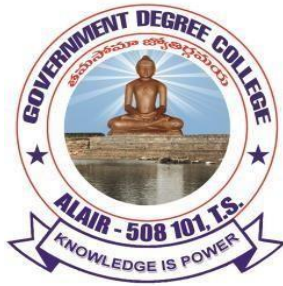


GOVERNMENT DEGREE COLLEGE ALAIR



DEPARTMENT OF BOTANY PROFILE



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1) ABOUT THE DEPARTMENT

- The Department of Botany started in the year 2008 in Govt. Degree College ALAIR affiliated to Osmania University, after the establishment of new State Telangana it is now affiliated to Mahatma Gandhi University.
- We have two sections BSc. B.Z.C (T/M &EM).
- One sanctioned post

VISION:

“Effectively engaging students, ensuring their learning and shaping their development in all Aspects”.

MISSION:

1. To render its students, quality education in Botany.
2. To create a pleasant learning atmosphere with theory and experiments.
3. To refer to as many sources of teaching and learning, making use of modern technology.
4. To use ICT wherever necessary.

PERSONAL PROFILE



Dr.KandulaJayapaul

Assistant Professor and Head Department of Botany

Academic Qualifications:

- BSc(Genetics) –Kakatiya University
- MSc (Botany):Specialization in Biotechnology and Molecular Biology–Osmania University Campus-2000.
- PhD(Botany): Sub Field-Biotechnology (Isolation Characterization and Enhancement of Vasicine A Quinazoline Alkaloid from Cell cultures of *Adhatodazeylanica*, Osmania University – 2006
- Advanced Diploma in Bioinformatics- Osmania University-2002

Job Profile:

- **Scientist** - Bio Nutrition (Food for Medicine) 2006-2012 AvesthagenPvt LtdDiscoverer, 9th Floor, International Technology Park –White FieldBangalore.

Projects involved:

- Diabetes- Nestle Cardiovascular Disease (CVD)-
- Dionne-US Bone Health and Pharmacokinetic studies-Cipla

Symposia and Workshops attended

- Participated in the 3 day International Conference on “Frontiers in Fungal Biotechnology ” Organized by the Dept. of Botany at Meka Star Auditorium ,Osmania University, Hyderabad ,January 16th -18th ,1999.
- Participated in the 3 National Symposium on “Plant Pathogens Diversity in Relation to Plant Health ” Organized by Dept. of Botany,Osmania University, Hyderabad ,January 16th -18th ,2003.
- Participated in the 2 day National Symposium on “Current Trends in Biotechnology ” Organized by Dept. of Botany at Meka Star Auditorium
- Osmania University, Hyderabad, December 7th -8th , 2013.
- Participated in one day workshop on “Recent Trends in Science and Technology “Organized by District Resource Centre, MVSD.
- P.G College, Mahabubnagar and Indian Science Congress Association Hyderabad on 3rd September, 2014.
- Participated in the One day National Seminar on “Aerobiology and Public Health” Organized by Dept. of Botany, University College of Science, Saifabad, Hyderabad ,December 12th , 2014.
- Participated in the One day Workshop on “Choice Based Credit System” at Dr.BRR Govt Degree and P.G College, Jadcherla, Mahabubnagar Dist, August, 08th, 2016.
- Participated in the One day Workshop on World Environment Crisis-A way Forward at Dr.BRR Govt Degree and P.G College, Jadcherla, Mahabubnagar Dist, September 07th, 2016.

- Participated in the One day Workshop on “RTI ACT-PERSPECTIVES AND CHALLENGES” at Dr.BRR Govt Degree and P.G College, Jadcherla, MahabubnagarDist., September 21th, 2016.
- Participated in the 2 day Awareness Workshop NIRF India Ranking-2021 for Higher Education Institutions from 18th to 19th Jan 2021 by Institute of Academic Excellence.

Symposia and Workshops Organized:

- One day National Seminar on “New Vistas in Science and Technology” UGC sponsored on 7th Feb 2017 by Department of Botany,Dr.BRR GDC, Jadcherla.

Oral Presentation:

- Ant diabetic activity of certain medicinal plant metabolites at National Symposium on “Genomics A Gateway to future at Yogi Vemana University, Kadapa .March18th,2015
- “Sourcing Alternative to Rare Endangered and Threatened (RET) Medicinal plants and Seeds Cryo-Banking. 4th World Ayurveda Congress and Arogya Expo, Palace Grounds-Bangalore. December 9th - 13th2010.
- “Production of vasicine in *Adhatoda zeylanica*” through Cell cultures in the 3 day International Conference on “Medicinal and aromatic plants” at ShilpakalaVedika, Hi-Tech city, Hyderabad, India. March15th-17th, 2003.
- “*In vitro* production of Vasicine in *Adhatodazeylanica*at National Seminar on Biodiversity, Conservation and Commercial Exploitation of Medicinal Plants, Hyderabad .November 8th -10th ,2003

Poster presentation:

- “Isolation of Aloin and Barbaloin from *Aloe barbadensis*” at National Seminar on Biodiversity, Conservation and Commercial Exploitation of Medicinal Plants, Hyderabad. November 8th -10th 2003.

Publications:

- K.Jayapaul, P.B.KaviKishor and K.Janardhan Reddy(2004).”Detection of vasicine from the Callus of *Adhatodazeylanica*” *InvitroCellular and Developmental Biology*.
- K.Jayapaul, Srilaxmi and K.JanardhanReddy(2005) Production of Phytochemicals of Pharmaceutical importance from cell cultures of *Adhatodazeylanica*, *Psoriliacorylifolia* in chronic inflammatory disease and neutraceuticals. YaminiB.Tripati. Pages309-326.
- Rama Murthy Ganesh, Jayapaul, K and K.Janardhan Reddy (2003): Production of Colchicine in *Gloriosa superb* L. through Plant Cell Cultures. *Cure all Journal of UnanaiMedicine*. 1:41-44.
- Janardhan Reddy, K and Jayapaul, K (2003): Production of Quinazoline alkaloid through plant cell cultures. *Proceedings of the International Conference on Medicinal and Aromatic Plants, Hyderabad*. 65-70pp.

Awards:

- Received fellowship from AP-Netherlands Biotechnology Programme (IPE) for the entire project work.
- ISCA – Best poster award in the Plant sciences at Indian Science Congress 2006.
- Best Teacher Award from the Government YadadriBhongirDistTelangana state -2019

Patent:

- A composition and a process thereof Tester No 2615/CHE/2008

Orientation Course:

- Orientation Course in Communicative English from 1st -29th June 2012. UGC-Academic Staff College, Osmania University Hyderabad. Grade-A

Refresher Course

- Refresher Course in Life Sciences from Nov 7th -24th 2014 UGC-Academic Staff College, University of Hyderabad. Grade-A
- Refresher Course in Life Sciences from Sep 17th -30th 2020 UGC-Maulana Azad National Urdu University Hyderabad. Grade-A
- FDP: One week online FIP short term course on ICT tools in Higher Education-UGC-HRDC-RUSA from 27th August to 2nd September 2020.

Training Programs:

- Training Programme in Waters- HPLC, Bangalore
- Orientation Course in Communicative English from 1/6/2012- 29/6/2012 by UGC – Academic Staff College, Osmania University.”
- Training Programme on Mainstreaming “Environment and Climate Science in Higher Education” at Dr.MCR HRD Institute, A.P, Hyderabad 26/6/2013-28/6/2013.
- Refresher Course in Life Sciences held from November 7th-27th (2014) Hyderabad Central University
- NIPUNA-Nurturing Young Leaders in Higher Education -2 day training programme 19th -20th 2016 Govt of Telangana Commissionerate of Collegiate Education(RUSA)
- D-Sampada Innovative online Teaching-Learning and Effective content Management-3day workshop from 1st -3rd June 2017 Govt of Telangana Commissionerate of Collegiate Education
- Workshop on U.G.CBCS Curriculum in Life Sciences DRC Mahabubnagar from 14th -15th July 2017
- Awareness Programme on “PREVENTION OF DRUG ABUSE” by Administrative Staff College

of India, Hyderabad 2nd&3rd August 2017.(RUSA)

Extension Lectures:

- Delivered lecture at Govt .Degree College Patancheru, Hyderabad. Topic: “r-DNA Technology” on 03-12-2013.
- Delivered lecture at GIRRAJ Govt. College (Autonomous), Nizamabad. Topic: “Recombinant DNA technology” on 07-01-2014.
- Delivered lecture at Govt Degree College Patancheru, Hyderabad. Topic: “Economic Importance of Algae” on 03-10-2015.

Curricular Aspects

Curricular Planning and Implementation

The Institution, as affiliated to Mahatma Gandhi University, Nalgonda, follows the curriculum designed by the university. Hence, the department implements the syllabus prescribed by Mahatma Gandhi University, Nalgonda. The College depending on its resources, potentiality institutional goals imparts quality education.

ACADEMIC FLEXIBILITY

CBCS System

CBCS system is being implemented since 2016-17 academic year, which gives more scope on flexibility of choosing subjects as per students' interest.

