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THE NATIONAL COLLEGE BASAVANAGUDI, BENGALURU- 04
AUTONOMOUS

Website: www.ncbgudi.com

DEPARTMENT OF COMPUTER SCIENCE

BOS

Proceedings

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Meeting Notice

05-06-2019

To
All BOS Members

Dear Madam/Sir,

Sub: Meeting of the Board of Studies in Computer Science(UG)

I take pleasure in informing you that the Board of Studies Meeting in Computer Science (UG) is scheduled to be held on Saturday, 15th June 2019 at 10.30 a.m. in the department of Computer Science, The National College Autonomous, Basavanagudi, and Bangalore - 560004, to discuss III and IV Semester BCA & B.Sc courses Syllabus.

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

Agenda:

1. Proceeding of previous BOS meeting held on 18-05-2018.
2. Discussion in detail on III & IV Sem BCA subjects.
3. Discussion in detail on III & IV Sem B.Sc Computer subjects.
4. Approval of Panel of External Examiners and Board of Examiners.
5. Any other subject.

Thanking you,

Yours sincerely,




Prof. Ravi Hegde

Proceedings of BOS Meeting


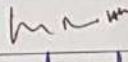
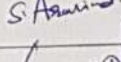
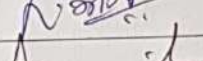
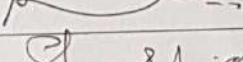
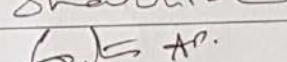
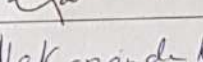
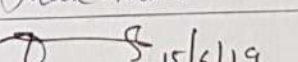
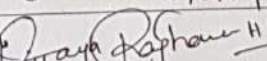
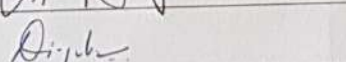
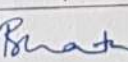


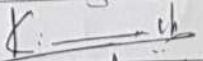
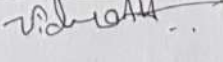
The meeting of the Board of Studies(UG) in Computer Science was held on June 15th 2018, Saturday at 10:30 a.m. in the department. Following members were present in the meeting.

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THE NATIONAL COLLEGE  **BASAVANAGUDI, BANGALORE**
AUTONOMOUS
Department of Computer Science

Board of Studies in Computer Science (UG)

The meeting of the Board of Studies(UG) in Computer Science was held on June 15th 2019, Saturday at 10.30 a.m. in the department.

Sl.No	Members Name	Signature
1.	Prof. Ravi Hegde Chairperson	
2.	Dr. Gundu Rao H.K University Nominee	
3.	Sri. Aravind S Industrial Representative	
4.	Dr. L. Manjunatha Rao Member, Subject Expert	
5.	Dr. Anil Kumar K.R. Member, Subject Expert	
6.	Prof. Shashidhara S.B Member, Subject Expert	
7.	Sri. Goutam, A. P., Alumnus of the college	
8.	Prof. Alakananda K.P. Member	
9.	Prof. Jagadeesh B.G. Member	
10.	Prof. Vijaya Raghavan Member	
11.	Prof. Divyashree N Member	
12.	Prof. Bharatha V Member	
13.	Prof. Sangeetha B.K Member	
14.	Prof. Satish Kumar G Member	
15.	Prof. Kiran C. K. Member	
16.	Prof. Vidya.A.H Member	

The meeting commenced with welcome speech by Prof. Ravi Hegde, HOD, Computer Science. He presented the course structure (BCA, B.Sc and B.Com) and requested to give suggestions and guidelines towards the proposed detailed syllabus.

Smt. Alakananda K.P. read the proceedings of the previous meeting held on 18-05-2018 and the BOS members confirmed the proceedings.

Dr. Manjunath Rao, suggested to interchange subjects Core Java(was in IV Semester BCA) and Computer Graphics(was in III Semester BCA)along with the labs. Also suggested to change the title of the paper as “Programming in Java” instead of Core Java.

Sri.Aravind .S, Industrial Representative briefed about the industrial requirement and the subjective importance. He stressed upon the Computer Graphics in the industry and appreciated the practicals towards it. He also mentioned the importance of Java Programming in the industry.

Agile technologies in Software engineering syllabus should be extended to add more of SCRUM technologies he added.

Prof. Gundu Rao calculated the number of credits and its contents to the course. The panel of members accepted the same. Also suggested to introduce practicals for the subject “Design and Analysis of Algorithms”.

Prof. Ravi Hegde explained the flow of contents in the 3rd and 4th semester of B.Sc and BCA courses and its rearrangement done to make the study more interesting. The panel members appreciated the same and also accepted the pattern of change made.

Sri. Gowtham, Student Representative from Industry explained the need of recursive programming, nested loops and its way of coding linked it with employability. He stressed upon the Java Programming which helps the student to create a software application.

Prof. Shashidhar said the syllabus of Database Management Systems should include query optimization and PL-SQL to practical and same was accepted by the members and the change will done accordingly. He appreciated the syllabus of VB.NET programming where the students will be able to create console and windows applications.

Dr. Anil Kumar said suggested study of any courses should have practicals to the possible extent to bring in job opportunities in students which would be the immediate requirement.

The Second Year ,3rd sem BCA Syllabus was taken for discussion,

3BC-1T	Programming in Java
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3BC-2T	Unix Operating System
3BC-3T	DataBase Management System
3BC-4T	VB.Net programming
3BC-5P	Unix Lab
3BC-6P	VB.Net and SQL Lab
3BC-7P	Java Lab

The syllabus in each of them were discussed and accepted.

The **Second Year, 4th sem BCA** Syllabus:

4BC-1T	Analysis and design of algorithms
4BC-2T	Python
4BC-3T	Software Engineering
4BC-4T	Computer Graphics
4BC-5P	Python Lab
4BC-6P	Computer Graphics and Algorithms lab
4BC-7P	Mini Project

The Panel asked to cut down syllabus of Analysis and Design of algorithms and introduce the lab oriented concepts of ADA along with Computer Graphics .These were accepted and approved by the panel.

Sri. Gowtham explained stronger skills in implementing the algorithms was necessary, one needs to develop programs based on concepts of ADA. The practical should also some important algorithms of ADA he added.

The Syllabus of III semester **B.Sc Computer Science** consists of:

III Semester

CSC – T3	Unix Operating System and Software Engineering
CSC – P3	Unix Programming lab

IV Semester

CSC – T4	Database Management systems
CSC – P4	DBMS Lab

and the above were accepted.

Prof. Gundu Rao said the student should implement the database design and normalization upto 3rd normal form in their projects with large number of SQL queries.

Prof. Ravi Hegde briefed the project work done by students in the lab, right from from choosing the topic allotment of guide, writing the SRS and documenting the work done by them.The members appreciated the faculty for the same and their effort in bringing the project effectively.

The syllabus of **B.Com** for:

III Semester

3 COM – P: Tally Lab

IV Semester

4 COM – P: Business Analytics Lab

The syllabus meets the demands of Industries requirements

Add-on Course

The following courses were retained by the panel, as it had a very good response.

- 1) Web page designing
- 2) Desk Top Publishing

The BOS meeting concluded with vote of thanks by the Prof. Ravi Hegde.



Ravi Hegde
Chairperson

List of BOE Members

The following of the Members of the BOE was approved by the Board

Sl.No	Members Name	Address
1.	Prof. Ravi Hegde	The National Degree College ,Basavanagudi Bangalore
2.	Prof. H.K. Gundu Rao	Lecturer, Vijaya College, Basavanagudi,B-4
3.	Prof. Shashidhara S.B	Lecturer, VV Puram College, VV Puram
4.	Prof. Satyashree	Associate Professor & HOD of Computer Science, A.P.S. Arts and Science College, N.R.
5.	Prof. Alakananda K.P.	Lecturer, National Degree College Basavanagudi,B'lore-4
6.	Prof. Jagadeesh B.G.	Lecturer, National Degree College Basavanagudi,B'lore-4
7.	Prof. Vijaya Raghavan	Lecturer, National Degree College Basavanagudi,B'lore-4
8.	Prof. Divyashree N	Lecturer, National Degree College Basavanagudi,B'lore-4
9.	Prof. Bharatha V	Lecturer, National Degree College Basavanagudi,B'lore-4
10.	Prof. Vidya A.H	Lecturer, National Degree College Basavanagudi,B'lore-4
11.	Prof. Sangeetha B.K	Lecturer, National Degree College Basavanagudi,B'lore-4
12.	Prof. Satish Kumar G	Lecturer, National Degree College Basavanagudi,B'lore-4
13.	Prof. Kiran C.K.	Lecturer, National Degree College Basavanagudi
14.	Prof. Avinash B. Patil	Lecturer, National Degree College Basavanagudi

List of External Examiners

The following list of the External Examiners was approved by the Board:

