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THE NATIONAL COLLEGE BASAVANAGUDI, BENGALURU- 04
AUTONOMOUS

Website: www.ncbgudi.com

DEPARTMENT OF CHEMISTRY

Board of Studies

BOS

12th June 2019

Academic year 2019-20

MEETING NOTICE

12th June 2019

TO

All BOS Members

Dear Madam/Sir,

Subject: Meeting of the board of studies in chemistry.

I take pleasure in informing you that the board of studies meeting in Chemistry is scheduled to be held on **Wednesday 12th June 2019 at 11.00am** in the department of chemistry. The National Degree College (Autonomous), Basavanagudi, Bangalore-4, to discuss III and IV semester BSc Courses Syllabus.

I request you to make it convenient to attend the meeting.

Agenda:

1. Discuss in detail on III and IV sem B.Sc Subjects.
2. Discuss in the Course content of Physical Chemistry syllabus.
3. Discuss in detail on open Elective paper for non- Chemistry students.
4. Approval of panel of External Examiners & Board of Examiners.
5. Any other Subject.

Your's sincerely
Thanking You



Prof. Surendra Reddy

Chairperson

Board of Studies in Chemistry

National Degree College (Autonomous), Basavanagudi



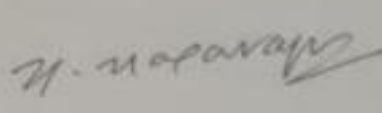
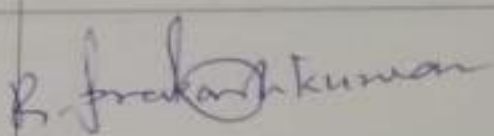





**The National Degree College, Basavanagudi, Bangalore -4
(Autonomous)**

Proceedings of the Board of studies meeting held on 12th June, 2019

A meeting of the Board of studies in Chemistry was held in the Department of Chemistry, National Degree College, Basavanagudi, Bangalore-4 on Wednesday, the 12th June, 2019.

Three sets of question papers each for III and IV semester (Theory and Practicals) were discussed, suggestions were incorporated and approved by the board.

Sl.No	Members present	Signature
1.	Dr.Devaraj.V.R Department of Biochemistry, Central college campus Bangalore University Bangalore-560001 Mobile:9886494428 E-Mail:devaraj@bub.ernet.in	
2.	Dr.Rudresh.H.B CEO, Vijaya metal finisher's Bangalore, India. Mob: +91 9880122298 +91 8028361469/1282 E-Mail:rudresh10@hotmail.com	
3.	Dr.Chandra S Bajagur Head LP.Services Shell Technology India Pvt Ltd. Mahadevapura Post Bangalore-560048 Mobile: E-Mail:	
4.	Dr.N.Nagarajan Vice Chairman BAL Pharma Bommasandra Industrial Area Bangalore-560019 Mobile: E-Mail:	

5.	Dr. N.Nagaraju St. Joseph's degree college (Autonomous),Bangalore. Mobile:9886765750 E-Mail:nagarajun@gmail.com	
6.	Dr.Prakash Kumar Rao, Associate Professor, SJR college,Bangalore-09 Mobile:9480549513 E-Mail:pkrao1960@gmail.com	
7.	Chaya.M.R Associate Professor, KLE College,Rajajinagar Bangalore-10 Mobile:9845015934 E-Mail:chaya.org@gmail.com	
8.	Surendra Reddy Associate Professor, H.O.D.Department of Chemistry, The National Degree College Basavanagudi,Bangalore-04 Mobile:9845632142 E-Mail:	
9.	R.Nagaraj Associate Professor, Department of Chemistry, The National Degree College Basavanagudi,Bangalore-04 Mobile:7019601804 E-Mail:	
10.	Yadhunandana N.G. Assistant Professor, Department of Chemistry, The National Degree College Basavanagudi,Bangalore-04 Mobile:9611104201 E-Mail:yadhu.ng@gmail.com	
11.	Shyamala G.A. Assistant professor Department of Chemistry, The National Degree College Basavanagudi,Bangalore-04 Mobile:7892655979 E-Mail:	

The members of the board have discussed the various aspects of III and IV semester syllabus for the year 2019 onwards. The valuable suggestions and corrections made by the members were incorporated. The copy of the syllabus approved by the BOS is attached here with.

**THE NATIONAL DEGREE COLLEGE (AUTONOMOUS)
BASAVANAGUDI, BANGALORE-4**

Proceedings

Proceedings of the BOS meeting held on 12th June 2019. The following members have attended the meeting.

1. Dr. Rudresh. CEO Vijaya metals finishers ltd., Bangalore
2. Dr. N. Nagaraj. Subject expert
3. Dr. Prakash Rao. Subject expert
4. Prof. M. R. Chaya. Subject expert
5. HOD and Staff members of the department.

Prof. Surendra Reddy H.O.D of the department welcomed the members and read the proceedings of the previous meeting.

Bos Suggested that in Chemistry lab III (preparation), the students need to do study detailed outlines of various experiments mentioned in their syllabus in addition to conducting them.

III semester B.Sc. Chemistry.

Dr. Prakash Rao has suggested to introduce the objectives for each module in III and IV semester syllabus. He also suggested to consider Solid state and structure of Ionic Solids chapter as Inorganic chemistry. **In Gaseous state** Dr. Prakash Rao has suggested to introduce numerical problems, Critical constants (P_c and T_c) by de-la-Contoircogniard method, V_c by density method and application to liquefaction of air, hydrogen and helium.

In Chemical Kinetics Dr. N. Nagaraj suggested to explain the factors influencing the rate of a reaction with an example. He suggested to introduce the activation energy, threshold energy, normal energy along with Arrhenius equations. Graphical representation to be considered for effect of temperature on the rate of reaction. Radioactive decay can be avoided.

In Solids state and structure of ionic solids Dr. Rudresh suggested to specify the structural differences between solids-crystalline and amorphous and liquid crystalline state-classification

(disc, rod and columnar).He suggested Elementary discussion of the liquid crystalline state can be avoided.

In **Metallurgy-1**,Prof.Chaya suggested to explain the refining of metals –electrolyte(Cu), Vapour phase(Zn), Zone refining (Si) as individual metals.They also suggested to include extraction shall be followed through flow sheet and chemical reaction.

In **Organic halogen compounds** Dr.Prakashrao suggested to consider tertiary butyl bromide for SN1 and methyl iodide SN2 reaction. Relative reactivity of alkyl,allyl,vinyland aryl halides examples to be considered.