FEEDBACK SYSTEM

The students' feedback is collected every year. A structured questionnaire is given to a random sample of students, constituting each class. Feedback is taken on every teacher and is analyzed.

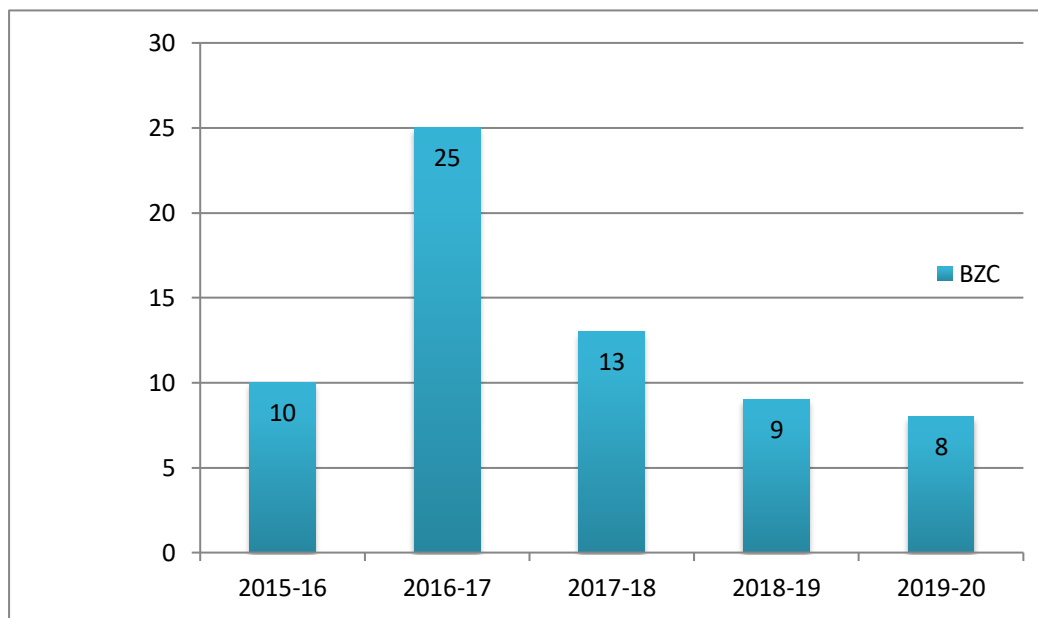
II. TEACHING LEARNING AND EVALUATION

STUDENT ENROLMENT AND PROFILE

DETAILS OF ADMISSIONS FOR THE LAST FIVE YEARS

Strength particulars			
S.No	YEAR	BZC	Total
1	2015-16	10	10
2	2016-17	25	25
3	2017-18	13	13
4	2018-19	09	09
5	2019-20	08	08

Graphical representation of Strength particulars



MODE OF ADMISSION:

To get admission in to their Bachelor's degree, students have to pass intermediate or 10+2 in the respective subjects. Admissions are given based on the merit obtained in their previous course and rule

of reservation is followed as per state Government rules .The manual mode of admission system had been in force until the academic year 2015-16. The admissions process used occur at college level as per the University Schedule, duly following reservation systems prevailing time to time.

DOST: DEGREE ONLINE SERVICES OF TELANGANA, W.E.F. Academic Year 2016-17:

From the AY 2016-17, the degree admission system was made online in entire Telangana State. The admissions are allowed to all universities under one umbrella called DOST.

STUDENT PROFILE:

Courses offered

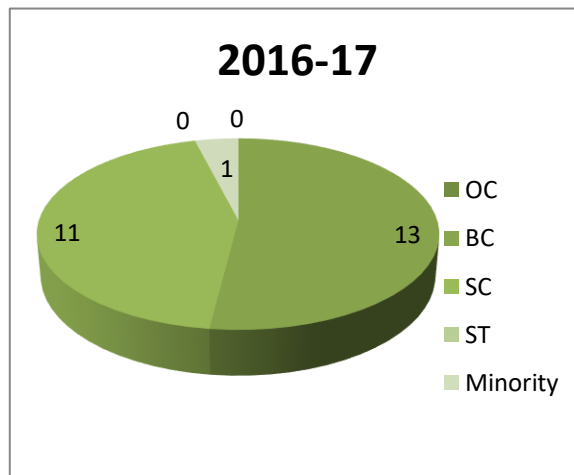
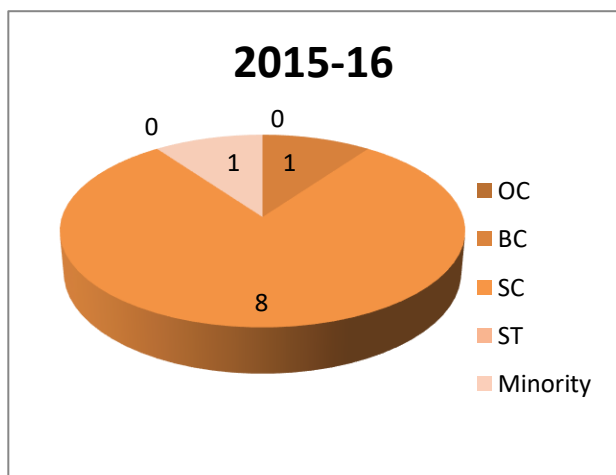
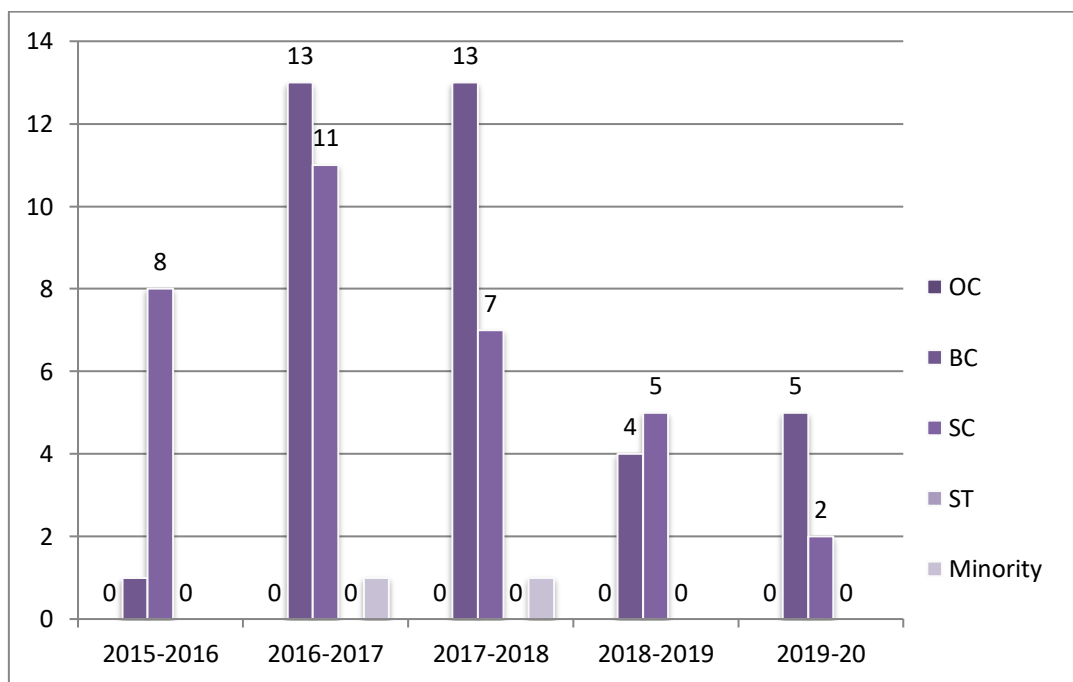
- B.Sc.1. B.Z.C (T/M)
2. B.B.C(E/M)