Sl.No	Members Name	Address
1.	Prof. Shashidhara S.B	VV Puram Atrs & Science College, VV Puram
2.	Prof.Madhusudan Reddy	VV Puram Atrs & Science College, VV Puram
3.	Prof. Gundu Rao	Vijaya College Basavanagudi,Bangalore-4
4.	Prof. Hemalatha N	Vijaya College Basavanagudi,Bangalore-4
5.	Prof. Surendra H.D.	Vijaya College Basavanagudi,Bangalore-4
6.	Prof. Divya S.R	Vijaya College Basavanagudi,Bangalore-4
7.	Prof. Prasad C.N.	St. Joseph College, Bangalore-1
8.	Prof. Vaishnavi K	St. Joseph College, Bangalore-1
9.	Prof. Aruna Akula	BMS College for Women,B,gudi,Blore-4
10.	Prof. Nalini L	BMS College for Women, B,gudi,Blore-4
11.	Prof. Bhavya T	SRN Adarsha College, Chamarajpet,Blore-18
12.	Prof. Gurunath R	Dayanada Sagar College,Bangalore-78
13.	Prof. Vijayakuma C M	Dayanada Sagar College, Bangalore-78
14.	Prof. Poornima Bhat	Dayanada Sagar College, Bangalore-78
15.	Prof. Bhavya Ramesh	Dayanada Sagar College, Bangalore-78
16.	Prof. Nagaraju	Teacher Academy College, Banasavadi
17.	Prof. Sudir T.V.	Teacher Academy College, Banasavadi
18.	Prof. Sathyashree	APS College N.R. Colony,Bangalore-19
19.	Prof. Anantha M	APS College N.R. Colony,Bangalore-19
20.	Prof. Priyanka S	Oxford College,J.P. Nagar,Bangalore



Ravi Hegde
Chairperson

THE NATIONAL COLLEGE  BASAVANAGUDI, BANGALORE
AUTONOMOUS

DEPARTMENT OF COMPUTER SCIENCE

BOS

May 2018

ACADEMIC YEAR 2018-19

Meeting Notice

10-05-2018

To

BOS Member

Dear Madam/Sir,

Sub: Meeting of the Board of Studies in Computer Science(UG)

This is to inform you that the Board of Studies Meeting in Computer Science(UG) is scheduled on Friday, 18th May 2018 at 10.30am in the Department of Computer Science , The National Degree College, Autonomous, Basavanagudi, Bangalore – 560 004.

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

Agenda:

1. Proceeding of previous BOS meeting held on 17-06-2017.
2. Discussion in detail on I & II Sem BCA subjects.
3. Discussion in detail on I & II Sem B.Sc Computer subjects.
4. Discussion in detail on I & II Sem B.Com Computer subjects.
5. Discussion in detail on open elective paper for non-Computer Science students.
6. Approval of Panel of External Examiners and Board of Examiners.
7. Any other subject.

Thanking you,

Yours sincerely,



Ravi Hegde

Proceedings of BOS Meeting




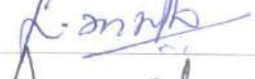
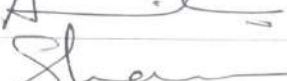
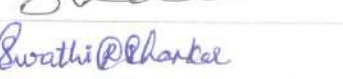
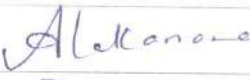

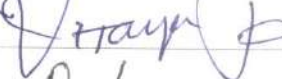

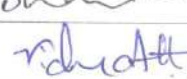
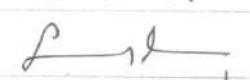





The meeting of the Board of Studies(UG) in Computer Science was held on May 18th 2018, Friday at 11 a.m. in the department. Following members were present in the meeting.

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THE NATIONAL COLLEGE BASAVANAGUDI, BANGALORE
 AUTONOMOUS
 Department of Computer Science

Board of Studies in Computer Science (UG)

The meeting of the Board of Studies(UG) in Computer Science was held on May 18th 2018, Friday at 11 a.m. in the department.

Sl.No	Members Name	Signature
1.	Prof. Ravi Hegde Chairperson	
2.	Dr. P. Deepa Shenoy University Nominee	
3.	Sri. Aravind S Industrial Representative	
4.	Dr. L. ManjunathaRao Member, Subject Expert	
5.	Dr. Anil Kumar K.R. Member, Subject Expert	
6.	Prof. Shashidhara S.B Member, Subject Expert	
7.	Smt. Swathi R Shankar Alumnus of the college	
8.	Prof. Alakananda K.P. Member	
9.	Prof. Jagadeesh B.G. Member	
10.	Prof. VijayaRaghavan Member	
11.	Prof. Divyashree N Member	
12.	Prof. Bharatha V Member	
13.	Prof. Vidya A.H. Member	
14.	Prof. Sangeetha B.K Member	
15.	Prof. Satish Kumar G Member	
16.	Prof. Kiran C. K. Member	
17.	Prof. Avinash B Patil Member	

The meeting commenced with welcome speech by Prof. Ravi Hegde, HOD, Computer Science. He presented the course structure (BCA, B.Sc and B.Com) and requested to give suggestions and guidelines towards the proposed detailed syllabus.

Smt. Alakananda K.P. read the proceedings of the previous meeting held on 17-06-2017 and the BOS members confirmed the proceedings.

Sri. Aravind .S ,Industrial Representative appreciated the syllabus and the course structure, which he said has created demand in the college for BCA course.

Dr. Deepa Shenoy, said “the right flow of course structure design corresponds to the excellences in the course”. She suggested the following:

To show videos of small talks using Edx.

To enroll students to online courses such as NPTEL, instead of giving assignments. The students here will be assessed on by the subject learned by them, instead of traditional approach of writing.

Also the video seen by the student can be given as a presentation or writing on these topics as assignments can be made.

Dr. L. Manjunath Rao, suggested a self study component, such that a student should be able to give a comprehensive presentation of the study, such as building a module on a topic learnt by them which will expose them to ability of learning.

Dr. Anil Kumar said “the interdisciplinary courses should make way for greater opportunities in employment”. He suggested courses such as skill oriented and packages. He also appreciated the course on Python which was introduced in the previous BOS year, which now is one of the Industry’s most requirements.

Dr. P. Deepa Shenoy explained the importance of C programming language which helps the student to develop a solution for a problem statement.

Prof. Shashidhar, said that the basic subjects are strong on the syllabus which makes the student’s foundation grounded in computer Science. Also suggested to change the content of Computer Application lab.

The First Year **BCA** Syllabus was taken for discussion,

- 1BC-3T Programming in C
- 1BC-4T Computer Organization and architecture
- 1BC-5P C Programming Lab
- 1BC-6P Computer Application Lab

The syllabus in each of them were discussed and accepted.

The **Second Year BCA** Syllabus:

2BC-2T	Data Structure using C
2BC-3T	Object Oriented Programming using C++
2BC-4T	Operating System
2BC-5P	Data Structure Lab using C
2BC-6P	C++ Lab

These were accepted and approved by the panel.

Dr. Deepa Shenoy suggested, the syllabus for Data structure is vast and hence trees structure (Unit 6) can be theory part only and need not be included to practical. The concept understanding would be enough at the undergraduate level.

Dr. L. Manjunath Rao discussed the necessity of C++ Programming which helps the student to develop system and Application software.

The C++ programming was reviewed by the team and accepted the same.

The Syllabus of **B.Sc Computer Science** consists of:

I Semester

CSC - T	Programming in C & Computer Organization
CSC - P	C Lab

II Semester

CSC - T	Data Structure and Operating System
CSC - P	Data Programming Lab

and the above were accepted.

The syllabus of **B.Com** for:

I Semester

1 COM - T	Computer Application I
1 COM - P	Computer Application I Lab

II Semester

2 COM - T	Computer Application II
2COM - P	Computer Application II Lab

The syllabus meets the demands of Industries requirements. Dr. Deepa Shenoy suggested introducing similar structure in certificate courses.

Mandatory Paper

Computer Application and Information Technology was discussed in detail and accepted.

Add-on Course

The following courses were retained by the panel, as it had a very good response.

- 1) Web page designing
- 2) Desk Top Publishing

The BOS meeting concluded with vote of thanks by the Prof. Ravi Hegde.



Ravi Hegde
Chairperson

List of BOE Members

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20.	Prof. Priyanka S	Oxford College,J.P. Nagar,Bangalore



Ravi Hegde
Chairperson

THE NATIONAL COLLEGE  BASAVANAGUDI, BANGALORE
AUTONOMOUS

DEPARTMENT OF COMPUTER SCIENCE

BOS

17th June 2017

ACADEMIC YEAR 2017-18

Meeting Notice

02-06-2017

To
BOS Member

Dear Madam/Sir,

Sub: Meeting of the Board of Studies in Computer Science(UG)

I take pleasure in informing you that the Board of Studies Meeting in Computer Science (UG) is scheduled to be held on Saturday, 17th June 2017 at 11 a.m. in the department of Computer Science, The National College Autonomous, Basavanagudi, and Bangalore - 560004, to discuss V and VI Semester BCA and B.Sc courses Syllabus in the college.