In **Alcohols and thiols** Dr.N.Nagaraj suggested to indicate the preparation of thiols from alkyl halide and alcohols. He included the chemical reactions –formation of salts, thio-esters, condensation with aldehyde and ketones.

IV Semester B.Sc Chemistry.

In **Nuclear and radiochemistry** Dr.Prakashrao suggested of introducing the n-n,n-p,p-p ratio of nuclear forces,radio active series to mention the first and last nuclide in the series.Nucleus structure and features of radioactive series can be avoided.

Dr.Rudresh has suggested to explain artificial transmutation by considering (Na 24, P 32 ,Co 60, I 131,C 14).

In **Metallurgy** Dr.Prakashraosuggested to include quenching along with annealing and tempering. Techniques in production of metal powders can be avoided.

In **Surface chemistry and phase equilibria** Prof.Chaya has suggested to include $F=C-P+2$ for one component system and $F=C-P=1$ for two component system.

In **Industrial materials-1** Dr.Rudresh suggested to mention Moh's scale for hardness of abrasives. He suggested Ordinary Portland and pozzolonic Portland cement can be avoided.

In **Carboxylic acid and its derivatives**Dr.N.Nagaraj has suggested to specify the number of carbon atoms upto four in the action of heat on dicarboxylic acids.

In **Environmental chemistry** Dr.prakashrao suggested to explain the industrial effluents from sugar and paper industry.He suggested to avoid the name Green Chemistry while explaining particulate pollution.

In **Photochemistry** Dr.N.Nagaraj has suggested to specify the quantum yield as QY more than 1, QY less than 1.

The board BOS proposed introduction of a characterization list along with crystallization for the produced preparation.

The Syllabus of B.Sc. – Chemistry Consists of: III Semester

CHE -T: Gaseous State, Chemical Kinetics, Solid state and structure of Ionic Solids, Metallurgy-I, Organic Halogen compounds, Alcohols and Thiols.

CHE-P: Preparation and purification of Organic compounds.

IV Semester:

CHE -T: Metallurgy, Nuclear and radiochemistry, Surface chemistry and phase equilibria, Industrial materials-1, Carboxylic acid and its derivatives, Environmental chemistry, Photochemistry.

CHE-P: Qualitative Analysis of a mixture of two simple Salts and above were accepted.

Inter-disciplinary Course:

The following course were accepted by the panel, as it focuses on the non- Chemistry students to know about basic knowledge of chemistry.

- 1.Nutrition & diet.
2. Chemistry in daily life.

These were accepted and approved by the panel.

The BOS meeting Conducted with Vote of thanks by the Pof. Surendra Reddy.



Prof. Surendra Reddy

Chairperson

Board of Studies in Chemistry

National Degree College (Autonomous), Basavanagudi.

B.Sc. Course Matrix

Sem	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
I	CHE-C1	Chemistry-I	4	30	70	100	4
	CHE-P1	Chemistry Lab -I	3	15	35	50	1
II	CHE-C2	Chemistry-II	4	30	70	100	4
	CHE-P2	Chemistry Lab -II	3	15	35	50	1
III	CHE-C3	Chemistry-III	4	30	70	100	4
	CHE-P3	Chemistry Lab -III	3	15	35	50	1
	CHE	Open Elective	2	15	35	50	1
IV	CHE-C4	Chemistry-IV	4	30	70	100	4
	CHE-P4	Chemistry Lab -IV	3	15	35	50	1
V	CHE-C5	Organic Chemistry	4	30	70	100	4
	CHE-P5	Chemistry Lab -V	3	15	35	50	1
	CHE-C6	Physical Chemistry VI	4	30	70	100	4
	CHE-P6	Chemistry Lab -VI	3	15	35	50	1
VI	CHE-C7	Inorganic Chemistry VII	4	30	70	100	4
	CHE-P7	Chemistry Lab -VII	3	15	35	50	1
	CHE-C8	Bio- Chemistry VIII	4	30	70	100	4
	CHE-P8	Chemistry Lab -VIII	3	15	35	50	1
Total Hours , Marks & Credits			58	375	875	1250	41

The above CBCS structures were accepted & approved by the panel

The following of the member of the BOE was approved by the Board.

Sl.No	Members Name	Address
1	Prof. Surendra Reddy	The National Degree, Basavanagudi, Bangalore
2	Prof R. Nagaraj	The National Degree, Basavanagudi, Bangalore
3	Prof Yadhunandan N.G	The National Degree, Basavanagudi, Bangalore
4	Prof Shyamala G.A	The National Degree, Basavanagudi, Bangalore
5	Prof Yashaswini H.V	The National Degree, Basavanagudi, Bangalore
6	Prof Chaya B. R	KLE College Rajaji Nagar, Bangalore

The following lists of the External Examiners was approved by the Board.

Sl.No	Members Name	Address
1	Dr K.C Mahesh	Mount Carmel College, Vasanth Nagar, Bangalore.
2	Prof Siddaraju	V. V Puram College, Basavanagudi. Bangalore
3	Prof Keshava Reddy	V. V Puram College, Basavanagudi. Bangalore
4	Prof Somashekarappa G. P	Kalpatharu College, Tiptaru
5	Prof Spandana	N.M.K.R.V College, Jayanagar, 3 rd Block, Bangalore
6	Dr Suresh	Dayananda Sagar College, Kattiguppe, Bangalore



Prof. Surendra Reddy

Chairperson

Board of Studies in Chemistry

National Degree College (Autonomous), Basavanagudi.



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THE NATIONAL COLLEGE BASAVANAGUDI, BENGALURU- 04
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DEPARTMENT OF CHEMISTRY

Board of Studies

BOS

31st May 2018

Academic year 2018-19

MEETING NOTICE

31st May 2018

TO

All BOS Members

Dear Madam/Sir,

Subject: Meeting of the board of studies in chemistry.

This is to inform that the board of studies meeting in Chemistry is scheduled on Thursday, **31st May 2018 at 1.00pm** in the department of chemistry to discuss 1st and 2nd semester B.Sc courses syllabus. The National Degree College (Autonomous), Basavanagudi, Bangalore-4.

I request you to make it convenient to attend the meeting

Agenda:

1. Discuss in detail on I and II sem B.Sc Subjects.
2. Discuss in detail on the Chemistry Experiments & preparation of Solution.
3. Approval of panel of External Examiners & Board of Examiners.
4. Any other Subject.