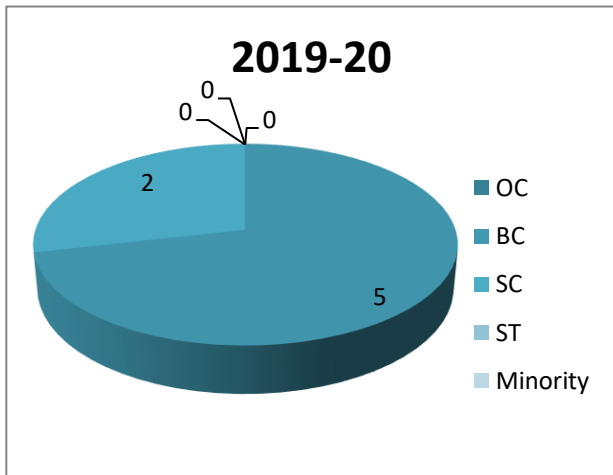
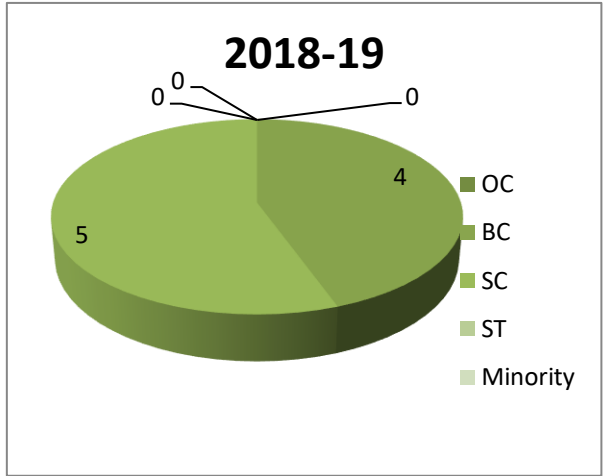
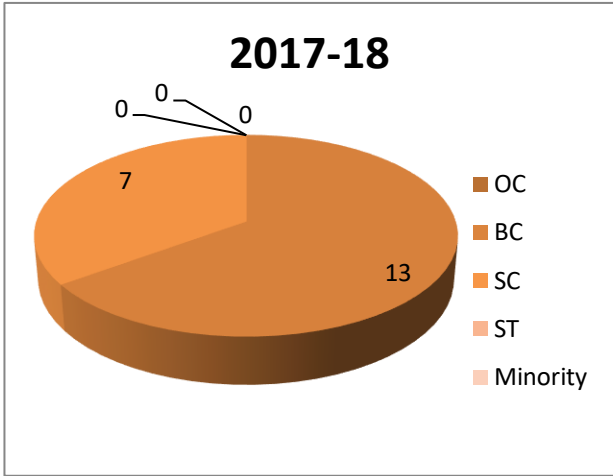
- A good number of students comes with an average level of awareness hailing from poor socio-economic back ground as rural first generation literate
- Majority of the students commutes daily from their native villages situated around Alair town by availing bus pass facility provided by TSRTC.
- Despite Low performance at entry level the students are well taught and encouraged to overcome the difficulties by arranging student seminars, Group discussions, Quiz competitions organizing Guest lectures and conducting tests.
- Finally the performance of the students is tested through Semester end examinations. The strength particulars and the results of the last five batches are given below.

Social Status of the students for the last five years:

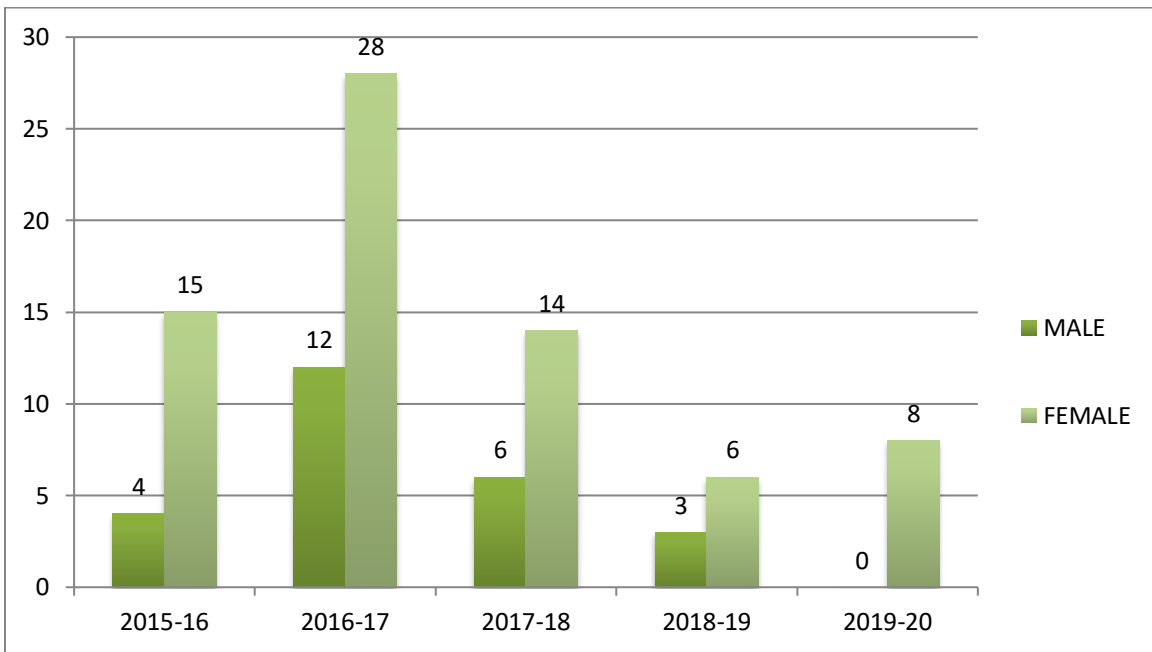
S. no	Academic year	OC			BC			SC			ST			Minority			Total		G.total	
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F		
1	2015-16	0	0	0	0	01	01	01	07	08	0	0	0	0	0	0	0	02	08	10
2	2016-17	0	0	0	03	10	13	01	10	11	0	0	0	0	0	0	0	04	21	25
3	2017-18	0	0	0	03	10	13	03	04	07	0	0	0	0	0	0	0	06	14	20
4	2018-19	0	0	0	01	03	04	03	02	05	0	0	0	0	0	0	0	04	05	09
5	2019-20	0	0	0	0	05	05	0	02	02	0	0	0	0	0	0	0	0	07	07

Graphical representation of Social Status





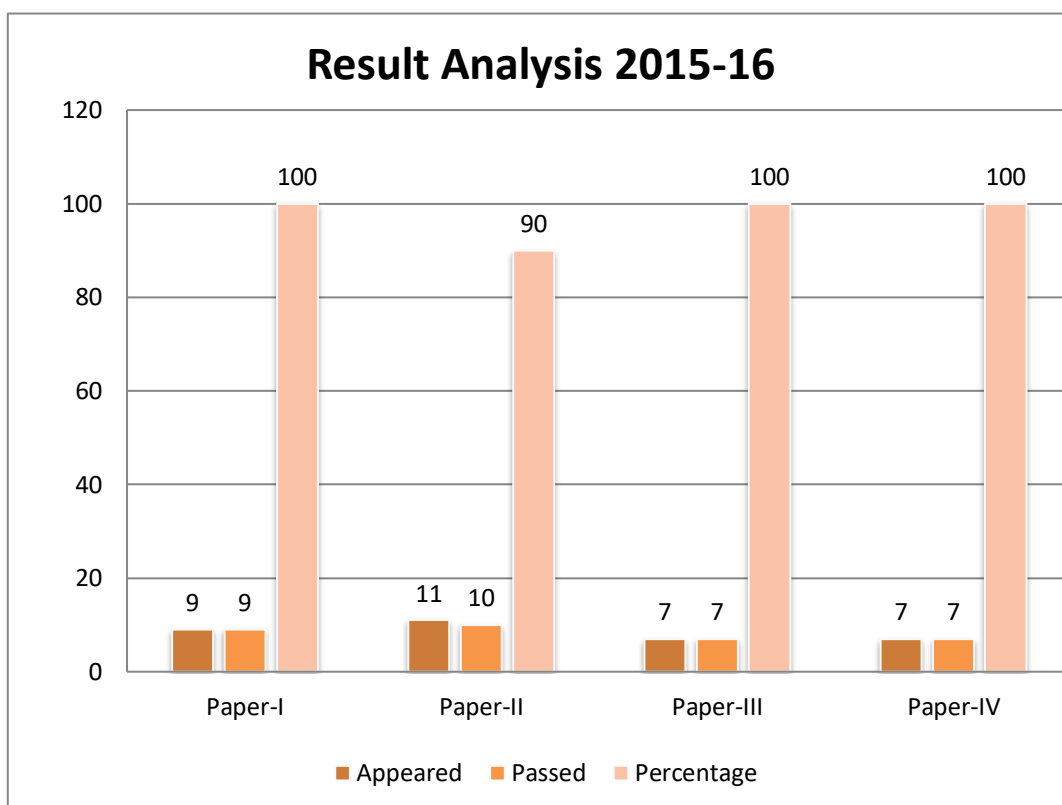
Student strength (male and female)