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

Agenda:

1. Proceeding of previous BOS meeting held on 17-06-2016.
2. Discussion in detail on V & VI Sem BCA subjects.
3. Discussion in detail on V & VI Sem B.Sc Computer subjects.
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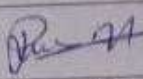
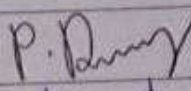
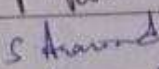
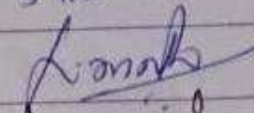
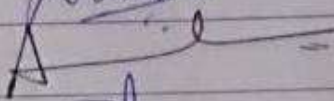
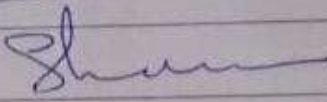
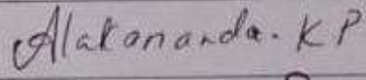


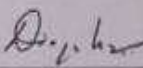
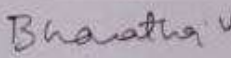
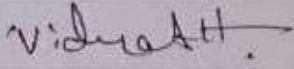
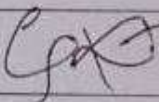

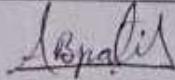


Prof. Ravi Hegde

THE NATIONAL COLLEGE  **BASAVANAGUDI, BANGALORE**
AUTONOMOUS
 Department of Computer Science

Board of Studies in Computer Science (UG)

The meeting of the Board of Studies(UG) in Computer Science was held on June 17th 2017, Saturday at 11 a.m. in the department.

Sl.No	Members Name	Signature
1.	Prof. Ravi Hegde Chairperson	
2.	Dr. P. Deepa Shenoy University Nominee	
3.	Sri. Aravind S Industrial Representative	
4.	Dr. L. ManjunathaRao Member, Subject Expert	
5.	Dr. Anil Kumar K.R. Member, Subject Expert	
6.	Prof. Shashidhara S.B Member, Subject Expert	
7.	Sri. Ranjan Chiplonkar Industrial Representative	
8.	Sri Srichand Koushik Alumnus of the college	
9.	Prof. Alakananda K.P. Member	
10.	Prof. Jagadeesh B.G. Member	
11.	Prof. VijayaRaghavan Member	
12.	Prof. Divyashree N Member	
13.	Prof. Bharatha V Member	
14.	Prof. Vidya A.H. Member	
15.	Prof. Sangeetha B.K Member	
16.	Prof. Satish Kumar G Member	
17.	Prof. Kiran C. K. Member	
18.	Prof. Avinash B Patil Member	

Proceedings

Board of Studies in Computer Science (UG)

The meeting of the Board of Studies(UG) in Computer Science was held on June 17th 2017, Saturday at 11 a.m. in the department. The following members were present:

Sl.No	Members Name	Address
1.	Prof. Ravi Hegde Chairperson	Selection Grade Lecturer & HOD of Computer Science The National Degree College,Basavanagudi,Bangalore
2.	Dr. P. Deepa Shenoy University Nominee	Professor, Department of Computer Science UVCE,BangaloreUniversity,Bangalore
3.	Sri. Aravind S Industrial Representative	Computer Consultant, Tata Consultancy Services, SJM Towers, 18, Sheshadri Road, Gandhi Nagar, Bengaluru, Karnataka 560009
4.	Dr. L. Manjunatha Rao Member,Subject Expert	Professor, Dr. Ambedkar Institute of Technology, Outer Ring Road, Near JnanaBharathi Campus, Mallathahalli, Bangalore-560056
5.	Dr. Anil Kumar K.R. Member,Subject Expert	Asst. Professor, Dept. of Computer Science, DayanandaSagar College of Art Science & Commerce ShavigeMalleshwara Hills,Kumaraswamy,Layout,B-78
6.	Prof. Shashidhara S.B Member,Subject Expert	Associate Professor &HOD of Computer Science V.V Puram College of Science, K.R. Road, Bangalore - 4
7.	Sri. Ranjan Chiplonkar Industrial Representative	AVP -Invenger Technologies Cyber Park, Electronics City,Bangalore, Karnataka
8.	Sri Srichand Koushik Alumnus of the college	COO, Litent ,#14, 2nd Floor HB Samaja Road, Gandhi Bazar,Bangalore-4
9.	Prof. Alakananda K.P.	SGL, National Degree College Basavanagudi
10.	Prof. Jagadeesh B.G.	Lecturer, National Degree College Basavanagudi
11.	Prof. VijayaRaghavan	Lecturer, National Degree College Basavanagudi
12.	Prof. Divyashree N	Lecturer, National Degree College Basavanagudi
13.	Prof. Bharatha V	Lecturer, National Degree College Basavanagudi
14.	Prof. Vidya A.H.	Lecturer, National Degree College Basavanagudi
15.	Prof. Sangeetha B.K	Lecturer, National Degree College Basavanagudi
16.	Prof. Satish Kumar G	Lecturer, National Degree College Basavanagudi
17.	Prof. Kiran C. K.	Lecturer, National Degree College Basavanagudi
18.	Prof. Avinash B Patil	Lecturer, National Degree College Basavanagudi

The BOS Chairman, Prof. Ravi Hegde thanked all the BOS members for accepting his invitation and making it convenient to attend the BOS meeting. He extended a warm welcome to all the BOS members. He presented the course structure of BCA & B.Sc Computer Science and requested to give suggestions and guidelines towards the proposed detailed syllabus.

Smt. Alakananda K.P. read the proceedings of the previous meeting held on 17-06-2016 and the BOS members confirmed the proceedings.

The discussion was started with the following proposed syllabus of V & VI Semester BCA and B.Sc, subject wise.

Proposed structure:

V Semester BCA		VI Semester BCA	
Paper	Title	Paper	Title
5BC-1T	Internet Technologies	6BC-1T	Computer Networks - II
5BC-2T	System Software	6BC-2T	Artificial Intelligence
5BC-3T	Computer Networks - I	6BC-3T	Mobile Computing and Wireless Technologies
5BC-4T	Web Application Development	6BC-4T	Object Oriented Analysis and Design
5BC-5T	Business Analytics	6BC-5T	Operation Research
5BC-6P	Internet Technologies Lab	6BC-6P	Computer Networks Lab
5BC-7P	Web Application Development Lab	6BC-7P	Project Work
5BC-8P	Simulation Project Lab		

A new subject, Network Security was introduced instead of (5BC-2T) System Software. Cloud Computing was another new subject introduced to replace Operation Research.

Mr. S. Aravind ,Computer Consultant mentioned about today's demand in the industry for subjects like Cloud Computing, Mobile Computing. He highly appreciated the target syllabus framed as per industrial demands. He also insisted to change all programming exercises of Web Application Development Lab.

Prof. Shashidhar S.B. proposed to move Network Security subject (5BC-2T) to VI semester BCA and same to be replaced by Artificial Intelligence(6BC-2T) of VI semester BCA. He also suggested to replace 6th Sem B.Sc Computer Graphics & system software subjects replace with Mobile Computing and Wireless Communication and Computer networks respectively. The changes were accepted by all the members of the board.

Dr. Deepa Shenoy suggested to have introduction to android in the syllabus of Mobile Computing and Wireless Technologies(6BC-3T),as it is the most sought.

She also suggested to rename Computer Networks –II (6BC-1T) as TCP/IP Internetworking in the 6th semester.

Prof. Anil Kumar proposed to move Cloud Computing subject (6BC-5T) to V semester BCA and same to be replaced by Business Analytics (5BC-5T) of VI semester BCA. The changes were accepted by all the members of the board.

Mr. Aravind suggested to have a flow in the projects for BCA course such as start with DBMS project Development in 4th semester , continue with Maintenance support and Testing (called enhancing) the project in the 6th semester BCA. So that a continuous flow of project in real time can be experienced.

Mr. S. Aravind suggested Industries requirement are maintenance of project support, as it requires debugging errors and making the enhancements. The concept of Optimization of CPU time and access should be taught to the student. The concept of performance testing should be incorporated in the project work.

Prof. Shashidhar S.B emphasized the need of subjects Mobile Computing and Wireless Technologies and Business Analytics which are creating opportunities in Industries and Data warehousing and Ecommerce .It helps to overcome the challenges of solving actual organizational issues with real-time data sets.

Dr. Deepa Shenoy explained the need of communicative skills being so important to the student to face the interview, which most technical student lack. The student fail to qualify in communication rounds of HR. Seminar presentation should be made on a regular basis in the classes.

The changes were accepted by all the members of the board.

The Committee appreciated the efforts made by the Department member in bringing out an effective syllabus to target the Industry needs and student skill development.

B.Sc Computer Science			
Paper	Title	Paper	Title
CSC – T5	Computer Networks	CSC – T5	Object Oriented Programming using Java.
CSC – P5	Java Programming	CSC – P5	Java Programming Lab
CSC – T6	UNIX Operating System and Internet Technology	CSC – T6	Visual Programming
CSC – P6	UNIX programming and Internet Lab	CSC – P6	Visual Programming Lab
CSC – T7	System Software	CSC – T7	Mobile Computing and Wireless Communication

CSC - T8	Computer Graphics	CSC - T8	Computer Networks
CSC - P7	Project Work	CSC - P7	Project Work
CSC - T5	Computer Networks	CSC - T5	Object Oriented Programming using Java.

The above structure and details syllabus was approved and accepted by the Board.