Thanking You

Your ssincerely

Prof. R. Nagaraj
Chairperson
Board of Studies in Chemistry
National Degree College (Autonomous), Basavanag



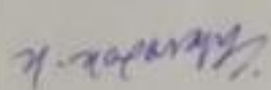
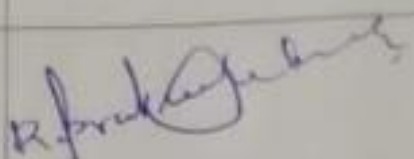
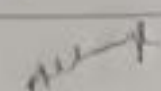
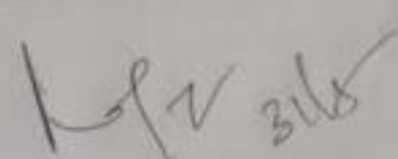
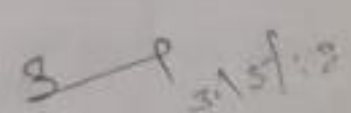

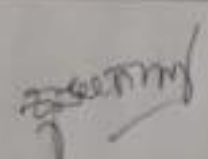
The National Degree College, Basavanagudi, Bangalore -4
(Autonomous)

Proceedings of the Board of Examiner's meeting held on 31st May, 2018

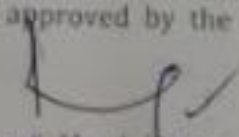
A meeting of the Board of Examiners' in Chemistry was held in the Department of Chemistry, National Degree College, Basavanagudi, Bangalore-4 on Thursday, the 31st May 2018.

Three sets of question papers each for I and II semester (Theory and Practicals) were discussed, suggestions were incorporated and approved by the board.

Sl.No	Members present	Signature
1.	Dr.Devaraj.V.R Department of Biochemistry. Central college campus Bangalore University Bangalore-560001 Mobile:9886494428 E-Mail:devaraj@bub.ernet.in	
2. ✓	Dr.Rudresh.H.B CEO, Vijaya metal finisher's Bangalore, India. Mob: +91 9880122298 +91 8028361469/1282 E-Mail:rudresh10@hotmail.com	
3.	Dr.Chandra S Bajagur Head I.P.Services Shell Technology India Pvt Ltd. Mahadevapura Post Bangalore-560048 Mobile: E-Mail:	
4.	Dr.N.Nagarajan Vice Chairman BAL Pharma Bommasandra Industrial Area Bangalore-560019 Mobile: E-Mail:	

5.	Dr. N.Nagaraju St. Joseph's degree college (Autonomous), Bangalore. Mobile: 9886765750 E-Mail: nagarajun@gmail.com	
6.	Dr. Prakash Kumar Rao, Associate Professor, SJR college, Bangalore-09 Mobile: 9480549513 E-Mail: pkrao1960@gmail.com	
7.	Chaya.M.R Associate Professor, KLE College, Rajajinagar Bangalore-10 Mobile: 9845015934 E-Mail: chaya.org@gmail.com	
8.	R.Nagaraj Associate Professor, H.O.D, Department of Chemistry, The National Degree College Basavanagudi, Bangalore-04 Mobile: 9845632142 E-Mail:	
9.	Surendra Reddy Associate Professor, Department of Chemistry, The National Degree College Basavanagudi, Bangalore-04 Mobile: 7019601804 E-Mail:	
10.	N.G.Yadhunandana Assistant Professor, Department of Chemistry, The National Degree College Basavanagudi, Bangalore-04 Mobile: 9611104201 E-Mail: yadhu.ng@gmail.com	
11.	Shyamala G.A. Assistant professor Department of Chemistry, The National Degree College Basavanagudi, Bangalore-04 Mobile: 7892655979 E-Mail:	

The members of the board have discussed the various aspects of I and II semester syllabus for the year 2018 onwards. The valuable suggestions and corrections made by the members were incorporated. The copy of the syllabus approved by the BOS is attached here with.


Professor & Head, Dept. of Chemistry
National College, Basavanagudi
Bangalore-560 004



**THE NATIONAL DEGREE COLLEGE (AUTONOMOUS)
BASAVANAGUDI, BANGALORE-4**

Department of Chemistry

Proceedings of the BOS meeting held on 31st May 2018. The following members have attended the meeting.

1. Dr. Rudresh. CEO Vijaya metals finishers ltd., Bangalore.
2. Dr. Devaraj. University Nominee
3. Dr. N. Nagaraj. Subject expert
4. Dr. Prakashrao. Subject expert
5. Prof. M. R. Chaya. Subject expert
6. HOD and Staff members of the department.

Prof. R. Nagaraj H.O.D of the department welcomed the members and read the proceedings of the previous meeting.

The board discussed about the strength of the present syllabus, student feedback, Internal Marks of theory and practical's and allotment of external examiners for end semester practical examinations.

The board has suggested the following corrections in the syllabus of I and II semester B.Sc from the Academic year 2018-19.

I semester B.Sc., Chemistry.

In mathematical concepts of chemistry Dr. Prakash Rao has suggested to introduce 10cm/10cm graph to be plotted during graphical representation of experimental data, large distance to be taken while calculating slopes and while drawing line graphs it has to

pass through the origin. He also suggested that instead of using bar graph to indicate the percentage more than 5 components, it is necessary to use pie charts. Problems to be calculated in terms of milli moles so that wastage of chemicals can be avoided.

In **Thermodynamics I** significance of γ is to be given while explaining heat capacity of gases at constant volume. Atomicity of a gas such as mono, di, tri and poly atomic gases to be explained.

In **Analytical chemistry**, Dr. Rudresh suggested to introduce W/V with examples in terms of ppm, ppb which is applicable in daily life. He also suggested to introduce the application of these units in estimating toxic metals in air, anaesthesia etc.

In **Quantum mechanics** instead of shapes of s, p, d, f orbitals, the members suggested to introduce radial probability distribution of 1s, 2s, and 2p atomic orbitals.

In **periodic table** Dr. N. Nagaraj suggested to introduce the calculation of ionisation energy based on Pauling scale, similarity and dissimilarity of the compounds of the elements like LiCO_3 , while learning diagonal relationship.

In **Hydrides of Chalcogens** explanation is to be given for the decreasing order of reducing action of H_2Te , H_2Po .

In **oxidation numbers** calculation of oxidation no. of oxyacids of halogens, sulphur ($\text{H}_2\text{S}_2\text{O}_3$) and Phosphorus is to be explained.

In **non-aqueous solvents** while giving application of liquid ammonia as a solvent ammoniated electron in Birch reagent is to be explained.

In **Liquids & Solutions** effects of addition of impurity to the pure solvent is to be explained with reason. The members also suggested to delete carcinogenicity and toxicity of hydrocarbons in alkanes and cyclo alkanes.

II Semester B.Sc Chemistry.