RESULTS

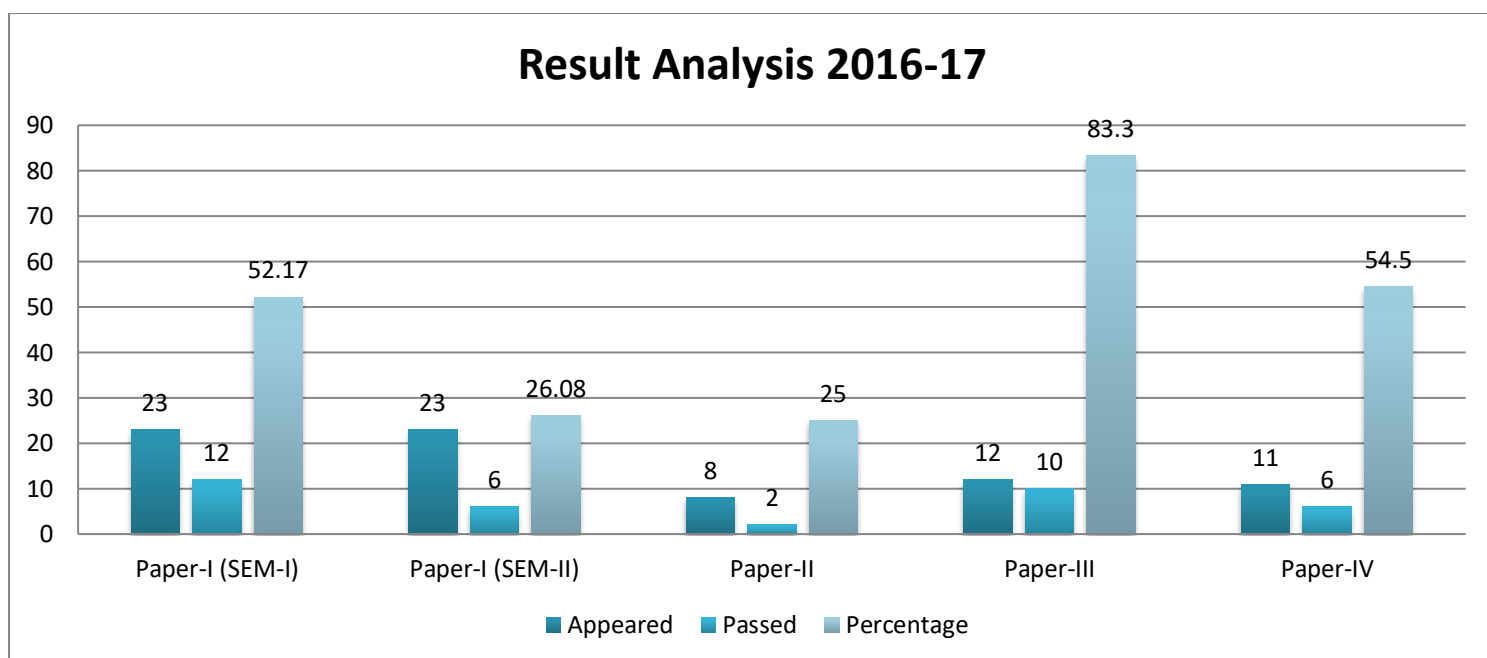
Results Analysis for the Academic Year-2015-16

Sl. No	Paper	Appeared	Passed	Pass Percentage
1	Paper-I	9	9	100%
2	Paper-II	11	10	90%
3	Paper-III	7	7	100%
4	Paper-IV	7	7	100%
	Total	34	33	97%



Results Analysis for the Academic Year-2016-17

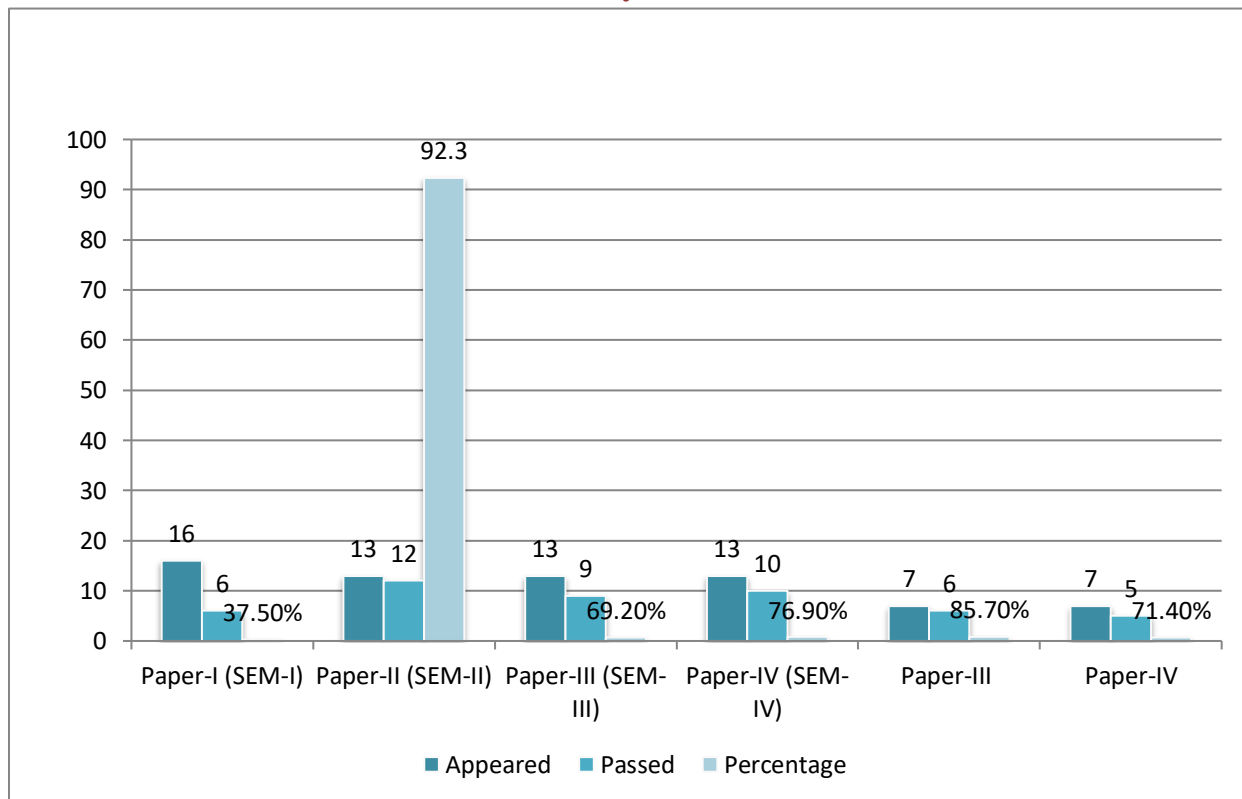
Sl. No	Paper	Appeared	Passed	Pass Percentage
1	Paper-I (SEM-I)	23	12	52.17%
2	Paper-II (SEM-II)	23	6	26.08
3	Paper-II Year	8	2	25%%
4	Paper-III Year	12	10	83.3%
5	PAPER-IV	11	6	54.5%
Total		77	36	46.7%



Results Analysis for the Academic Year-2017-18

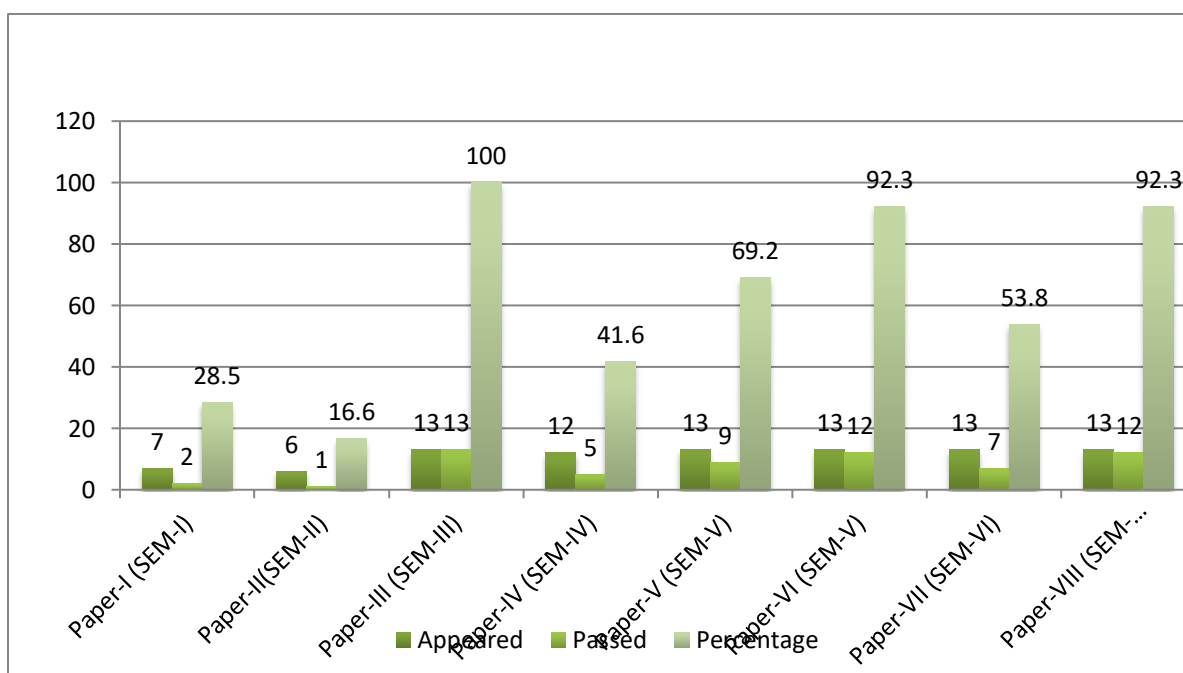
Sl. No	Paper	Appeared	Passed	Pass Percentage
1	Paper-I (SEM-I)	16	06	37.5%
2	Paper-II (SEM-II)	13	12	92.3%
3	Paper-III(SEM-III)	13	09	69.2%
4	Paper-IV(SEM-IV)	13	10	76.9%
5	Paper-III Year	07	06	85.7%
6	Paper-IV	07	05	71.4%
Total		56	36	64.2%