Ravi Hegde
Chairperson

Board of Studies in Computer Science
The National College, Autonomous,
Basavanagudi, Bangalore - 4

BCA Course Matrix

I Semester BCA							
Part	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
Part-1	LK/S/H B1	Language(Kannada/Sanskrit/Hindi)	4	30	70	100	2
	LE B1	Language English-I	4	30	70	100	2
Part-2	1BC-1T	Mathematical Foundation for Comp. Apns.	4	30	70	100	4
	1BC-2T	Fundamentals of Accounting	4	30	70	100	4
	1BC-3T	Programming in C	4	30	70	100	4
	1BC-4T	Computer Organization and Architecture	4	30	70	100	4
	1BC-5P	C Programming Lab	3	15	35	50	1
	1BC-6P	Computer Application Lab	3	15	35	50	1
Part-3	MC1	MC: Human Resource Management	2	15	35	50	1
	VE1	Value Education	1	15	35	50	1
Part-4	CC1	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Marks & Credits			34	240	560	800	25

II Semester BCA							
Part	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
Part-1	LK/S/H B2	Language(Kannada/Sanskrit/Hindi)	4	30	70	100	2
	LE B2	Language English-I	4	30	70	100	2
Part-2	2BC-1T	Numerical and Statistical Methods	4	30	70	100	4
	2BC-2T	Data Structures Using C	4	30	70	100	4
	2BC-3T	Object Oriented Programming Using C++	4	30	70	100	4
	2BC-4T	Operating System	4	30	70	100	4
	2BC-5P	Data Structure Lab Using C	3	15	35	50	1

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	2BC-6P	C++ Lab	3	15	35	50	1
Part-3	MC2	MC: India Constitution & Human Right	2	15	35	50	1
	VE2	Value Education	1	15	35	50	1
Part-4	CC2	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Hours ,Marks & Credits			34	240	560	800	25
III Semester BCA							
Part	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
Part-1	LK/S/H B3	Language(Kannada/Sanskrit/Hindi)	4	30	70	100	2
	LE B3	Language English-I	4	30	70	100	2
Part-2	3BC-1T	Computer Graphics	4	30	70	100	4
	3BC-2T	Unix Operating System	4	30	70	100	4
	3BC-3T	Database Management Systems	4	30	70	100	4
	3BC-4T	VB.Net Programming	4	30	70	100	4
	3BC-5P	Unix Lab	3	15	35	50	1
	3BC-6P	VB.Net and SQL Lab	3	15	35	50	1
	3BC-7P	Computer Graphics Lab	3	15	35	50	1
Part-3	ID1	Inter Disciplinary:	2	15	35	50	2
	MC3	MC: Campus Recruitment Training	1	15	35	50	1
	VE3	Value Education	1	15	35	50	1
Part-4	CC3	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Hours ,Marks & Credits			35	270	630	900	28

IV Semester BCA

Part	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
Part-1	LK/S/H B4	Language(Kannada/Sanskrit/Hindi)	4	30	70	100	2
	LE B4	Language English-I	4	30	70	100	2
Part-2	4BC-1T	Design and Analysis of Algorithms	4	30	70	100	4
	4BC-2T	Python	4	30	70	100	4
	4BC-3T	Software Engineering	4	30	70	100	4
	4BC-4T	Core Java	4	30	70	100	4
	4BC-5P	Python Lab	3	15	35	50	1
	4BC-6P	Core Java Lab	3	15	35	50	1
	4BC-7P	Mini Project	3	15	35	50	1
Part-3	ID2	Inter Disciplinary:	2	15	35	50	2
	MC4	MC: e-governance	1	15	35	50	1
	VE4	Value Education	1	15	35	50	1
Part-4	CC4	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Hours ,Marks & Credits			38	270	630	900	28

V Semester BCA

Part	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
Part-2	5BC-1T	Internet Technologies	4	30	70	100	4
	5BC-2T	Artificial Intelligence	4	30	70	100	4

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	5BC-3T	Computer Networks	4	30	70	100	4
	5BC-4T	Web Application Development	4	30	70	100	4
	5BC-5T	Cloud Computing	4	30	70	100	4
	5BC-6P	Internet Technologies Lab	3	15	35	50	1
	5BC-7P	Web Application Development Lab	3	15	35	50	1
	5BC-8P	Simulation Project Lab	6	15	35	50	1
Part-3	MC5	MC: Communicative English	2	15	35	50	1
	VE5	Value Education	1	15	35	50	1
Part-4	CC5	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Hours ,Marks & Credits			33	225	525	750	26

VI Semester BCA

Part	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
Part-2	6BC-1T	TCP/IP Internetworking	4	30	70	100	4
	6BC-2T	Network Security	4	30	70	100	4
	6BC-3T	Mobile Computing and Wireless Technologies	4	30	70	100	4
	6BC-4T	Object Oriented Analysis and Design	4	30	70	100	4
	6BC-5T	Business Analytics	4	30	70	100	4
	6BC-6P	Business Analytics Lab	3	15	35	50	1
	6BC-7P	Project Work	6	30	70	100	2
Part-3	MC6	MC: Environmental Science	2	15	35	50	1
	VE6	Value Education	1	15	35	50	1
Part-4	CC6	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Hours ,Marks & Credits			33	225	525	750	26

B.Sc Course Matrix

SEM	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
1	CSC - T1	Computer Organization and Programming in C	4	30	70	100	4
	CSC - P1	Programming in C Lab	3	15	35	50	1
2	CSC - T2	Data Structures using C	4	30	70	100	4
	CSC - P2	Data Structures Lab using C	3	15	35	50	1
3	CSC - T3	Unix Operating System and Software Engineering	4	30	70	100	4
	CSC - P3	UNIX Programming Lab	3	15	35	50	1
4	CSC - T4	Database Management System	4	30	70	100	4
	CSC - P4	DBMS Lab	3	15	35	50	1
5	CSC - T5	Object Oriented Programming using Java.	4	30	70	100	4
	CSC - P5	Java Programming Lab	3	15	35	50	1
	CSC - T6	Visual Programming	4	30	70	100	4
	CSC - P6	Visual Programming Lab	3	15	35	50	1

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6	CSC - T7	Mobile Computing and Wireless Communication	4	30	70	100	4
	CSC - T8	Computer Networks	4	30	70	100	4
	CSC - P7	Project Work	6	30	70	100	2

The following of the Members of the BOE was approved by the Board

Sl.No	Members Name	Address
1.	Prof. Ravi Hegde	The National Degree College ,Basavanagudi Bangalore
2.	Prof. H.K. Gundu Rao	Lecturer, Vijaya College, Basavanagudi,B-4
3.	Prof. Shashidhara S.B	Lecturer, VV Puram College,VV Puram
4.	Prof. Sudhir T.V	Oxford College,J.P. Nagar,Bangalore
5.	Prof. Kalyani S.A.	BMS College for Women, B,gudi,Blore-4
6.	Prof. Alakananda K.P.	Lecturer, National Degree College Basavanagudi,B'lore-4
7.	Prof. Jagadeesh B.G.	Lecturer, National Degree College Basavanagudi,B'lore-4
8.	Prof. Vijaya Raghavan	Lecturer, National Degree College Basavanagudi,B'lore-4
9.	Prof. Divyashree N	Lecturer, National Degree College Basavanagudi,B'lore-4
10.	Prof. Bharatha V	Lecturer, National Degree College Basavanagudi,B'lore-4
11.	Prof. Vidya A.H	Lecturer, National Degree College Basavanagudi,B'lore-4
12.	Prof. Sangeetha B.K	Lecturer, National Degree College Basavanagudi,B'lore-4
13.	Prof. Satish Kumar G	Lecturer, National Degree College Basavanagudi,B'lore-4

The following list of the External Examiners was approved by the Board:

Sl.No	Members Name	Address
1.	Prof. Shashidhara S.B	VV Puram Atrs & Science College, VV Puram
2.	Prof.Madhusudan Reddy	VV Puram Atrs & Science College, VV Puram
3.	Prof. Gopal B	Vijaya College Basavanagudi,Bangalore-4
4.	Prof. Hemalatha N	Vijaya College Basavanagudi,Bangalore-4
5.	Prof. Surendra H.D.	Vijaya College Basavanagudi,Bangalore-4

The National College, Autonomous, Basavanagudi, Bengaluru-04

6.	Prof. Divya S.R	Vijaya College Basavanagudi,Bangalore-4
7.	Prof. Prasad C.N.	St. Joseph College, Bangalore-1
8.	Prof. Vaishnavi K	St. Joseph College, Bangalore-1
9.	Prof. Aruna Akula	BMS College for Women,B,gudi,Blore-4
10.	Prof. Nalini L	BMS College for Women, B,gudi,Blore-4
11.	Prof. Kalyani S.A.	BMS College for Women, B,gudi,Blore-4
12.	Prof. Bhavya T	SRN Adarsha College, Chamarajpet,Blore-18
13.	Prof. Gurunath R	Dayanada Sagar College,Bangalore-78
14.	Prof. Vijayakuma C M	Dayanada Sagar College, Bangalore-78
15.	Prof. Poornima Bhat	Dayanada Sagar College, Bangalore-78
16.	Prof. Bhavya Ramesh	Dayanada Sagar College, Bangalore-78
17.	Prof. Nagaraju	Teacher Academy College, Banasavadi
18.	Prof. Sudir T.V.	Teacher Academy College, Banasavadi
19.	Prof. Sathyashree	APS College N.R. Colony,Bangalore-19
20.	Prof. Anantha M	APS College N.R. Colony,Bangalore-19
21.	Prof. Priyanka S	Oxford College,J.P. Nagar,Bangalore
22.	Prof. Sudhir T.V	Oxford College,J.P. Nagar,Bangalore



Ravi Hegde
Chairperson

Board of Studies in Computer Science
The National College, Autonomous,
Basavanagudi, Bangalore - 4

**THE NATIONAL COLLEGE  BASAVANAGUDI, BANGALORE
AUTONOMOUS**

DEPARTMENT OF COMPUTER SCIENCE

BOS

17th June 2016

ACADEMIC YEAR 2016-17

Meeting Notice

10-06-2016

To
BOS Member

Dear Madam/Sir,

Sub: Meeting of the Board of Studies in Computer Science(UG)

This is to inform you that the Board of Studies Meeting in Computer Science(UG) is scheduled on Friday, 17th June 2016 at 3 p.m. in the department of Computer Science , The National Degree College Autonomous, Basavanagudi, Bangalore - 560 004.