In **Chemical bonding** Dr. Nagaraj suggested of introducing the structural study of ICl_2^+ ion based on VSEPR theory, to explain Born-lande equation before Born Haber

cycle for calculation of lattice energy. To explain lewis concept, VSEPR theory and then Valence bond approach and to review the postulates of VBT and MOT.

To explain the energy level diagram in MOT for studying bond order, stability and magnetic property .

In **polarisation Concept** molecules like ammonia, water, Chloroform, CCl_4 and benzene to be taken as examples.

In **General study of d & f block elements** the members suggested to delete spectral properties of Lanthanides & Actinides and to introduce colour formation in complexes. The members also suggested to delete the study of atomic and ionic radii , ionisation energy of transition elements.

In **Inorganic polymers** definition, examples and uses of conducting and semiconducting polymers is introduced.

In **Silicates** classification of silicates (any 3) and composition and applications of Zeolites is introduced.

In **Thermodynamics II** application of Clausius -Clapeyron equation in boiling point correction of solvents to be given.

In **Arenes** the structure of benzene is to be explained on energy level diagram and while explaining the orienting influence of functional groups, man electron with drawing groups like $-\text{COOH}$, RCHO is to be given.

The Syllabus of B.Sc. Chemistry Consists of I Semester:

CHE -T: Mathematical Concepts Chemistry, Thermodynamics I, Analytical Chemistry, Quantum Mechanics, Periodic Table, Hydrolysis of Chalcogens, Oxidation Numbers, Non-Aqueous Solvents, Liquids and solutions.

CHE -P: Determination of the percentage of available chlorine in the given sample of Bleaching Powder.

II Semester:

CHE -T: Chemical Bonding, General Study of d and f -block elements, Inorganic Polymers, Silicates, Thermodynamics II, Arenes.

CHE -P: Determination of molar mass of non-electrolyte by Walker Lumsden method.

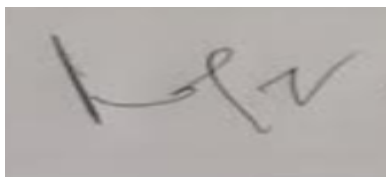
Determination of degree of dissociation of an electrolyte by ebullioscopic method.

The Board also discussed, the preparation of standard solution to be done by the students for experiments.

In determination of molar mass, students are supposed to calculate the van't Hoff factor with proper substitution.

And the above were accepted.

The BOS meeting Conducted with Vote of thanks by the Pof. Surendra Reddy.



Prof. R. Nagaraj

Chairperson

Board of Studies in Chemistry

National Degree College (Autonomous), Basavanagudi.

B.Sc. Course Matrix

Sem	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
I	CHE-C1	Chemistry-I	4	30	70	100	4
	CHE-P1	Chemistry Lab -I	3	15	35	50	1
II	CHE-C2	Chemistry-II	4	30	70	100	4
	CHE-P2	Chemistry Lab -II	3	15	35	50	1
III	CHE-C3	Chemistry-III	4	30	70	100	4

	CHE-P3	Chemistry Lab -III	3	15	35	50	1
IV	CHE-C4	Chemistry-IV	4	30	70	100	4
	CHE-P4	Chemistry Lab -IV	3	15	35	50	1
V	CHE-C5	Organic Chemistry	4	30	70	100	4
	CHE-P5	Chemistry Lab -V	3	15	35	50	1
	CHE-C6	Physical Chemistry VI	4	30	70	100	4
	CHE-P6	Chemistry Lab -VI	3	15	35	50	1
VI	CHE-C7	Inorganic Chemistry VII	4	30	70	100	4
	CHE-P7	Chemistry Lab -VII	3	15	35	50	1
	CHE-C8	Bio- Chemistry VIII	4	30	70	100	4
	CHE-P8	Chemistry Lab -VIII	3	15	35	50	1
		Total Hours , Marks & Credits	56	360	840	1200	40

The above CBCS structures were accepted & approved by the panel

The following of the members of the BOE was approved by the Board.

Sl.No	Members Name	Address
1.	Prof R. Nagaraj	The National Degree, Basavanagudi,Bangalore
2	Prof. Surendra Reddy	The National Degree, Basavanagudi,Bangalore
3	Prof Yadhunandan N. G	The National Degree, Basavanagudi,Bangalore
4	Prof Shyamala G. A	The National Degree, Basavanagudi,Bangalore
5	Prof Chaya B. R	KLE College Rajaji Nagar, Bangalore

The following lists of the External Examiners was approved by the Board.

Sl.No	Members Name	Address
1	Dr K.C Mahesh	Mount Carmel College, Vasanth Nagar, Bangalore.
2	Prof Siddaraju	V. V Puram College, Basavanagudi. Bangalore
3	Prof Keshava Reddy	V. V Puram College, Basavanagudi. Bangalore
4	Prof Somashekarappa G. P	Kalpatharu College, Tiptaru
5	Prof Spandana	N.M.K.R.V College, Jayanagar, 3 rd Block, Bangalore
6	Dr Suresh	Dayananda Sagar College, Kattiguppe, Bangalore



Prof. R. Nagaraj

Chairperson

Board of Studies in Chemistry

National Degree College (Autonomous), Basavangudi



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AUTONOMOUS

Website: www.ncbgudi.com

DEPARTMENT OF CHEMISTRY

Board of Studies

BOS

21st June 2017

Academic year 2017-18

MEETING NOTICE

7th June 2017

TO

All BOS Members

Dear Madam/Sir,

Subject: Meeting of the board of studies in chemistry.

This is to inform that the board of studies meeting in Chemistry is scheduled on Wednesday, **21st June 2018 at 2.00pm** in the department of chemistry to discuss V and VI semester B.Sc courses syllabus. The National Degree College (Autonomous), Basavanagudi, Bangalore-4.

I request you to make it convenient to attend the meeting.

Agenda:

1. Discuss in detail on V and VI sem B.Sc chemistry Subjects.
2. Discuss in detail on the subjects to develop problem solving skills..
3. Discussion on the students exposure to different process used in industries and their application.
4. Discussion on the projects and seminars.
5. Discussion on the physical chemistry experiments.
6. Approval of panel of External Examiners & Board of Examiners.
7. Any other agenda with permission of the chair.