Result Analysis 2017-18



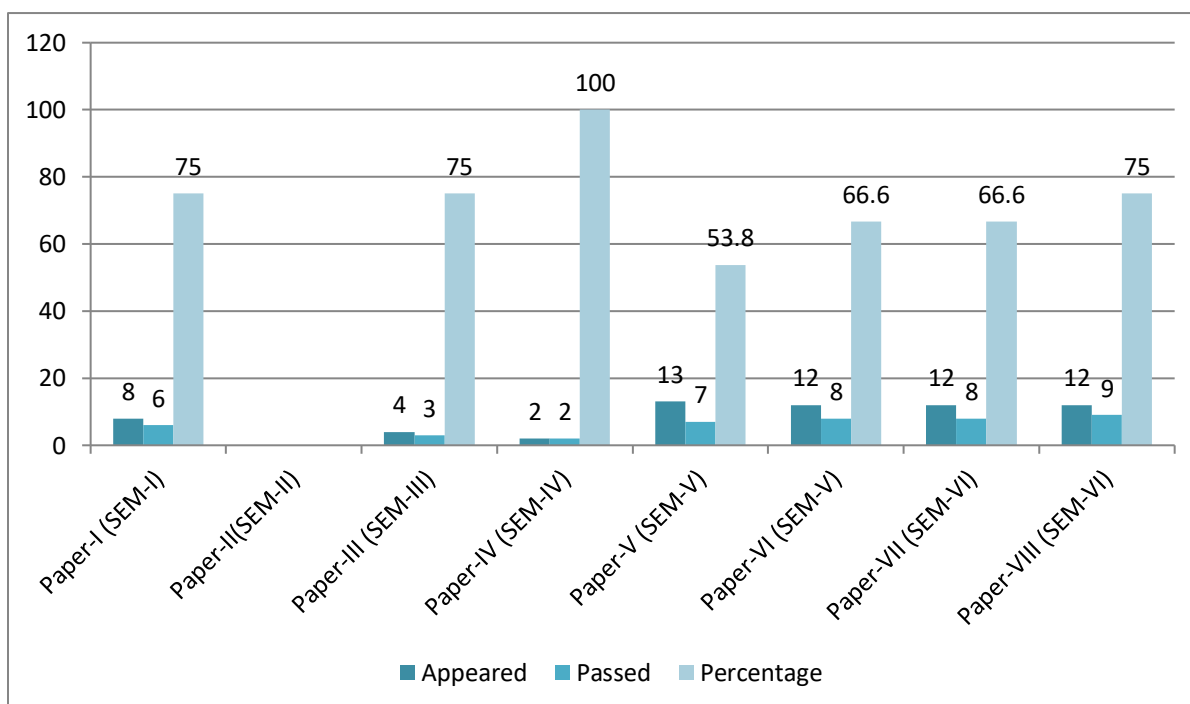
Results Analysis for the Academic Year-2018-19

Sl. No	Paper	Appeared	Passed	Pass Percentage
1	Paper-I (SEM-I)	07	02	28.5
2	Paper-II (SEM-II)	06	01	16.6
3	Paper-III(SEM-III)	13	13	100
4	Paper-IV(SEM-IV)	12	05	41.6
5	Paper-V(SEM-V)	13	09	69.2
6	Paper-V(SEM-VI)	13	12	92.3
7	Paper-VI(SEM-VII)	13	07	53.8
8	Paper-VI(SEM-VIII)	13	12	92.3
Total		90	61	67.7



Results Analysis for the Academic Year-2019-20

Sl. No	Paper	Appeared	Passed	Pass Percentage
1	Paper-I (SEM-I)	08	06	75
2	Paper-II (SEM-II)	08	05	62.5
3	Paper-III(SEM-III)	04	03	75
4	Paper-IV(SEM-IV)	02	02	100
5	Paper-V(SEM-V)	13	07	53.8
6	Paper-V(SEM-VI)	12	08	66.6
7	Paper-VI(SEM-VII)	12	08	66.6
8	Paper-VI(SEM-VIII)	12	09	75
Total		63	43	68.2



Students Performance Analysis for a period of 5 consecutive years.

S.No	Year	Papers	No of Students appeared	No of Students passed	Pass Percentage
1	2015-2016	Paper-I	11	11	100%
		Paper-II	07	05	71.4%
		Paper-III	05	04	80%
		Paper-IV	05	05	100%
2	2016-2017	Paper-I (SEM-I)	23	12	52.17%
		Paper-II (SEM-II)	23	6	26.08
		Paper-II Year	8	2	25% %
		Paper-III Year	12	10	83.3%
		PAPER-IV	11	6	54.5%
3	2017-2018	Paper-I (SEM-I)	16	06	37.5%
		Paper-II (SEM-II)	13	12	92.3%
		Paper-III(SEM-III)	13	09	69.2%
		Paper-IV(SEM-IV)	13	10	76.9%
		Paper-III Year	07	06	85.7%
4	2018-2019	Paper-IV	07	05	71.4%
		Paper-I (SEM-I)	07	02	28.5%
		Paper-II (SEM-II)	06	01	16.6%
		Paper-III(SEM-III)	13	13	100%
		Paper-IV(SEM-IV)	12	05	41.6%
		Paper-V(SEM-V)	13	09	69.2%
		Paper-V(SEM-VI)	13	12	92.3%
5	2019-2020	Paper-VI(SEM-VII)	13	07	53.8%
		Paper-VI(SEM-VIII)	13	12	92.3%
		Paper-I (SEM-I)	08	06	75%
		Paper-II (SEM-II)	08	05	62.5%
		Paper-III(SEM-III)	04	03	75%
		Paper-IV(SEM-IV)	02	02	100%
		Paper-V(SEM-V)	13	07	53.8%
Paper-V(SEM-VI)	12	08	66.6%		
Paper-VI(SEM-VII)	12	08	66.6%		
Paper-VI(SEM-VIII)	12	09	75%		

TEACHER QUALITY

Teaching Staff:

Sl.No.	Name of the Teaching Staff	Designation	Highest qualification	Awards received/Achievements
1	Dr.KandulaJayapaul	Asst Professor	M.Sc. Ph.D. Advance Diploma in Bioinformatics	Scientist (Food for Medicine) Bionutra division, Avesthagen Ltd .Bangalore.2006-2012. ISCA-Best poster award in the Plant sciences at Indian Science Congress 2006. Harithahaaram Convener
2	Dr.ChandraBabu	AsstProfessor	M.Sc. Ph.D.	
3	D.Rajesh	lecturer	M.Sc.	

2) Teaching Staff Work load particulars

S.No	Name of The Faculty	Work Load Per Week
1	Dr.KandulaJayapaul	22

Additional responsibilities of the faculty

S.No	Name of The Faculty	Additional Responsibilities
1	Dr.KandulaJayapaul	1. Vice –Principal 2. Academic Co-Coordinator 3. Harithahaaram Convener 4. CPDC Secretary 5. Minority Cell Convener

Catering to Student Diversity

Department of Botany has a streamlined mechanism for the continuous assessment of the learning levels of the students. Their learning levels are assessed based on their performance in slip tests, internal and external exams, assignments, seminars, group discussions etc. Based on this, advanced learners and slow learners are identified. Special programs are designed to cater to the needs of the students of different groups.

Strategies adopted for facilitating Slow Learners:

- The students who are slow at learning are given special coaching in theory and practicals at zero hours.
- They are given personal counseling through mentor mentee system.
- The students who are unable to clear the semester examinations are identified and Remedial classes are conducted to enable them to pass the examinations.
- The slow learners are supplemented with important question bank, home assignments are given, slip tests are conducted to make them learn on par with the advanced learners.

Strategies adopted for facilitating Quick Learners:

- Based on the performance in the examinations quick learners are identified.
- They are encouraged to go beyond the syllabus to acquire in depth knowledge in the subject concerned. Classroom seminars, group discussions are conducted to encourage them to enhance their skills.
- They are encouraged to take part in student study projects and research activities.
- They are given guidance to join higher education in the institutions of national importance after completion of UG

Student centric methods

Department of chemistry follow different methodologies like Group Discussions, debates, laboratory experimental learning, studyprojects, assignments, field trips and other competitions like quiz, presentations and student seminars.

Student Seminars: Student seminars help the students to express his / her views on the topic and gain self-knowledge by referring different books and interaction with peer group and the teachers. It also helps in attaining confidence by self-expression.

GroupDiscussions: Students are encouraged to participate in group discussion in various subjects as they enhance their subject knowledge and broaden their creative thinking skills.

Laboratory experiential learning: Practical knowledge is always justified with the motto of learning by doing. Basic experiments are practiced by the students.

Study projects:

To enhance practical knowledge with innovation, we do encourage our students to undertake study projects under the supervision of faculty members. The outstanding and enthusiastic students are motivated to undertake study projects. The selected projects are presented and evaluated. The best study projects are sent for District and State level competitions. Jignasa is one such programme introduced by CCE across all the government degree colleges of the state.

Student Assignments: The College has been following the CBCS system from the academic year

2016-17. Assignments are given at the end of each chapter by the faculty members to assess the knowledge gained by the student. The assignments are evaluated and graded.

ICT Tools/E-Content

INTERNET FACILITY

The College has an internet connection. Wi-fi facility is provided to the students on campus.