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

Agenda:

1. Proceeding of previous BOS meeting held on 03-07-2015.
2. Discussion in detail on III& IVSem BCA subjects.
3. Discussion in detail on III& IVSem B.Sc Computer subjects.
4. Discussion in detail on III& IVSem B.Com Computer subjects.
5. Discussion in detail on open elective paper for non-Computer Science students.
6. Approval of Panel of External Examiners and Board of Examiners.
7. Any other subject.

Thanking you,

Yours sincerely,


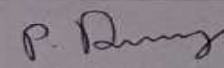
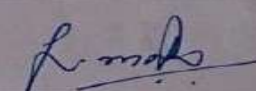




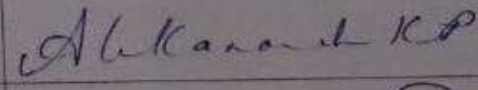

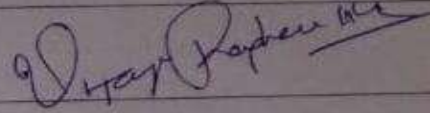
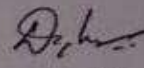
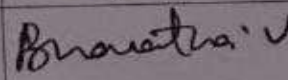
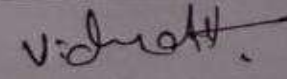
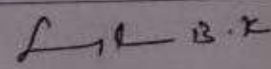
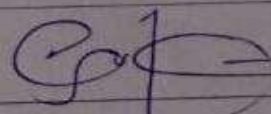
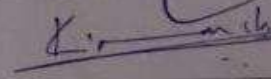
Chairperson
Ravi Hegde

**THE NATIONAL COLLEGE  BASAVANAGUDI, BANGALORE
AUTONOMOUS**

Board of Studies in Computer Science(UG)

The meeting of the Board of Studies in Computer Science was held On Friday, the 17th June 2016, at 3 p.m. in Computer Science department.

Sl.No	Members Name	Signature
1.	Prof. Ravi Hegde Selection Grade Lecturer & HOD of Computer Science The National Degree College, Basavanagudi, Bangalore	
2.	Dr. P. Deepa Shenoy Professor, Department of Computer Science, UVCE, Bangalore University, Bangalore	
3.	Dr. L. Manjunatha Rao Professor, Dr. Ambedkar Institute of Technology, Outer Ring Road, Near Jnana Bharathi Campus, Mallathahalli, Bangalore-560056	
4.	Dr. Anil Kumar K.R. Asst. Professor, Dept. of Computer Science, Dayananda Sagar College of Art Science & Commerce Shavige Malleshwara Hills, Kumaraswamy, Layout, 8-78	
5.	Prof. Shashidhara S.B Associate Professor & HOD of Computer Science V.V Puram College of Science, K.R. Road, Bangalore - 4	
6.	Sri. Ranjan Chiplonkar AVP - Invenger Technologies Cyber Park, Electronics City, Bangalore, Karnataka	
7.	Sri Srichand Koushik COO, Litent, #14, 2nd Floor HB Samaja Road, Gandhi Bazar, Bangalore-4	

8.	Prof. Alakananda K.P. SGL, National Degree College, Basavanagudi	
9.	Prof. Jagadeesh B.G. Lecturer, National Degree College Basavanagudi	
10.	Prof. Vijaya Raghavan Lecturer, National Degree College Basavanagudi	
11.	Prof. Divyashree N Lecturer, National Degree College Basavanagudi	
12.	Prof. Bharatha V Lecturer, National Degree College Basavanagudi	
13.	Prof. Vidya A.H. Lecturer, National Degree College Basavanagudi	
14.	Prof. Sangeetha B.K Lecturer, National Degree College Basavanagudi	
15.	Prof. Satish Kumar G Lecturer, National Degree College Basavanagudi	
16.	Prof. Kiran C. K. Lecturer, National Degree College Basavanagudi	

Proceedings

The Meeting of the **Board of Studies in Computer Science** was held on 17th June 2016, at 3 p.m. in the Department of Computer Science. The following members were present:

Sl.No	Members Name	Address
1.	Prof. Ravi Hegde Chairperson	Selection Grade Lecturer & HOD of Computer Science The National Degree College, Basavanagudi, Bangalore
2.	Dr. P. Deepa Shenoy University Nominee	Professor, Department of Computer Science UVCE, Bangalore University, Bangalore
3.	Dr. L. Manjunatha Rao Member, Subject Expert	Professor, Dr. Ambedkar Institute of Technology, Outer Ring Road, Near Jnana Bharathi Campus, Mallathahalli, Bangalore-560056
4.	Dr. Anil Kumar K.R. Member, Subject Expert	Asst. Professor, Dept. of Computer Science, Dayananda Sagar College of Art Science & Commerce Shavige Malleshwara Hills, Kumaraswamy, Layout, B-78
5.	Prof. Shashidhara S.B Member, Subject Expert	Associate Professor & HOD of Computer Science V.V Puram College of Science, K.R. Road, Bangalore - 4
6.	Prof. Alakananda K.P.	SGL, National Degree College Basavanagudi
7.	Prof. Jagadeesha B.G.	Lecturer, National Degree College Basavanagudi
8.	Prof. Vijaya Raghavan	Lecturer, National Degree College Basavanagudi
9.	Prof. Divyashree N	Lecturer, National Degree College Basavanagudi
10.	Prof. Bharatha V	Lecturer, National Degree College Basavanagudi
11.	Prof. Vidya A.H.	Lecturer, National Degree College Basavanagudi
12.	Prof. Sangeetha B.K	Lecturer, National Degree College Basavanagudi
13.	Prof. Satish Kumar G	Lecturer, National Degree College Basavanagudi
14.	Prof. Kiran C. K.	Lecturer, National Degree College Basavanagudi
15.	Prof. Avinash B Patil	Lecturer, National Degree College Basavanagudi

The meeting started with welcome speech by Prof. Ravi Hegde, HOD, Computer Science. He presented the course structure (BCA, B.Sc and B.Com) and requested to give suggestions and guidelines towards the proposed detailed syllabus.

Smt. Alakananda K.P. read the proceedings of the previous meeting held on 03-07-2015 and the BOS members confirmed the proceedings.

Dr. Deepa Shenoy appreciated the flow of course structure and suggested few the following changes, as enclosed in the course matrix of BCA shown below.

Dr. Deepa Shenoy suggested to make changes in the total number of credits from 27 to 28 in III semester BCA course.

Shri. Ranjan, Industry representative, suggested to introduce Python (theory as well as Lab) in III semester (3BC-1T) that is applicable in current software Industries, instead of Discrete mathematics.

Dr. Deepa Shenoy suggested to introduce “Design and Analysis of Algorithms” (4BC-1T) in IV semester instead of V semester BCA. Similarly, suggested to introduce “System Software” (5BC-2T) in V semester instead of VI semester BCA course.

Dr. L. Manjunath Rao, suggested to increase the lab hours from 3 hours to 6 hours (2 sessions per week) VBCA course as it is the basic requirement for System software project work.

Dr. Deepa Shenoy emphasized the need of Computer Science in B.Com Courses which is creating opportunity in data warehousing and E-commerce. Data mining tools can be used as practicals, which are open source. The Interdisciplinary courses should make way for greater opportunities in employment.

Graphics and animation was appreciated instead of TSR Programming for BCA 4th semester Course by the Panel members.

Dr. Anil Kumar stressed upon the need for the change to meet Industry standards, by introducing Python which is a useful scripting language for developers and the students can work as Python Data Analytics Software Engineer.

The **Third Year BCA** Syllabus was taken for discussion,

Part-2

3BC-1T	Computer Graphics
3BC-2T	Unix Operating System
3BC-3T	Database Management Systems
3BC-4T	VB.Net Programming
3BC-5P	Unix Lab
3BC-6P	VB.Net and SQL Lab
3BC-7P	Computer Graphics Lab

The syllabus in each of them were discussed and accepted.

The **Fourth Year BCA** Syllabus:

Part-2

4BC-1T	Design and Analysis of Algorithms
4BC-2T	Python
4BC-3T	Software Engineering

4BC-4T	Core Java
4BC-5P	Python Lab
4BC-6P	Core Java Lab
4BC-7P	Mini Project

These were accepted and approved by the panel.

Dr. Anil Kumar expressed the need to concentrate on job oriented programs. The panel also discussed the importance of using the actual sample data for projects instead of dummy. Shri.Shrichand suggested to implement the project in multiple module forms and then assemble them.