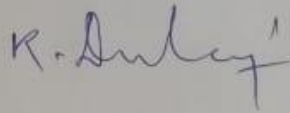
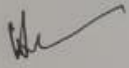
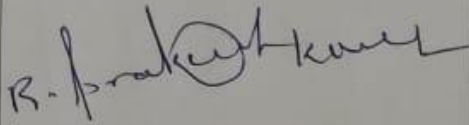
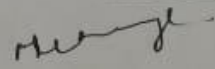
Thanking You



Yourssincerely

Prof. R. Nagaraj
Chairperson
Board of Studies in Chemistry
National Degree College (Autonomous), Basavanag

The National Degree College, Basavanagudi, Bangalore -4
(Autonomous)

Meeting of the Board of Studies in Chemistry held on 21st June 2017

Sl.No	Members present	Signature
1.	Dr.Devaraj.V.R Professor of Biochemistry Department of Biochemistry, Central college campus Bangalore University Bangalore-560001	
2.	Dr.Rudresh.H.B CEO, Vijaya metal finisher's Bangalore. India. Mob: +91 9880122298 +91 8028361469/1282	
3.	Dr.Chandra S Bajagur Head I.P.Services Shell Technology India Pvt Ltd. Mahadevapura Post Bangalore-560048	
4.	Dr.N.Nagarajan Vice Chairman BAL Pharma Bommasandra Industrial Area Bangalore-560019	
5.	Dr. N.Nagaraju Associate Professor St. Joseph's degree college (Autonomous) Bangalore.	
6.	Dr.Prakash Kumar Rao, Associate Professor, SriJagadguru Renukacharya college Bangalore.	
7.	Chaya.M.R Assistant Professor, KLE College Rajajinagar Bangalore-	

8.	Nagaraj.R Associate Professor, H.O.D,Department of Chemistry, The National Degree College Bangalore.	
09.	Shobha.J.Prakash Associate Professor, Department of Chemistry, The National Degree College Bangalore.	
10.	Yadhunandan. N.G Assistant professor Department of Chemistry, The National Degree College Bangalore.	

The members of the board have discussed the various aspects of V and VI semester chemistry syllabus for the year 2017 onwards. The valuable suggestions and corrections made by the members were incorporated. The same has been approved and signed by the board members. The copy of the syllabus approved by the BOS is attached here with.



|| ಪ್ರವೃತ್ತಿ ಪರಮಾ ಗತಿ: ||

**The National Degree College Basavanagudi, Bangalore -560004
(Autonomous)**

Department of Chemistry

Proceedings of the BOS meeting held on 21st June 2017

Board of studies of chemistry department started at 11am on 21st June 2017. Head of the department of chemistry Prof.Nagaraj R. welcomed the members who were present.

An Industrialist and an old student of National College Jayanagar

Dr.Rudresh suggested emphasizing the importance and applications of each module at the beginning to discuss objectives of the topics.He also insisted to create interest in chemistry among the students of degree classes by giving importance of various chemicals which are used as drugs,cosmetics. Polymers,etc in the first class.

Dr.Rudresh made a point to conduct one guest lecture on each topic of the syllabus framed for all semesters.

Dr. Prakash kumar of Sri Jagadguru Renukacharya college suggested to introduce some theoretical aspects in practicals so that the students by conducting the experiment will learn the concept easily and also it reduces the syllabus pressure on teachers.

Dr.Devaraj.V.R, Professor of Biochemistry, BangaloreUniversity, Prof.Chaya of K.L.E college, Dr. Prakash kumar Rao along with Prof. R.Nagaraj H.O.D of chemistry, Prof Shobha.J.Prakash, Prof Yadhunandan N.G, discussed about the Syllabus(theory and

practical's) of V and VI Semesters that was framed based on the CBCS System, model question papers and question bank for all the semesters.

They insisted the following points collectively.

- i) Problems to be worked out in physical chemistry using SI units but cgs system to be mentioned.
- ii) Introduction of the phenomena of corrosion and batteries in next revision
- iii) Conducting a study trip to one of the pharmaceutical industry who have chromatography instruments

The Syllabus of B.Sc. Chemistry Consists of

V Semester:

CHE -T:Paper V- Organic chemistry

Amines and pericyclic reactions, heterocyclic compounds, stereochemistry, spectroscopy of organic compounds.

CHE -P: Organic chemistry lab V

Systematic identification of organic compounds.

CHE -T:Paper VI- Physical chemistry

Analytical chemistry, electrochemistry, chemical spectroscopy.

CHE -P: Physical chemistry lab VI

Potentiometric titration of HCl with NaOH.

Determination of percentage of NaCl by miscibility temperature method.

VI Semester:

CHE -T:Paper VII- Inorganic chemistry

Introduction to group theory, bioinorganic chemistry, coordination and organometallic compounds

CHE -P: Inorganic chemistrylab VII

Determination of the total hardness of water by using EDTA

Estimation of Nickel as nickel dimethyl glyoximate gravimetrically.

CHE -T:Paper VIII- Bio- chemistry

Amino acids and proteins, enzymes, biological oxidation, metabolism, molecular biology

CHE -P: Bio-chemistrylab VIII

Estimation of creatinine by Jaffe's method

Isolation lactose and casein from milk by colorimetric method.

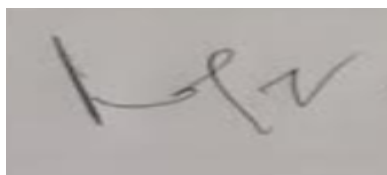
BOS Suggested in Physical Chemistry lab the students need to determine the cell constant of the conductivity cell and Calculation is done by Substitution.

BOS suggested to standardised the solution before conductometric titration as well as potentiometric titration, they also discussed on organic chemistry lab ,preparation of solid derivatives and functional group tests.

The board BOS also discussed on the students' academic projects and its uses

And the above were accepted.

The BOS meeting concluded with vote of thanks by HOD.



Prof. R. Nagaraj

Chairperson

Board of Studies in Chemistry

National Degree College (Autonomous), Basavanagudi.

B.Sc. Course Matrix

Sem	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
I	CHE-C1	Chemistry-I	4	30	70	100	4
	CHE-P1	Chemistry Lab -I	3	15	35	50	1
II	CHE-C2	Chemistry-II	4	30	70	100	4
	CHE-P2	Chemistry Lab -II	3	15	35	50	1
III	CHE-C3	Chemistry-III	4	30	70	100	4
	CHE-P3	Chemistry Lab -III	3	15	35	50	1
IV	CHE-C4	Chemistry-IV	4	30	70	100	4
	CHE-P4	Chemistry Lab -IV	3	15	35	50	1
V	CHE-C5	Organic Chemistry	4	30	70	100	4
	CHE-P5	Chemistry Lab -V	3	15	35	50	1
	CHE-C6	Physical Chemistry VI	4	30	70	100	4
	CHE-P6	Chemistry Lab -VI	3	15	35	50	1
VI	CHE-C7	Inorganic Chemistry VII	4	30	70	100	4
	CHE-P7	Chemistry Lab -VII	3	15	35	50	1
	CHE-C8	Bio- Chemistry VIII	4	30	70	100	4
	CHE-P8	Chemistry Lab -VIII	3	15	35	50	1
Total Hours , Marks & Credits			56	360	840	1200	40

The above CBCS structures were accepted & approved by the panel

The following of the members of the BOE was approved by the Board.