- Central library can be made use of.
- Internet facility in the central library can be made use of.
- The department has acquired the following list of teaching learning tools
- ICT Tools (LCD Projector)
- T-SAT (MANA TV) Channel-Remote Learning Through Online
- Blended Teaching Learning Method-List of PPTs

S. No	Topic	Link
1	Leguminacea	https://docs.google.com/presentation/d/1-lsxxITkRa6HDwF2kK0sHOnOSCtHq9tWe8FRADTf7nQ/edit?usp=sharing
2	Chara-Algae	https://docs.google.com/presentation/d/1PpO8emH35UZe4i3Hgk_rAg9TmTaCCt-8BorpllwGB6M/edit?usp=sharing
3	Fabaceae	https://docs.google.com/presentation/d/1LifcJo_ISLY1DiNyzYpI1TER9ITOpItLb3FpW35lfko/edit?usp=sharing
4	Lac Operon	https://docs.google.com/presentation/d/1DZgjGVEFYsPKlpyj9Qu3JPgR2VsslrGALZQcrqKS VFo/edit?usp=sharing
5	Tissue Culture	https://docs.google.com/presentation/d/1YZWT-7ulAc_0iVBZxzvr7qskapIrEuHI7lIPo7oCI4/edit?usp=sharing
6	Cell Biology	https://docs.google.com/presentation/d/1IUaVPxmoRpDvno684TcFTCr36h9n1S7Ryk8gWpvr8e4/edit?usp=sharing
7	Cell Biology	https://docs.google.com/presentation/d/1RxFrIFmeZRY0fk2Wvbko8VDxQz7dpJhXRkpW5Sf ewg/edit?usp=sharing
8	Mendels Laws	https://docs.google.com/presentation/d/13QUo2qGxh9R5SxgJNzHVo-dkKxapPVqKxPywMA5_rs/edit?usp=sharing
9	Crossing Over	https://docs.google.com/presentation/d/1Hm2WYkqn-CpXrWyLjQckJP-QDhF93nWFHQKdAQEj_DY/edit?usp=sharing
10	EnZymes	https://docs.google.com/presentation/d/1Y68tT6P2UO9Sg2BwoGbuSMKJ4H1UNAmbBR2NqM-S4Q0/edit?usp=sharing
11	Mutations	https://docs.google.com/presentation/d/1b0G-W7rfu0OIaVdadkWZuV1mwN5p0qElxeRawq_NkkE/edit?usp=sharing
12	R-DNA Technology	https://docs.google.com/presentation/d/1aMC3WtSfJntiImMs519R-ssZ7k15PnHLC6nqRv2exU0/edit?usp=sharing
13	Leguminaceae	https://docs.google.com/presentation/d/1-lsxxITkRa6HDwF2kK0sHOnOSCtHq9tWe8FRADTf7nQ/edit?usp=sharing
14	Herbarium Preparat	https://docs.google.com/presentation/d/1u4EtMnPDzFy5kvULx11fuVX1Q9mj_gDr/edit?usp=sharing&oid=111656637730794252241&rtpof=true&sd=true

	ion	
15	Cell Division	https://docs.google.com/presentation/d/17SMncJ_ml10kZKG1ys5msCpPg9X14O0QRs9i3rIZqAs/edit?usp=sharing
16	Special Chromosomes	https://docs.google.com/presentation/d/18p-0Kwufr8iMzelz9r41yKAaeHPWwSxY9GYt13S5hZA/edit?usp=sharing
17	DNA Functions	https://docs.google.com/presentation/d/1t4rlNvaCxZV6QQ4AFrI-6bVvNoWcQ5Nkn5yKmS0_py8/edit?usp=sharing
18	Cucurbitaceae	https://docs.google.com/presentation/d/1Sy6VfTy6-x3URTe2cIa8c2Qb7-2V0YAAP46W3ErVbSM/edit?usp=sharing
19	Asteraceae	https://docs.google.com/presentation/d/1ni2GOgsHUZBBkMrO6Vd_xqjndDyINhbsBXb41_UmV1o/edit?usp=sharing
20	Annonaceae	https://docs.google.com/presentation/d/1Dsnx4OJVCQfRsDvIubOU5HtvK2CPkoBGMx1NGXZ2A0s/edit?usp=sharing
21	Enzymes-2	https://docs.google.com/presentation/d/1Y68tT6P2UO9Sg2BwoGbuSMKJ4H1UNAmbBR2NqM-S4Q0/edit?usp=sharing

➤ **E-Content-**You tube Channel of faculty.

<https://www.youtube.com/channel/UCcfstiyQ4glCPMhk-L-ghvA/>

➤ **Whatsapp groups:**



Programme Outcomes:

- The scope of plant diversity with respect to environmental relationships.
- Study of plant classification to understand the taxonomy.
- The utilization of plants for human beings in terms of its economic importance.
- Take projects, study case to understand plant biodiversity.
- Student learns practical work as per the syllabus prescribed by SPPU, field studies for optimizing proficiency the subject.
- Use of IT tools, communication skills in scientific knowledge for specific needs.
- Career planning.

Programme Specific Outcomes:

- Understanding phylogenetic relationships of plants.
- Identification of plants becomes easier.
- Students will apply statistical method to interpret their data collected from various fields
- Students will be able to explain plant development at molecular level, development of plant, plant anatomy, photosynthesis and life cycle of plants.

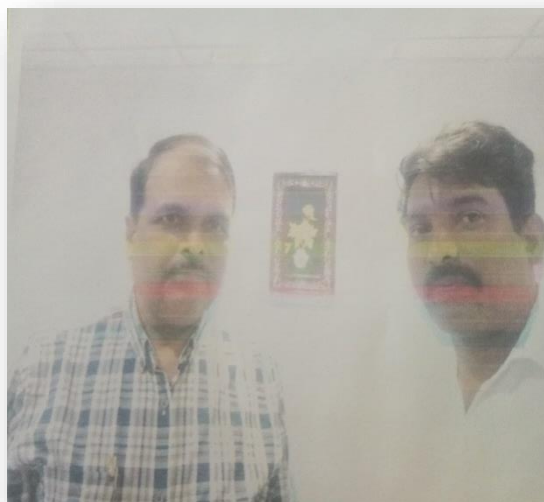
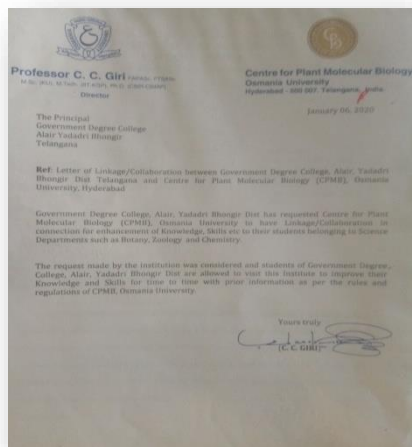
Course Outcomes:

S. No.	Semester	Course	Credits	Course Outcomes
1	I	Microbial Diversity of Lower Plants	5	Understanding the microbial organisms in nature and their diversity with Lower Plants
2	II	Bryophytes, Pteridophytes, Gymnosperms and Paleobotany	5	Understanding the nature and life cycle of non flowering plants.
3	III	Taxonomy of Angiosperms and Medicinal Botany	5	Identification and taxonomical study Angiospermic plants and Medicinal values of important plants
4	IV	Plant Anatomy, Embryology and Palynology	5	Study of internal structure of plant parts.
5	V Paper - V	Cell Biology and Genetics	4	Helps to understand the pattern of inheritance of various life forms. 2. Builds strong fundamentals basics for further molecular studies
6	V Paper – VI	Ecology and Biodiversity	4	Understanding the ecological problems and remedies for biodiversity
7	VI Paper - VII	Plant Physiology	4	Physiological life processes in plants 2. Transport mechanisms in plants (Water and Food) and its coordination mechanism 3 . Role of hormones, signaling, thermodynamics and enzyme kinetics a 4. Protein Channelling
8	VI Paper - VII	Plant Biotechnology:	4	<i>In vitro</i> propagation techniques, Vectors and its construction, Genetic transformation methods & GM crops

Research Collaboration's/Linkages

S.No	Title of the collaborative activity	Name of the collaborative agency	Year of Collaboration	Duration
1	Student & Faculty Exchange	CPMB	2019	1yr
2	Student & Faculty Research Facility	CFRD	2019	1yr
3	Student exchange	KEMINN tech laboratories	2019	5 yr

Director CPMB Prof.C.C GIRI



Infrastructure and Learning Resources

- 1) Class rooms: well ventilated and spacious class rooms are available
- 2) Lab:, Simple , Compound Microscopes, Centrifuge,Specimens and Charts

Library as a Learning Resource

DEPARTMENT LIBRARY

There is separate departmental library for the Botany department. It has 15 books, which are available for Students. These books will be issued to the students for reference.