Prof. Shashidhar emphasized that learning DBMS with SQL server is very essential for Software development.

The Syllabus Of **B.Sc Computer Science** consists of :

III Semester

CSC - T	Database Management System and Software Engineering
CSC - P	DBMS Lab

IV Semester

CSC - T	Unix Operating System
CSC - P	UNIX Programming Lab

and the above were accepted.

The syllabus of **B.Com** for:

III Semester

3 COM - T	Computer Application III Relational Database Management System
3 COM - P	Computer Application III Lab RDBMS and Tally Lab

IV Semester

The syllabus was discussed and accepted. The panel has appreciated the structure

4 COM - T	Computer Application IV Business Analytics
4 COM - P	Computer Application IV Lab Business analytics case study lab

which meets the demands of Industries requirements. Dr. Deepa Shenoy suggested to introduce similar structure in certificate courses.

Mandatory Course paper Computer Application and Information Technology was discussed in detail and was accepted.

Add-on Course

The following were suggested by the panel:

- 1) Web page designing
- 2) Desk Top Publishing

The BOS meeting concluded with vote of thanks by the Prof. Ravi Hegde.



Ravi Hegde
Chairperson

Board of Studies in Computer Science
The National College, Autonomous,
Basavanagudi, Bangalore - 4

BCA Course Matrix

I Semester BCA (Choice Based Credit System)							
Part	Paper	Title	Hrs.	Marks			Credits
				IA	Exam	Total	
Part-1	LK/S/H B1	Language(Kannada/Sanskrit/Hindi)	4	30	70	100	2
	LE B1	Language English-I	4	30	70	100	2
Part-2	1BC-1T	Mathematical Foundation for Comp. Apns.	4	30	70	100	4
	1BC-2T	Fundamentals of Accounting	4	30	70	100	4
	1BC-3T	Programming in C	4	30	70	100	4
	1BC-4T	Computer Organization and Architecture	4	30	70	100	4
	1BC-5P	C Programming Lab	3	15	35	50	1
	1BC-6P	Computer Application Lab	3	15	35	50	1
Part-3	MC1	MC: Human Resource Management	2	15	35	50	1
	VE1	Value Education	1	15	35	50	1
Part-4	CC1	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Marks & Credits			34	240	560	800	25

II Semester BCA (Choice Based Credit System)							
Part	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
Part-1	LK/S/H B2	Language(Kannada/Sanskrit/Hindi)	4	30	70	100	2
	LE B2	Language English-I	4	30	70	100	2
Part-2	2BC-1T	Numerical and Statistical Methods	4	30	70	100	4
	2BC-2T	Data Structures Using C	4	30	70	100	4
	2BC-3T	Object Oriented Programming Using C++	4	30	70	100	4
	2BC-4T	Operating System	4	30	70	100	4
	2BC-5P	Data Structure Lab Using C	3	15	35	50	1
	2BC-6P	C++ Lab	3	15	35	50	1
Part-3	MC2	MC: India Constitution & Human Right	2	15	35	50	1

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	VE2	Value Education	1	15	35	50	1
Part-3	CC2	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Hours ,Marks & Credits			34	240	560	800	25

III Semester BCA (Choice Based Credit System)

Part	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
Part-1	LK/S/H B3	Language(Kannada/Sanskrit/Hindi)	4	30	70	100	2
	LE B3	Language English-I	4	30	70	100	2
Part-2	3BC-1T	Computer Graphics	4	30	70	100	4
	3BC-2T	Unix Operating System	4	30	70	100	4
	3BC-3T	Database Management Systems	4	30	70	100	4
	3BC-4T	VB.Net Programming	4	30	70	100	4
	3BC-5P	Unix Lab	3	15	35	50	1
	3BC-6P	VB.Net and SQL Lab	3	15	35	50	1
	3BC-7P	Computer Graphics Lab	3	15	35	50	1
Part-3	ID1	Inter Disciplinary:	2	15	35	50	2
	MC3	MC: Campus Recruitment Training	1	15	35	50	1
	VE3	Value Education	1	15	35	50	1
Part-4	CC3	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Hours ,Marks & Credits			35	270	630	900	28

IV Semester BCA

Part	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
Part-1	LK/S/H B4	Language(Kannada/Sanskrit/Hindi)	4	30	70	100	2
	LE B4	Language English-I	4	30	70	100	2
Part-2	4BC-1T	Design and Analysis of Algorithms	4	30	70	100	4
	4BC-2T	Python	4	30	70	100	4
	4BC-3T	Software Engineering	4	30	70	100	4
	4BC-4T	Core Java	4	30	70	100	4
	4BC-5P	Python Lab	3	15	35	50	1
	4BC-6P	Core Java Lab	3	15	35	50	1
	4BC-7P	Mini Project	3	15	35	50	1
Part-3	ID2	Inter Disciplinary:	2	15	35	50	2
	MC4	MC: e-governance	1	15	35	50	1
	VE4	Value Education	1	15	35	50	1
Part-4	CC4	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Hours ,Marks & Credits			38	270	630	900	28

V SEMESTER

SUBJECT CODE	TITLE	LEC HRS	PRAC HOURS	MARKS		TOTAL
				IA	UE	
V.BCA 1	Web Technologies	4	-	20	80	100
V.BCA 2	Analysis & Design of Algorithms	4	-	20	80	100
V.BCA 3	Computer Networks – I	4	-	20	80	100
V.BCA 4	Asp.Net and C#	4		20	80	100
V.BCA 5	Simulation Project lab	-	4	20	80	100

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V.BCA 6	Web Technologies lab	-	4	20	80	100
V.BCA 7	Asp.Net and C# lab	-	4	20	80	100
V.BCA 8	Communicative Skills	-	4	20	80	100
	Total	16	16	160	640	800

VI SEMESTER

SUBJECT CODE	TITLE	LEC HRS	PRAC HOURS	MARKS		TOTAL
				IA	UE	
VI.BCA 1	Computer Networks – II	4	-	20	80	100
VI.BCA 2	Artificial Intelligence	4	-	20	80	100
VI.BCA 3	Mobile Computing	4	-	20	80	100
VI.BCA 4	Object Oriented Analysis and Design	4		20	80	100
VI.BCA 5	Mathematics: Operation Research	4		20	80	100
VI.BCA 6	Computer Networks lab	-	4	20	80	100
VI.BCA 7	Project Work	-	08	40	160	200
VI.BCA 8	Seminar	-	-	-	-	50
	Total	20	12	160	640	850

B.Sc Course Matrix

SEM	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
I	CSC - T	Computer Organization and Programming in C	4	30	70	100	4
	CSC - P	Programming in C Lab	3	15	35	50	1
II	CSC - T	Data Structures using C	4	30	70	100	4
	CSC - P	Data Structures Lab using C	3	15	35	50	1
III	CSC - T	Database Management System and Software Engineering	4	30	70	100	4
	CSC - P	DBMS Lab	3	15	35	50	1
IV	CSC - T	Unix Operating System	4	30	70	100	4
	CSC - P	UNIX Programming Lab	3	15	35	50	1
V	CSC - T	Computer Networks	4	20	80	100	
	CSC - P	Java Programming	3	10	40	50	
	CSC - T	UNIX Operating System and Internet Technology	4	20	80	100	
	CSC - P	UNIX programming and Internet Lab	3	10	40	50	
VI	CSC - T	System Software	4	20	80	100	
	CSC - P	Computer Graphics	3	10	40	50	
	CSC - T	Project Work	4	20	80	100	
	CSC - P	Computer Networks	3	10	40	50	

B.Com Course Matrix

The above CBCS structures were accepted and approved by the panel.

SEM	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
I	1 COM - T	Computer Application I Fundamentals of Information System	4	30	70	100	4
	1 COM - P	Computer Application I Lab MS Word,Excel,Powerpoint	3	15	35	50	1
II	2 COM - T	Computer Application II Management Information System	4	30	70	100	4
	2 COM - P	Computer Application II Lab Advance Excel,Ms Access	3	15	35	50	1
III	3 COM - T	Computer Application III Relational Database Management System	4	30	70	100	4
	3 COM - P	Computer Application III Lab RDBMS and Tally Lab	3	15	35	50	1
IV	4 COM - T	Computer Application IV Business Analytics	4	30	70	100	4
	4 COM - P	Computer Application IV Lab Business analytics case study lab	3	15	35	50	1

The following of the Members of the BOE was approved by the Board:

Sl.No	Members Name	Address
1.	Prof. Ravi Hegde	The National Degree College ,Basavanagudi Bangalore
2.	Prof. H.K. GunduRao	Lecturer, Vijaya College, Basavanagudi,B-4
3.	Prof. Shashidhara S.B	Lecturer, VV PuramCollege,VVPuram
4.	Prof. Sudhir T.V	Lecturer, Teacher Academy College
5.	Prof. Alakananda K.P.	Lecturer, National Degree College Basavanagudi,B'lore-4
6.	Prof. Jagadeesh B.G.	Lecturer, National Degree College Basavanagudi,B'lore-4
7.	Prof. VijayaRaghavan	Lecturer, National Degree College Basavanagudi,B'lore-4