Sl.No	Members Name	Address
1.	Prof R. Nagaraj	The National Degree, Basavanagudi,Bangalore
2	Prof.Shobaj.Praakash	The National Degree, Basavanagudi,Bangalore
3	Prof Yadhunandan N. G	The National Degree, Basavanagudi,Bangalore
4	Prof Shyamala G. A	The National Degree, Basavanagudi,Bangalore
5	Prof.Sushma.C	The National Degree, Basavanagudi,Bangalore
6	Prof Chaya B. R	KLE College Rajaji Nagar, Bangalore

The following lists of the External Examiners was approved by the Board.

Sl.No	Members Name	Address
1	Dr K.C Mahesh	Mount Carmel College, Vasanth Nagar, Bangalore.
2	Prof Siddaraju	V. V Puram College, Basavanagudi. Bangalore
3	Prof Keshava Reddy	V. V Puram College, Basavanagudi. Bangalore
4	Prof Somashekarappa G. P	Kalpatharu College, Tiptaru
5	Prof Spandana	N.M.K.R.V College, Jayanagar, 3 rd Block, Bangalore
6	Dr Suresh	Dayananda Sagar College, Kattiguppe, Bangalore



Prof. R. Nagaraj

Chairperson

Board of Studies in Chemistry

National Degree College (Autonomous), Basavanagudi.



E-Mail: nationalbgudiautonomous@gmail.com

☎ 080-26674441

THE NATIONAL COLLEGE BASAVANAGUDI, BENGALURU- 04
AUTONOMOUS

Website: www.ncbgudi.com

DEPARTMENT OF CHEMISTRY

Board of Studies

BOS

5th May 2016

Academic year 2016-17

MEETING NOTICE

20th April 2016

TO

All BOS Members

Dear Madam/Sir,

Subject: Meeting of the board of studies in chemistry.

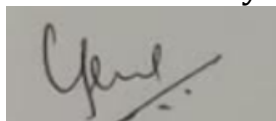
I take pleasure in informing you that the board of studies meeting in Chemistry is scheduled to be held on **Thursday, 5th May 2016, at 11.00am** in the department of chemistry. The National Degree College (Autonomous), Basavanagudi, Bangalore-4, to discuss III and IV semester BSc Courses Syllabus.

I request you to make it convenient to attend the meeting.

Agenda:

1. Discuss in detail on III and IV sem B.Sc Subjects.
2. Discuss in detail on practical experiments.
3. Discussion on the modules objectives.
4. Discuss in detail on open Elective paper for non- Chemistry students.
5. Discussion on model question papers and question bank for all the semester.
6. Approval of panel of External Examiners & Board of Examiners.
7. Any other Subject.

Thanking You
Your's sincerely



Prof. Chandrashekar.

Chairperson

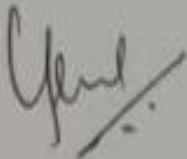
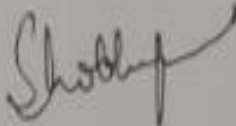
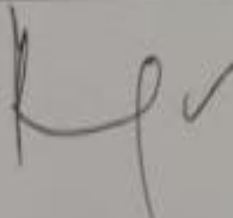
Board of Studies in Chemistry

National Degree College (Autonomous), Basavanagudi

The National Degree College, Basavanagudi, Bangalore -4
(Autonomous)

Meeting of the Board of Studies in Chemistry held on 5th May 2016.

Sl.No	Members present	Signature
1.	Dr.Devaraj.V.R Professor of Biochemistry Department of Biochemistry, Central college campus Bangalore University Bangalore-560001	K. Devaraj devaraj@BUB.ernet.in
2.	Dr.Rudresh.H.B CEO, Vijaya metal finisher's Bangalore. India. Mob: +91 9880122298 +91 8028361469/1282	Rudresh H B rudresh10@kist mail.com
3.	Dr.Chandra S Bajagur Head I.P.Services Shell Technology India Pvt Ltd. Mahadevapura Post Bangalore-560048	—
4.	Dr.N.Nagarajan Vice Chairman BAL Pharma Bommasandra Industrial Area Bangalore-560019	—
5.	Dr. N.Nagaraju Associate Professor St. Joseph's degree college (Autonomous) Residency road Bangalore.	9886765750 N. Nagaraju nagaraju@yahoo.com
6.	Dr.Prasanna Kumar Rao, Associate Professor, SSCASC (WOMENS), TUMKUR--572102 TUMKURUNIVERSITY	P. Prakash Kumar PK Rao 1960 @ gmail.com
7.	Chaya.M.R Assistant Professor, KLE College Rajajinagar Bangalore-	Hubey

8.	Chandrashekara Associate Professor, H.O.D,Department of Chemistry, The National Degree College Bangalore.	
09.	Shobha.J.Prakash Associate Professor, Department of Chemistry, The National Degree College Bangalore.	
10.	Nagaraj.R Assistant professor Department of Chemistry, The National Degree College Bangalore.	

The members of the board have discussed the various aspects of III, IV semester chemistry syllabus, inter disciplinary and add-on course syllabi for the year 2016 onwards. The valuable suggestions and corrections made by the members were incorporated. The same has been approved and signed by the board members. The copy of the syllabus approved by the BOS is attached here with.

**THE NATIONAL DEGREE COLLEGE (AUTONOMOUS)
BASAVANAGUDI, BANGALORE-4**

Proceedings

Proceedings of the meeting:

Board of studies of chemistry department started at 11am on 5th May 2016. Head of the department of chemistry Prof.Chandrshekara welcomed the members who were present.

An Industrialist and an old student of our college Mr Rudresh suggested emphasizing the importance and applications of each module at the beginning to discuss objectives of the topics.

Dr.Devaraj.V.R, Professor of Biochemistry, Bangalore University, Dr.Nagaraju.N of St Josephs college, Prof.Chaya of K.L.E, Prof. Prakash kumar Rao of Siddaganga college for women, Tumkur, Tumkur university, discussed about the Syllabus of III and IV Semester that was framed based on the CBCS System, the syllibi of inter disciplinary and add-on course, model question papers and question bank for all the semesters.

They insisted the following points collectively.

- i) Problems are must in physical chemistry modules.
- ii) To insist flow-chart in metallurgy module.
- iii) Green chemistry should be treated as a separate module.
- iv) To emphasize a specific reaction mechanism in organometallic compounds.

v) With regard to practical, they suggested to include demonstration experiments in chromatography, chemical kinetics and 2 step preparations organic preparations.

