<p>UNIT 1: REAGENTS IN ORGANIC SYNTHESIS AND NAME REACTIONS Reagents - Aluminium isopropoxide, N-Bromosuccinimide, Lithium aluminium hydride, Boron trifluoride, Iodobenzoic acid, Wilkinson's Catalyst, Heck palladium catalyst, tetra N propylperruthenate (TRAP based oxidation) Important name reaction - Swern Oxidation, Dess Martin periodinane, Tamao Fleming oxidation, Katsuki Jacobsen Epoxidation, Microbial Reactions (Pseudomonas putida)</p>	Addition of newer mechanism will modernize the syllabus
<p>UNIT 5: STEREOCHEMICAL ASPECTS OF ORGANIC SYNTHESIS Stereospecific and stereoselective synthesis, Control of Stereochemistry-Introduction, The Chiral Pool, Asymmetric Synthesis: Asymmetric Induction I-Reagent-Based Strategy,</p>	<p>UNIT 5: STEREOCHEMICAL ASPECTS OF ORGANIC SYNTHESIS Stereospecific and Stereoselective synthesis, Control of Stereochemistry-Introduction, The Chiral Pool, Asymmetric Synthesis.</p>	It will enhance the content of the syllabus of stereochemistry

<p>Asymmetric Induction II- Asymmetric Catalysis, Asymmetric Induction III- Substrate-Based Strategy, Enzymes: Biological Methods in Asymmetric Synthesis. Octane rule and Axial halo ketone rule.</p>	<p>Asymmetric Induction I- Reagent-Based Strategy, Asymmetric Induction II- Asymmetric Catalysis, Asymmetric Induction III- Substrate-Based Strategy. (alkylboranes-9-BBN, oxaborolidine, Sharpless epoxidation, Salen, BINAL), Enzymes: Biological Methods in Asymmetric Synthesis (Baker's yeast).</p>	
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Minutes of the Board of Studies in Chemistry

A meeting of the board of studies in Chemistry was held on 10th February 2018 at 11.30 AM in the seminar room of the Department of Chemistry, Faculty of Science of the Institute. The following members were present:

1. Prof. Sahab Das, Head, Department of Chemistry	Chairperson
2. Prof. Rita Kakkar	External Expert
3. Prof. Y.D. Vankar	External Expert
4. Prof. M.M. Srivastava	Member
5. Prof. Pankaj	Member
6. Prof. Rohit Shrivastava	Member
7. Prof. Surat Kumar	Member
8. Prof. K. Mahraj Kumari	Member
9. Prof. Shalini Srivastava	Member
10. Dr. Anita Lakhani	Member
11. Dr. Radhika Singh	Member
12. Dr. Pushpa Shukla	Member
13. Dr. Sudhir Kumar Verma	Internal Member
14. Dr. Ranjit Kumar	Internal Member
15. Dr. Aparna Satsangi	Member
16. Dr. Manju Srivastava	Member
17. Dr. Sachin Saxena	Member

Meeting of the Board of Studies started on scheduled time. Prof. Sahab Das, Chairperson and Head, Department of Chemistry extended welcome to external members Prof. Rita Kakkar from the Department of Chemistry, Delhi University, Delhi and Prof. Y.D. Vankar from the Department of Chemistry, IIT Kanpur, Kanpur and introduced the faculty members of the department to the External Members.

Members started reviewing the syllabus of each course extensively. The following changes were proposed in CHM 502 & 502:

Existing syllabus	Proposal for change	Justification
CHM 502 (Organic Chemistry I) UNIT 5: STEREOCHEMISTRY Conformational analysis of cycloalkanes, decalins, elements of symmetry, chirality, R-S constraints, molecules with more than one chiral centre, threo and erythro isomers, methods of resolution, optical purity, enantiotropic and diastereotopic	UNIT 5: STEREOCHEMISTRY Conformational analysis of cycloalkanes, decalins, elements of symmetry, chirality, R-S constraints, molecules with more than one chiral centre, threo and erythro isomers, methods of resolution, optical purity, enantiotropic and	It will enhance the content of stereochemistry

atoms, groups and faces	diastereotopic atoms, groups and faces, Octant rule and axial halo ketone rule	
<p>CHM 803 (Organic Chemistry II)</p> <p>UNIT 1: REAGENTS IN ORGANIC SYNTHESIS AND NAME REACTIONS</p> <p>Important name reaction - Cannizzaro reaction, Hall-Volhard Zelinsky reaction, Oppenauer oxidation, Parkin reaction and Birch reduction. Reagents - Aluminium isopropoxide, N-Bromosuccinimide, Lithium aluminium hydride, boron trifluoride, Raney Ni, Sodium borohydride, Periodic acid, Osmium tetroxide, Fenton's reagent and di-azo methane.</p>	<p>UNIT 1: REAGENTS IN ORGANIC SYNTHESIS AND NAME REACTIONS</p> <p>Reagents - Aluminium isopropoxide, N-Bromosuccinimide, Lithium aluminium hydride, Boron trifluoride, Iodobenzoic acid, Wilkinson's Catalyst, Heck palladium catalyst, tetra N propylgarnathenate (TRAP based oxidation) Important name reaction - Swern Oxidation, Dess Martin periodinane, Tamao Fleming oxidation, Katsuki Jacobsen Epoxidation, Microbial Reactions (Pseudomonas putida)</p>	<p>Addition of newer mechanism will modernize the syllabus</p>
<p>UNIT 5: STEREOCHEMICAL ASPECTS OF ORGANIC SYNTHESIS</p> <p>Stereospecific and stereoselective synthesis, Control of Stereochemistry-Introduction, The Chiral Pool, Asymmetric Synthesis: Asymmetric Induction I-Reagent-Based Strategy, Asymmetric Induction II-Asymmetric Catalysis, Asymmetric Induction III-Substrate-Based Strategy, Enzymes: Biological Methods in Asymmetric Synthesis. Octane rule and Axial halo ketone rule.</p>	<p>UNIT 5: STEREOCHEMICAL ASPECTS OF ORGANIC SYNTHESIS</p> <p>Stereospecific and Stereoselective synthesis, Control of Stereochemistry-Introduction, The Chiral Pool, Asymmetric Synthesis: Asymmetric Induction I-Reagent-Based Strategy, Asymmetric Induction II-Asymmetric Catalysis, Asymmetric Induction III-Substrate-Based Strategy (alkylboranes-9-BBN, oxaborolidine, Sharpless epoxidation, Saleo, BINAL), Enzymes: Biological Methods in Asymmetric Synthesis (Baker's yeast).</p>	<p>It will enhance the content of the syllabus of stereochemistry</p>

After discussion, members approved the changes proposed.

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External members gave fruitful suggestion to include a few new and popular books in the list of suggested books for the benefit of the students as given below:

1. Khosla B.D.: Senior Practical Physical Chemistry, R. Chand & Company (1985).
2. Smith M.: ORGANIC SYNTHESIS, 3rd ed., Academic Press (2011).
3. Bruckner R.: Organic Mechanism (edited by Hamada M.), Springer (2010).
4. Cotton F.A. Wilkinson G., Murillo C.A. and Bochmann C.: ADVANCED INORGANIC CHEMISTRY, John-Wiley & Sons, 6th Ed. (1999).

External members praised the syllabus of different courses run by the department particularly the content of syllabus of M.Sc. Chemistry program.

The meeting ended with thanks to the external members of Board of Studies.

Submitted for approval


Prof. Sahab Dass, Chairperson