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8.	Prof. Divyashree N	Lecturer, National Degree College Basavanagudi,B'lore-4
9.	Prof. Bharatha V	Lecturer, National Degree College Basavanagudi,B'lore-4
10.	Prof. Vidya A.H	Lecturer, National Degree College Basavanagudi,B'lore-4
11.	Prof. Sangeetha B.K	Lecturer, National Degree College Basavanagudi,B'lore-4
12.	Prof. Satish Kumar G	Lecturer, National Degree College Basavanagudi,B'lore-4
13.	Prof. Kiran C. K.	Lecturer, National Degree College Basavanagudi,B'lore-4
14.	Prof. Avinash B Patil	Lecturer, National Degree College Basavanagudi,B'lore-4

The following list of the External Examiners was approved by the Board:

Sl.No	Members Name	Address
1.	Prof. Shashidhara S.B	VV PuramAtrs& Science College, VV Puram
2.	Prof.Madhusudan Reddy	VV PuramAtrs& Science College, VV Puram
3.	Prof. Gopal B	Vijaya College Basavanagudi,Bangalore-4
4.	Prof. Hemalatha N	Vijaya College Basavanagudi,Bangalore-4
5.	Prof. Surendra H.D.	Vijaya College Basavanagudi,Bangalore-4
6.	Prof. DivyaS.R	Vijaya College Basavanagudi,Bangalore-4
7.	Prof. Prasad C.N.	St. Joseph College, Bangalore-1
8.	Prof. Vaishnavi K	St. Joseph College, Bangalore-1
9.	Prof. ArunaAkula	BMS College for Women,B,gudi,Blore-4
10.	Prof. Nalini L	BMS College for Women, B,gudi,Blore-4
11.	Prof. Bhavya T	SRN Adarsha College, Chamarajpet,Blore-18
12.	Prof. Gurunath R	DayanandaSagar College,Bangalore-78
13.	Prof. Vijayakuma C M	DayanandaSagar College, Bangalore-78
14.	Prof. PoornimaBhat	DayanandaSagar College, Bangalore-78
15.	Prof. Bhavya Ramesh	DayanandaSagar College, Bangalore-78
16.	Prof. Nagaraju	Teacher Academy College, Banasawadi
17.	Prof. Sudir T.V.	Teacher Academy College, Banasawadi
18.	Prof. Sathyashree	APS College N.R. Colony,Bangalore-19
19.	Prof. Anantha M	APS College N.R. Colony,Bangalore-19

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20.	Prof. Priyanka S	Oxford College,J.P. Nagar ,Bangalore
21.	Prof. Shaila Mary	Mount Carmel College, Bangalore
22.	Prof. Nalini.L	B.M.S College for Women, Bangalore-04
23.	Prof. Kalyani S.A	B.M.S College for Women, Bangalore-04



Ravi Hegde
Chairperson

Board of Studies in Computer Science
The National College, Autonomous,
Basavanagudi, Bangalore - 4

**THE NATIONAL COLLEGE  BASAVANAGUDI, BANGALORE
AUTONOMOUS**

DEPARTMENT OF COMPUTER SCIENCE

BOS

3rd July 2015

Academic year 2015-16

Meeting Notice

10-06-2015

To
BOS Member

Dear Madam/Sir,

Sub: Meeting of the Board of Studies in Computer Science (UG)

This is to inform you that the Board of Studies Meeting in Computer Science(UG) is scheduled on Friday, 3rd July 2015 at 3 p.m. in the department of Computer Science , The National Degree College Autonomous, Basavanagudi, Bangalore – 560 004.

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

Agenda:

1. Proceeding of previous BOS meeting held on 20-06-2014.
2. To frame the structure of all the semesters of BCA,B.Sc & B.Com [Choice Base Credit System].
3. Discussion in detail on I & II Sem BCA subjects.
4. Discussion in detail on I & II Sem B.Sc Computer subjects.
5. Discussion in detail on I & II Sem B.Com Computer subjects.
6. Approval of Panel of External Examiners and Board of Examiners.
7. Any other subject.

Thanking you,

Yours sincerely,



Ravi Hegde



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

Department of Computer Science

Board of Examiners in Computer Science

The meeting of the Board of Studies in Computer Science was held On Friday , the 3rd July 2015, at 3pm in Computer Science department.

Sl.No	Members Name	Signature
1.	Prof. Ravi Hegde Chairperson	
2.	Dr. P. Deepa Shenoy University Nominee	
3.	Dr. H.N Mahabala Member, Subject Expert	
4.	Dr. Anil Kumar K.R. Member, Subject Expert	
5.	Prof. Shashidhara S.B Member, Subject Expert	
6.	Sri. Ranjan Chiplonkar Industrial Representative	
7.	Sri Srichand.Koushik Alumnus of the college	
8.	Prof. Nagamma P Member	
9.	Prof. Alakananda K.P. Member	
10.	Prof. Jagadeesh B.G. Member	
11.	Prof. Vijaya Raghavan Member	
12.	Prof. Divyashree N Member	
13.	Prof. Bharatha V Member	
14.	Prof. Vidya A.H. Member	
15.	Prof. Sangeetha B.K Member	
16.	Prof. Sudhir T.V Member	
17.	Prof. Satish Kumar G Member	
18.	Prof. Kalyani P Member	
19.	Prof. Anil Kumar P.C. Member	

Proceedings

The Meeting of the Board of Studies in Computer Science was held on 3rd July 2015, at 3pm in the Department of Computer Science. The following members were present:

1. Prof. Ravi Hegde
2. Dr. P. Deepa Shenoy
3. Dr. Anil Kumar K.R.
4. Prof. Shashidhara S.B
5. Sri. Ranjan Chiplonkar
6. Sri Srichand Koushik
7. Prof. Alakananda K.P.
8. Prof. Jagadeesh B.G.
9. Prof. VijayaRaghavan
10. Prof. Divyashree N
11. Prof. Bharatha V
12. Prof. Vidya A.H.
13. Prof. Sangeetha B.K
14. Prof. Sudhir T.V
15. Prof. Satish Kumar G
16. Prof. Kalyani P
17. Prof. Anil Kumar P.C.

The Head of the Department introduced himself as well as all the members and welcomed the members.

Smt. Alakananda K.P. read the proceedings of the previous meeting held on 20-06-2014 and the BOS members confirmed the proceedings.

Ravi Hegde explained in detailed about CBCS syllabus structure BCA , B.Sc & B.Com , which enclosed below.

The CBCS structures were accepted and approved by the panel.

Sri.Ranjan explained the MS-Excel as industry requirements, writing programs in macros's, Pivot table, formula's etc.

Dr. P. Deepa Shenoy explained the importance of C programming language which helps the student to develop a solution for a problem statement.

The **First Year BCA** Syllabus was taken for discussion,

Part-2

1BC-3T Programming in C

1BC-4T Computer Organization and Architecture

1BC-5P C Programming Lab

1BC-6P Computer Application Lab (New Course)

The syllabus in each of them were discussed and accepted.

The **Second Year BCA** Syllabus:

Part-2

2BC-2T Data structures using C

2BC-3T OBJECT Oriented Programming In C++

2BC-4T Operating System

2BC-5P Data Structure Lab using C

2BC-6P C++LAB

These were accepted and approved by the panel.

Dr. Anil Kumar expressed the need to concentrate on job availability requirements. The panel also discussed the necessity of Java and C++ languages to the students in the course. The syllabus in the 6thsem BCA should include the android application In Mobile Computing.

The Syllabus Of **B. Sc Computer Science** Consists of:

I Semester CSC-T Computer Organization and Programming in C

CSC-P Programming Lab in C

II Semester CSC-T Data Structures using C

CSC-P Data Structures Lab (using C)

and the above were accepted.

The syllabus of **I B.Com** for:

I Semester COM-T Computer Applications I (Fundamentals of Information System)

COM-P Computer Application I Lab

II Semester **COM-T** Computer Application II(Management Information System)

COM-P Computer Application II Lab

The syllabus was discussed and accepted.

Open Electives

For **Non-Computer Science** students, the following papers were suggested by the panel:

- 1) User Interface design and Content Management
- 2) Computer Fundamentals
- 3) MS-Office

Add-on Course

The following were suggested by the panel:

- 1) Web page designing
- 2) Desk Top Publishing

The BOS meeting concluded with vote of thanks by the Prof. Ravi Hegde.