Finally they concluded to conduct industrial tours and to collect the feedback of the syllabi from outgoing students.

The Syllabus of B.Sc. – Chemistry Consists of: III Semester

CHE -T: Chemical Kinetics, Solid state and structure of Ionic Solids, Metallurgy-I, Organic Halogen compounds.

CHE-P: Demonstration experiments in chromatography and chemical kinetics.

Two steps preparation of organic compounds.

IV Semester:

CHE -T: Metallurgy, Surface chemistry and phase equilibria, Carboxylic acid and its derivatives, Environmental chemistry, Photochemistry.

CHE-P: Qualitative Analysis of a mixture of two simple Salts and above were accepted.

Inter-disciplinary Course:

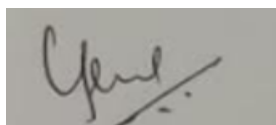
The following course were accepted by the panel, as it focuses on the non- Chemistry students to know about basic knowledge of chemistry.

1. Ideal weight ,total energy requirements,BMS.

2. Cosmetics and perfumes,soil and water..

These were accepted and approved by the panel.

The BOS meeting Conducted with Vote of thanks by HOD.



Chairperson

Board of Studies in Chemistry

National Degree College (Autonomous), Basavanagudi.

B.Sc. Course Matrix

Sem	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
I	CHE-C1	Chemistry-I	4	30	70	100	4
	CHE-P1	Chemistry Lab -I	3	15	35	50	1
II	CHE-C2	Chemistry-II	4	30	70	100	4
	CHE-P2	Chemistry Lab -II	3	15	35	50	1
III	CHE-C3	Chemistry-III	4	30	70	100	4
	CHE-P3	Chemistry Lab -III	3	15	35	50	1
	CHE	Open Elective	2	15	35	50	1
IV	CHE-C4	Chemistry-IV	4	30	70	100	4
	CHE-P4	Chemistry Lab -IV	3	15	35	50	1
V	CHE-C5	Organic Chemistry	4	30	70	100	4
	CHE-P5	Chemistry Lab -V	3	15	35	50	1
	CHE-C6	Physical Chemistry VI	4	30	70	100	4
	CHE-P6	Chemistry Lab -VI	3	15	35	50	1
VI	CHE-C7	Inorganic Chemistry VII	4	30	70	100	4
	CHE-P7	Chemistry Lab -VII	3	15	35	50	1
	CHE-C8	Bio- Chemistry VIII	4	30	70	100	4
	CHE-P8	Chemistry Lab -VIII	3	15	35	50	1
Total Hours , Marks & Credits			58	375	875	1250	41

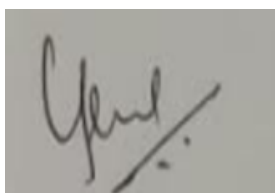
The above CBCS structures were accepted & approved by the panel

The following of the member of the BOE was approved by the Board.

Sl.No	Members Name	Address
1	Prof. Chandrashekar	The National Degree, Basavanagudi,Bangalore
2	Prof R. Nagaraj	The National Degree, Basavanagudi,Bangalore
3	Prof.Shobaj.Pakash	The National Degree, Basavanagudi,Bangalore
4	Dr.B.Nagalakshmi.	MLA college of women ,Malleshwaram,Bangalore
6	Prof Chaya B. R	KLE College Rajaji Nagar, Bangalore

The following lists of the External Examiners was approved by the Board.

Sl.No	Members Name	Address
1	Prof Siddaraju	V. V Puram College, Basavanagudi. Bangalore
2	Prof Keshava Reddy	V. V Puram College, Basavanagudi. Bangalore
3	Prof Somashekarappa G. P	Kalpatharu College, Tiptaru
4	Dr. Suresh	Dayananda Sagar College, Kattiguppe, Bangalore



Chairperson

Board of Studies in Chemistry

National Degree College (Autonomous), Basavanagudi.



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THE NATIONAL COLLEGE BASAVANAGUDI, BENGALURU- 04

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Website: www.ncbgudi.com

DEPARTMENT OF CHEMISTRY

Board of Studies

BOS

27th June 2015

Academic year 2015-16

MEETING NOTICE

13th June 2015

TO

All BOS Members

Dear Madam/Sir,

Subject: Meeting of the board of studies in chemistry.

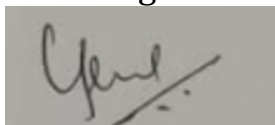
This is to inform that the board of studies meeting in Chemistry is scheduled on Saturday, **27th June at 11.00am** in the department of chemistry to discuss 1st and 2nd semester B.Sc courses syllabus. The National Degree College (Autonomous), Basavanagudi, Bangalore-4.

I request you to make it convenient to attend the meeting.

Agenda:

1. Discussion in detail on I and II sem B.Sc Subjects.
2. Discuss in detail on the Chemistry Experiments & preparation of Solution.
3. Discussion in detail on model question paper.
4. Discussion on internals and end semester examination.
5. Discussion in detail on IA and end semester exam marks distribution.
6. Approval of panel of External Examiners & Board of Examiners.
7. Any other Subject.

Thanking You



Your sincerely,

Chairperson

Board of Studies in Chemistry

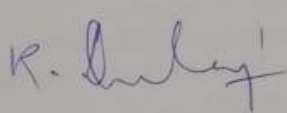
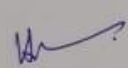

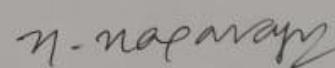
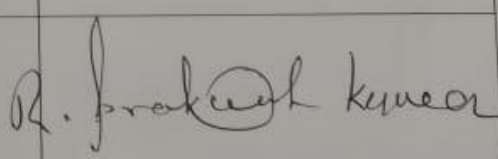
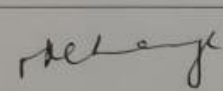
National Degree College (Autonomous), Basavanag

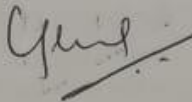
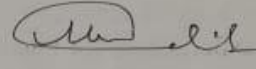
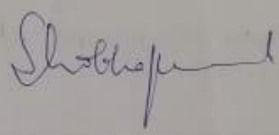
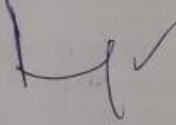
The National Degree College, Basavanagudi, Bangalore -4
(Autonomous)

Meeting of the Board of Studies in Chemistry was held on 27th June 2015. The following aspects were discussed.

1. I and II semester syllabus based on CBCS system.
2. Question paper pattern for I and II semesters.
3. Question bank for I and II semesters.
4. List of practical experiments for I and II semesters including scheme of valuation.
5. Template for design of syllabus of III, IV, V and VI semesters.
6. Topics for Interdisciplinary course for III and IV semesters.
 - i. Entrepreneurial Chemistry
 - ii. Pharmaceutical Chemistry

Changes have been incorporated based on the valuable suggestions given by the following members of the BOS.

Sl.No	Members present	Signature
1.	Dr. Devaraj. V.R Department of Biochemistry, Central college campus Bangalore University Bangalore-560001	
2.	Dr. Rudresh.H.B CEO, Vijaya metal finisher's Bangalore. India. Mob: +91 9880122298 +91 8028361469/1282	
3.	Dr. Chandra S Bajagur Head I.P. Services Shell Technology India Pvt Ltd. Mahadevapura Post Bangalore-560048	
4.	Dr. N. Nagaraju St. Joseph's degree college (Autonomous) Residency road Bangalore.	
5.	Dr. Prakash Kumar Rao, Associate Professor, SSCASC (WOMENS), Tumkur--572102 Tumkur University	
6.	Chaya.M.R Associate Professor, KLE College Rajajinagar Bangalore-	

7.	Chandrashekara Associate Professor, H.O.D, Department of Chemistry, The National Degree College Bangalore.	
8.	Mahadevaiah Associate Professor, Department of Chemistry, The National Degree College Bangalore.	
9.	Shobha J. Prakash Associate Professor, Department of Chemistry, The National Degree College Bangalore.	
10.	Nagaraj.R Assistant professor Department of Chemistry, The National Degree College Bangalore.	



**THE NATIONAL DEGREE COLLEGE (AUTONOMOUS)
BASAVANAGUDI, BANGALORE-4**

Department of Chemistry

Proceedings of the meeting:

Board of studies of chemistry department started at 11am on 27th June 2015. Head of the department of chemistry Prof.Chandrsekhar welcomed the members who were present.

An Industrialist and an old student of our college Mr Rudresh insisted that we should give more importance to practical aspects, such as sending students to industries and research institutes. This will give them a better exposure to research activities and an idea of how to frame their careers when they go out. He also suggested that some marks should be allotted to such activities. The students will be serious about these activities.

Dr.Nagaraju.N of St Josephs college, Prof.Chaya of K.L.E, Prof.Prakashkumar Rao of Siddaganga college for women, Tumkur, Tumkur university, Chandrashekar.S.Bajagur of Gulbarga university discussed about the Syllabus of I and II Semester that was framed based on the CBCS System. They gave their suggestions regarding certain topics that were incorporated in the present Syllabus.

In their presence we also discussed the topics or modules of II and III Year B.Sc., interdisciplinary topics which we are going to introduce for III Sem and IV Sem, model question paper and question bank for all the semesters.

They gave a suggestion not to include one mark questions in the question paper. They also insisted to prepare a tabular column indicating the number of hours and topics for all the semesters.

The Syllabus of B.Sc. Chemistry Consists of

I Semester:

CHE -T: Mathematical Concepts Chemistry, Thermodynamics I, Analytical Chemistry, Quantum Mechanics, Periodic Table.

CHE -P: Determination of the percentage of available chlorine in the given sample of Bleaching Powder.

II Semester:

CHE -T: Chemical Bonding, General Study of d and f -block elements, Inorganic Polymers, Silicates, Thermodynamics II, Arenes.

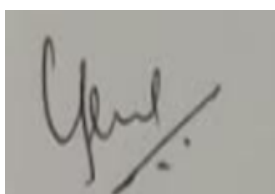
CHE -P: Determination of molar mass of non-electrolyte by Walker Lumsden method.

Determination of degree of dissociation of an electrolyte by ebullioscopic method.

The Board also discussed, the preparation of standard solution to be done by the students for experiments.

And the above were accepted.

The BOS meeting Conducted with Vote of thanks by the Pof. Surendra Reddy.



Chairperson

Board of Studies in Chemistry

National Degree College (Autonomous), Basavanagudi

B.Sc. Course Matrix

Sem	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
I	CHE-C1	Chemistry-I	4	30	70	100	4
	CHE-P1	Chemistry Lab -I	3	15	35	50	1
II	CHE-C2	Chemistry-II	4	30	70	100	4
	CHE-P2	Chemistry Lab -II	3	15	35	50	1
III	CHE-C3	Chemistry-III	4	30	70	100	4
	CHE-P3	Chemistry Lab -III	3	15	35	50	1
IV	CHE-C4	Chemistry-IV	4	30	70	100	4
	CHE-P4	Chemistry Lab -IV	3	15	35	50	1
V	CHE-C5	Organic Chemistry	4	30	70	100	4
	CHE-P5	Chemistry Lab -V	3	15	35	50	1
	CHE-C6	Physical Chemistry VI	4	30	70	100	4
	CHE-P6	Chemistry Lab -VI	3	15	35	50	1
VI	CHE-C7	Inorganic Chemistry VII	4	30	70	100	4
	CHE-P7	Chemistry Lab -VII	3	15	35	50	1
	CHE-C8	Bio- Chemistry VIII	4	30	70	100	4
	CHE-P8	Chemistry Lab -VIII	3	15	35	50	1
Total Hours , Marks & Credits			56	360	840	1200	40

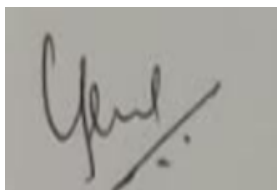
The above CBCS structures were accepted & approved by the panel

The following of the members of the BOE was approved by the Board.

Sl.No	Members Name	Address
1.	Prof.Chandrashekara	The National Degree, Basavanagudi,Bangalore
2	Prof.Mahadevaiah.	The National Degree, Basavanagudi,Bangalore
3	Prof Shoba J Prakash	The National Degree, Basavanagudi,Bangalore
4	Prof.Nagalakshmi.B.N	MLA college for women,Malleshwaram,Bangalore
5	Dr.N.Nagaraj.	St.Josep's degree college, Bangalore

The following lists of the External Examiners was approved by the Board.

Sl.No	Members Name	Address
1	Prof Siddaraju	V. V Puram College, Basavanagudi. Bangalore
2	Prof Keshava Reddy	V. V Puram College, Basavanagudi. Bangalore
3	Prof Somashekarappa G. P	Kalpatharu College, Tiptaru
4	Dr Suresh	Dayananda Sagar College, Kattiguppe, Bangalore



Chairperson

Board of Studies in Chemistry

National Degree College (Autonomous), Basavanagudi.