Ravi Hegde
Chairperson

Board of Studies in Computer Science
The National College, Autonomous,
Basavanagudi, Bangalore - 4

BCA Courses
Year 2015-2016

I Semester BCA (Choice Based Credit System)

Part	Paper	Title	Hrs.	Marks			Credits
				IA	Exam	Total	
Part-1	LK/S/H B1	Language(Kannada/Sanskrit/Hindi)	4	30	70	100	2
	LE B1	Language English-I	4	30	70	100	2
Part-2	1BC-1T	Mathematical Foundation for Comp. Apns.	4	30	70	100	4
	1BC-2T	Fundamentals of Accounting	4	30	70	100	4
	1BC-3T	Programming in C	4	30	70	100	4
	1BC-4T	Computer Organization and Architecture	4	30	70	100	4
	1BC-5P	C Programming Lab	3	15	35	50	1
	1BC-6P	Computer Application Lab	3	15	35	50	1
Part-3	MC1	MC: Human Resource Management	2	15	35	50	1
	VE1	Value Education	1	15	35	50	1
Part-4	CC1	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Marks & Credits			34	240	560	800	25

II Semester BCA (Choice Based Credit System)

Part	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
Part-1	LK/S/H B2	Language(Kannada/Sanskrit/Hindi)	4	30	70	100	2
	LE B2	Language English-I	4	30	70	100	2
Part-2	2BC-1T	Numerical and Statistical Methods	4	30	70	100	4
	2BC-2T	Data Structures Using C	4	30	70	100	4
	2BC-3T	Object Oriented Programming Using C++	4	30	70	100	4
	2BC-4T	Operating System	4	30	70	100	4
	2BC-5P	Data Structure Lab Using C	3	15	35	50	1
	2BC-6P	C++ Lab	3	15	35	50	1
Part-3	MC2	MC: India Constitution & Human Right	2	15	35	50	1
	VE2	Value Education	1	15	35	50	1
Part-3	CC2	Co C & Extra Curriculum Activity	1	-	-	-	1
Total Hours ,Marks & Credits			34	240	560	800	25

III SEMESTER

SUBJECT CODE	TITLE	LEC HRS	PRAC HOURS	MARKS		TOTAL
				IA	UE	
III.BCA 1	Language(Kannada/Sanskrit/Hindi)	4	-	20	80	100
III.BCA 2	Language English-III	4	-	20	80	100
III.BCA 3	Database Management Systems	4	-	20	80	100
III.BCA 4	Unix Operating System	4	-	20	80	100

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III.BCA 5	Mathematics: Discrete Mathematical Structures	4	-	20	80	100
III.BCA 6	Accounting & Financial Management	4	-	20	80	100
III.BCA 7	VB.Net Programming	4	-	20	80	100
III.BCA 8	Unix Lab	-	4	20	80	100
III.BCA 9	VB.Net & SQL Server Lab	-	4	20	80	100
	Total	28	8	180	720	900

IV SEMESTER

SUBJECT CODE	TITLE	LEC HRS	PRAC HOURS	MARKS		TOTAL
				IA	UE	
IV.BCA 1	Language(Kannada/Sanskrit/Hindi)	4	-	20	80	100
IV.BCA 2	Language English-IV	4	-	20	80	100
IV.BCA 3	System Software	4	-	20	80	100
IV.BCA 4	Computer Graphics	4	-	20	80	100
IV.BCA 5	Software Engineering	4	-	20	80	100
IV.BCA 6	Core Java	4	-	20	80	100
IV.BCA 7	Mini Project	-	4	20	80	100
IV.BCA 8	Computer Graphics and TSR Programming lab	-	4	20	80	100
IV.BCA 9	Core Java Lab	-	4	20	80	100
	Total	24	12	180	720	900

V SEMESTER

SUBJECT CODE	TITLE	LEC HRS	PRAC HOURS	MARKS		TOTAL
				IA	UE	
V.BCA 1	Web Technologies	4	-	20	80	100
V.BCA 2	Analysis & Design of Algorithms	4	-	20	80	100
V.BCA 3	Computer Networks – I	4	-	20	80	100
V.BCA 4	Asp.Net and C#	4	-	20	80	100
V.BCA 5	Simulation Project lab	-	4	20	80	100
V.BCA 6	Web Technologies lab	-	4	20	80	100
V.BCA 7	Asp.Net and C# lab	-	4	20	80	100
V.BCA 8	Communicative Skills	-	4	20	80	100
	Total	16	16	160	640	800

VI SEMESTER

SUBJECT CODE	TITLE	LEC HRS	PRAC HOURS	MARKS		TOTAL
				IA	UE	
VI.BCA 1	Computer Networks – II	4	-	20	80	100
VI.BCA 2	Artificial Intelligence	4	-	20	80	100
VI.BCA 3	Mobile Computing	4	-	20	80	100
VI.BCA 4	Object Oriented Analysis and Design	4	-	20	80	100

VI.BCA 5	Mathematics: Operation Research	4		20	80	100
VI.BCA 6	Computer Networks lab	-	4	20	80	100
VI.BCA 7	Project Work	-	08	40	160	200
VI.BCA 8	Seminar	-	-	-	-	50
	Total	20	12	160	640	850

B.Sc Courses

YEAR 2015-2016

(Choice Based Credit System)

SEM	Paper	Title	Hours	Marks			Credits
				IA	Exam	Total	
I	CSC - T	Computer Organization and Programming in C	4	30	70	100	4
	CSC - P	Programming in C Lab	3	15	35	50	1
II	CSC - T	Operating System and Data Structures using C	4	30	70	100	4
	CSC - P	Data Structures Lab(using C)	3	15	35	50	1

B.Sc Syllabus Structure

Non CBCS Pattern

CBCS Pattern

Semester I

Computer Fundamentals and C Programming	CSC - T	Computer Organization and Programming in C
C Programming Lab	CSC - P	Programming in C Lab

Semester II

Data Structures and Operating Systems	CSC - T	Operating System and Data Structures using C
Data Structures Lab	CSC - P	Data Structures Lab (using C)

Semester III

OOPS using C++ and DBMS	CSC - T	Database Management System and Software Engineering
C++ Lab	CSC - P	DBMS Lab

Semester IV

VB.Net and Software Engineering	CSC - T	Unix Operating System
SQL and VB.Net Lab	CSC - P	UNIX Programming Lab

Semester V

Computer Networks	CSC - T5	Object Oriented Programming using Java.
Java Programming	CSC - P5	Java Programming Lab
UNIX Operating System and Internet Technology	CSC - T6	Visual Programming
UNIX programming and Internet Lab	CSC - P6	Visual Programming Lab

Semester VI

System Software	CSC - T7	Mobile Computing and Wireless
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		Communication
Computer Graphics	CSC – T8	Computer Networks
Project Work	CSC – P7	Project Work

The following of the Members of the BOE was approved by the Board

Sl.No	Members Name	Address
15.	Prof. Ravi Hegde	The National Degree College ,Basavanagudi Bangalore
16.	Prof. H.K. GunduRao	Lecturer, Vijaya College, Basavanagudi,B-4
17.	Prof. Shashidhara S.B	Lecturer, VV PuramCollege,VVPuram
18.	Prof. Sudhir T.V	Lecturer, Teacher Academy College
19.	Prof. Alakananda K.P.	Lecturer, National Degree College Basavanagudi,B'lore-4
20.	Prof. Jagadeesh B.G.	Lecturer, National Degree College Basavanagudi,B'lore-4
21.	Prof. VijayaRaghavan	Lecturer, National Degree College Basavanagudi,B'lore-4
22.	Prof. Divyashree N	Lecturer, National Degree College Basavanagudi,B'lore-4
23.	Prof. Bharatha V	Lecturer, National Degree College Basavanagudi,B'lore-4
24.	Prof. Vidya A.H	Lecturer, National Degree College Basavanagudi,B'lore-4
25.	Prof. Sangeetha B.K	Lecturer, National Degree College Basavanagudi,B'lore-4
26.	Prof. Satish Kumar G	Lecturer, National Degree College Basavanagudi,B'lore-4
27.	Prof. Kiran C. K.	Lecturer, National Degree College Basavanagudi,B'lore-4
28.	Prof. Avinash B Patil	Lecturer, National Degree College Basavanagudi,B'lore-4

The following list of the External Examiners was approved by the Board:

Sl.No	Members Name	Address
24.	Prof. Shashidhara S.B	VV PuramAtrs& Science College, VV Puram
25.	Prof.Madhusudan Reddy	VV PuramAtrs& Science College, VV Puram
26.	Prof. Gopal B	Vijaya College Basavanagudi,Bangalore-4

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27.	Prof. Hemalatha N	Vijaya College Basavanagudi,Bangalore-4
28.	Prof. Surendra H.D.	Vijaya College Basavanagudi,Bangalore-4
29.	Prof. DivyaS.R	Vijaya College Basavanagudi,Bangalore-4
30.	Prof. Prasad C.N.	St. Joseph College, Bangalore-1
31.	Prof. Vaishnavi K	St. Joseph College, Bangalore-1
32.	Prof. ArunaAkula	BMS College for Women,B,gudi,Blore-4
33.	Prof. Nalini L	BMS College for Women, B,gudi,Blore-4
34.	Prof. Bhavya T	SRN Adarsha College, Chamarajpet,Blore-18
35.	Prof. Gurunath R	DayanandaSagar College,Bangalore-78
36.	Prof. Vijayakuma C M	DayanandaSagar College, Bangalore-78
37.	Prof. PoornimaBhat	DayanandaSagar College, Bangalore-78
38.	Prof. Bhavya Ramesh	DayanandaSagar College, Bangalore-78
39.	Prof. Nagaraju	Teacher Academy College, Banasawadi
40.	Prof. Sudir T.V.	Teacher Academy College, Banasawadi
41.	Prof. Sathyashree	APS College N.R. Colony,Bangalore-19
42.	Prof. Anantha M	APS College N.R. Colony,Bangalore-19
43.	Prof. Priyanka S	Oxford College,J.P. Nagar ,Bangalore
44.	Prof. Shaila Mary	Mount Carmel College, Bangalore
45.	Prof. Nalini.L	B.M.S College for Women, Bangalore-04
46.	Prof. Kalyani S.A	B.M.S College for Women, Bangalore-04



Ravi Hegde
Chairperson

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