Student Support and Progression

Department of Botany provides the students PG entrance coaching; few students have joined master's degree in Botany

Students progressing to higher education:

	Year	Name of the student	Program graduated from	Name of institution joined	Name of program admitted to
1	2019-20	A.Anitha	B.Sc(BZC)	Kakatiya University	M.Sc. (Botany)

Student Mentoring and Support

PARTICIPATION OF TEACHERS IN ACADEMIC AND PERSONAL COUNSELLING OF STUDENTS:

The lecturers in the department are assigned as class teachers/ as student Mentor for a particular class. They provide counseling to the students in respect of their academic issues, career opportunities and personal counseling.

FACULTY ACADEMIC RECORDS

The staff maintains Teaching diaries, Synopsis and prepares Annual curricular plans to have more Systematic approach. Departmental meetings are conducted regularly to discuss various issues Pertaining to academic as well as administrative matters.

The faculty of the department strictly adheres to the academic schedule as per the almanac furnished by the university. The time table is framed and workload is distributed among the staff as per the time table.

MODERN TEACHING METHODS:

- Conducting of group discussions
- Conduct of seminars by students
- Arranging guest lectures
- Giving study projects to students
- Quiz competitions

STUDY TOURS AND FIELD TRIPS:

The Department is planned to arrange study tours and field trips to the students of BSc.BZC. Field trips to CCMB, Agricultural Universities, CIMAP and other Research Centers.

STUDY PROJECTS OR TASKS GIVEN TO ADVANCE LEARNERS (STUDENTS):

The meritorious and extraordinary students are given new tasks such as involving them in study projects and research papers.

REMEDIAL COACHING FOR SLOW LEARNERS

Remedial classes are arranged in the department every year to the academically slow learners, our staff Actively participates in taking classes for them. These students are given extra coaching in various subjects and Topics to improve their academic performance in each year.

EVALUATION PROCESS AND REFORMS

EVALUATION OF THE STUDENTS PERFORMANCE:

The department conducts slip tests and assignments regularly for all the years for assessing their Performance. Marks lists are prepared and placed in a separate register. The department also conducts Student tutorials particularly for final years, in which the students actively participate and the same will be Recorded in a separate file. The staff also submits the reports of slip tests and assignments conducted in the Department in their performance indicators.

- ASSIGNMENTS
- UNIT TESTS
- RECORDS
- INTERNALS
- PRACTICALS
- UNIVERSITY EXAMS
- CREDITS / CGPA

PARTICIPATION IN EXAMINATION WORK:

All the teachers of the department are extensively involving in examination duties like Paper setting,

External examiners for Practical Exams, invigilation, observers, flying squads and as evaluators for Mahatma Gandhi University Nalgonda.

EXTENSION ACTIVITIES AND INSTITUTIONAL SOCIAL RESPONSIBILITY

The students of Physics department are actively involved in various activities like Sports & Games, NCC, NSS, TSKC etc.

Guest and Extension Lectures:

The Department of Botany organized guest lectures and extension lectures by eminent personalities to impart Knowledge to the students to latest development in the Botany and also general awareness of science and technologies.

S.NO	YEAR	RESOURCE PERSON	TOPIC	ADDRESS
1	2018-19	Mr.J.Venkanna	Glycolysis	Motukur Degree College.
2	2019-20	Dr.B.Kiran Kumar Asst.Prof	Trends in Plant Biotechnology with species emphasis on BT –Cotton and construct preparation for transgenic plants	Osmania University
3	2019-20	N.Prasanth	Embryology	Begumpet Degree College
4	2020	A.RamanaRao Asst .Prof	Plant Sucession	KDC Warangal

Extension Lectures:

- Delivered lecture at Govt Degree College Patancheru, Hyderabad. Topic: “Economic Importance of Algae”
- Delivered lecture at GIRRAJ Govt. College (Autonomous), Nizamabad. Topic: “Recombinant DNA technology”
- Delivered lecture at Govt Degree College Patancheru, Hyderabad. Topic: “r-DNA Technology”.

StudyProjects:

The Department of Botany gave project works to meritorious students in various topics to inculcate research activities amongst students. It also helps students to develop innovative ideas.

S.No	Title of the Project	Students Involved	Grade
1	Medicinal plants and Their Uses	G.Kalyani B.Kalyani B.Vennela A.Usha	A
2	Biodiesel From Plants	B.Venu A.Usha Ch.Rekha R.Manasa	A+
3	Biodiversity	Chitanya Swapna	A+

Projects/Seminars/Assignments

Projects, student seminars and assignments were given to the students and evaluated and given grades.

CO CURRICULAR /EXTRACURRICULAR ACTIVITIES CONDUCTED BY THE DEPARTMENT

S.NO	Academic year	Name of the activity	Name of Resource person	No. of students participated
1	2019-20	Quiz competition	Interdisciplinary	16 (04groups) Audience=50

11) DEPARTMENTAL ANNUAL PLAN 2019-20

S.No	MONTH	ACTIVITY
1	JUNE-19	1) Preparation of Annual curricular plan 2) Student admissions 3) recording of student progression 4) Semester exams results review, syllabus review for the academic year of 2019-20
2	JULY-19	1) Departmental meeting 2) Orientation class for first year students 3) Commencement of student seminars, field trips, competitions and allotment of study and science projects to students
3	AUG-19	1) Departmental meeting 2) Field /Industrial visit 3) First Internals for II & III year students
4	SEPT-19	1) Departmental meeting and review of First internals results 2) Arrangement of guest lecture/ extension activities 3) Conduct of student seminars by final year students 4) Remedial classes for backlog students
5	OCT-19	1) Departmental meeting and review of Exam results 2) Second Internals. 3) Conduct of Quiz competition

6	NOV-19	1) Departmental meeting. 2) Conduct of student seminar classes by I & II year students 3) Conduct of quiz competition for II year students 4) Practical exams
7	DEC-19	1) Departmental meeting 2) Collection of study projects and science project reports from the students 3) Conduct of quiz competition for I year students 4) Semester Exams.
8	JAN-2020	1) Departmental meeting and review of term exam results 2) Remedial classes for backlog students
9	FEB-2020	1) Departmental meeting and review 2) Conduct of science day
10	MAR-2020	1) Departmental meeting and review of academic matters
11	APRIL-2020	1. Review on the syllabus coverage 2. Practical examinations. 3. Semester Exams

Achievements & Highlights

The Department of Botany produced post – graduates a few of alumni have distinguished in academic, administrative areas occupying positions of responsibilities in industries and academic institutions. Revanth Herbarium keeper is the product of our Group.

➤ Best Teacher Award -2019

Best Practices:

The Program of Harithahaaram was initiated in the college premise and was organized under the guidance of the Principal and the teaching and non-teaching staff including the students

participated in the programme. Nearly 150 plant species were planted in the college premise.

Swachh Bharath Programme has been conducted in college premise.

Botanical Garden: Different varieties of Medicinal & Aromatic plants were collected and maintained in the garden.

Innovative Practices:

- a) QR codes to the Medicinal and Aromatic plants in the campus
- b) **Seed Bank:** Seed Bank of Medicinal plants was maintained.
- c) **Seed Bank :** Medicinally important Rice varieties were maintained
- d) Compendium of Medicinal plants of GDC ALAIR was maintained.

APPENDICES:

APPENDIX-1: PHOTOS OF DEPARTMENTAL ACTIVITIES

APPENDIX-2: DEPARTMENTAL TIME-TABLE

APPENDIX-3: SYLLABUS

Educational Tour/Field-Industrial Visit



Educational Tour as a part of JIGNASA



Field Trip to Acharya NG Ranga Agricultural University

Field Trip to CCMB



FIELD TRIP TO CENTRE FOR PLANT MOLECULAR BIOLOGY(CPMB)



DAIRY INDUSTRY

Student Seminars

Venu of Final year BZC giving seminar on Gene Cloning



G.Pooja giving seminar on Types of Steels.



B.Vennelaof II year BZC giving seminar on Pollen Grains



Group Discussion

Students participating in group Discussion –DNA nature



Quiz competition

Interdisciplinary quiz competition was held on 01-03-2019



EXTENSION ACTIVITY

As a part of social responsibility the Final year students getting involved in teaching to the ZPHS school students



Students speaking with the Head Mistress **Chitanya** teaching students about **Bacteria**



Chitanya teaching students about **Amoeba**



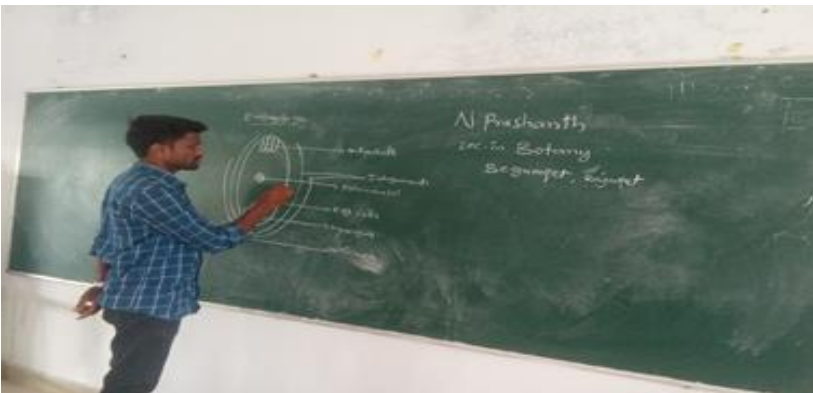
Guest Lecture:

Lecture on Transgenic Plants (Gene Cloning)

Dr.B.KIRAN Assistant Professor in Plant Biotechnology of Osmania University teaching about Bt-Cotton



N.Prashant Lecturer in Botany giving Lecture on Embryology



Extension Lecture at GDC Nizamabad



Topic: r-DNA Technology

TELANGANAKU HARITHA HAARAM



Faculty and Students involving in planting trees

కరణాలు

ప్రభుత్వ డిగ్రీ కళాశాలలో హరితహారం

అలేరు టౌన్ (తెలంగాణ): హరితహారం కార్యక్రమంలో భాగంగా శనివారం అలేరు పట్టణంలోని ప్రభుత్వ డిగ్రీ కళాశాలలో పెద్ద ఎత్తున మొక్కలను నాటారు. కళాశాల ఆవరణలో 50 మొక్కలను నాటినట్లు, నిరంతరం మొక్కలను కళాశాల ఆవరణలో విద్యార్థుల సహాయంతో మొక్కలను నాటుతున్నామని కళాశాల ప్రిన్సిపాల్ డా.సీ.హెచ్. సత్యనారాయణ విలేకరులకు తెలిపారు. కళాశాల ఆవరణలో స్వచ్ఛమైన గాలి, మంచి వాతావరణం నెలకొల్పేందుకు తమవంతు కృషి చేస్తున్నామని అన్నారు. ఈ కార్యక్రమంలో వైస్ చీఫ్ ప్రిన్సిపాల్ డా.అయిషాల్, అధ్యాపకులు కే హరిత, విద్యార్థిగర్, శ్రీశైలం, ప్రవీణ్, కరుణాకర్ తదితరులు పాల్గొన్నారు.

కళాశాల ఆవరణలో మొక్కలు నాటుతున్న ప్రిన్సిపాల్ సత్యనారాయణ

Main Edition
Aug 1, 2021 Page No. 1
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SCIENCE EXPO AND TALENT TEST



Explaining the technique of DNA Fingerprinting



Evaluation of scripts of Talent Test



Cash prize distribution to the Winners

IMPORTANT DAYS

Celebrating National Science Day: 28/02/2019&2020



INTERNATIONAL DAY AGAINST DRUG ABUSE & Illicit Trafficking 26th June 2019



FACULTY FORUM

Delivering Lecture in Faculty Forum. Topic: **Diabetes**



Botanical Garden

QR codes to the medicinal and Aromatic plants

There are many kinds of medicinal and aromatic and ornamental plants in the botanical garden of our college. The plants are given QR codes, the best practice of the Botany Department of the college. With the help of QR scanner app, even a layman can identify the scientific name and the common name along with its medicinal properties. This creates interest and enhances knowledge among the students about the medicinal properties of the plants and enables the students to utilize technology in a proper

EXAMPLE



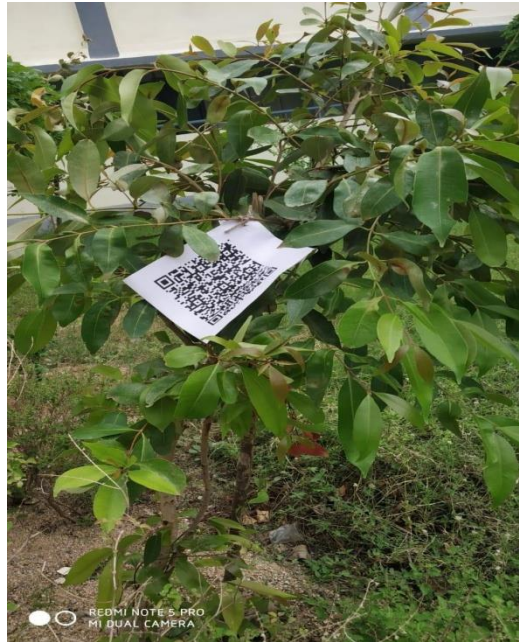
GDC Alair

Scientific Name: *Murraya Koenigii*

Telugu Name : Karivepaku

Family Name : Rutaceae

Use: Piles, Inflammation, dysentery



<i>S.NO</i>	<i>Scientific Name</i>	<i>Family</i>	<i>Common Name</i>	<i>Uses</i>
1	<i>Adhathoda zeylanica</i>	<i>Acanthaceae</i>	ADDASARAM	BRONCHODILATOR
2	<i>Mimosa pudica</i>	<i>Fabaceae</i>	ATTIPATTI	
3	<i>Bacopa monnieri</i>	<i>Plantaginaceae</i>	Brahmi	Alzheimer's disease, improving memory
4	<i>Jatropha curcas</i>	<i>Euphorbiaceae</i>	JATROPHA	BIODIESEL
5	<i>Caralluma diffusa</i>	<i>Apocynaceae</i>	KARALAMU	
6	<i>Caraluma adscendens</i>	<i>Apocynaceae</i>		
7	<i>Saropeus androgynus</i>	<i>Phyllanthaceae</i>	Sweet	Good source of vitamin K
8	<i>Tithonia diversifolia</i>	<i>Asteraceae</i>	MEXICAN SUNFLOWER	Ornamental
9	<i>Costus speciosus</i>	<i>Costaceae</i>	kashmeeramu	Anti-inflammatory, anti-microbial, antioxidant, anti-dyslipidaemia and anti-cancer.
10	<i>Geranium</i>	<i>Geraniaceae</i>		GERANIUM OIL
11	<i>Sauropus androgynus</i>	<i>Phyllanthaceae</i>	MULTIVITAMIN	COUGH ,LUNG PROBLEMS FEVER URINARY PROBLEMS ,EYE PROBLEMS
12	<i>Bixa orellana</i>	<i>Bixaceae</i>	ANNOITA	
13	<i>Simarouba glauca</i>	<i>Simaroubaceae</i>	SIMARUCHA	paradise-tree, dysentery-bark, bitter wood
14	<i>Ocimum tenuiflorum</i>	<i>Lamiaceae</i>	LAVANYA TULASI "Holy Basil"	Cold, cough ,Fever
15	<i>Ocimum tenuiflorum</i>	<i>Lamiceae</i>	KRISHNA TULASI	Essential Oil
16	<i>Vitexnigonda</i>	<i>Lamiceae</i>	VAVILAKU	Body aches
17	<i>Morinda citrifolia</i>	<i>Rubiaceae</i>	NONI(healing plant)	colds, flu, diabetes, anxiety, and high blood pressure
18	<i>Aasparagus officinalis</i>	<i>Liliaceae</i>		DIURETIC,APHRODISIAC
19	<i>Bryophyllum kalanchoe pinnata</i>	<i>Crassulaceae</i>	RANAPALA, Kalanchoe pinnata	curing various infections, bowel diseases, healing wounds and other ailments
20	<i>Indigofera tinctoria</i>	<i>Fabaceae</i>	NEELI	hair growth and to prevent hair fall and greying of hair
21	<i>Musa paradisiaca</i>	<i>Musaceae</i>	BANANA	Source of Energy

SEED BANK

Medicinal Value containing RICE VARIETIES



Medicinal and Aromatic Seeds:



SEEDS of Medicinal and Aromatic Plants

1	<i>Indigofera tinctoria</i>	NEELI
2	<i>Ocimum tenuiflorum</i>	LAVANGA TULASI
3	<i>Bixa orellana</i>	ANNATO
4	<i>Abelmoschus moschatus</i>	KASTURI BENDA
5	<i>Abrus precatorius</i>	GURAVINDA
6	<i>Andrographis paniculata</i>	NELAVEMU
7	<i>Ocimum tenuiflorum</i>	KARPOORA TULASI
8	<i>Mucuna pruriens</i>	DOOLAGONDI 56
9	<i>Psoralea corylifolia</i>	BAVANCHALU

10	<i>Cassia fistula</i>	SENNA
11	<i>Withania somnifera</i>	ASHWAGANDHA
12	<i>Ocimum tenuiflorum</i>	LAXMANA TULASI
13	<i>Ocimum basilicum</i>	SABJA
14	<i>Ocimum tenuiflorum</i>	LEMON TULASI
15	<i>Limonia acidissima</i>	VELAGA
16	<i>Nigella Sativa</i>	KARONGHI
17	<i>Terminalia chebula</i>	KARAKAI

Compendium of Medicinal and Aromatic Plants:

GOVERNMENT DEGREE COLLEGE ALAIR



DEPARTMENT OF BOTANY

COMPENDIUM OF MEDICINAL & AROMATIC PLANTS

AWARDS

Physically Challenged BZC student Uday playing State Level Chess Champion at Yuvatarangam



Best Teacher Award -2019



Receiving Certificate from District Collector



National Seminar on “Corporate Academia Partnership Fostering Innovation & Entrepreneurship”



BEYOND CLASS ROOM

VISITING LOCAL WEAVERS



TIME TABLE 2019-20

GOVERNMENT DEGREE COLLEGE, ALAIR									
TIME TABLE FOR THE ACADEMIC YEAR 2019-20									
DEPARTMENT OF BOTANY									
DAY	SEM	10 to 11	11 TO 12	12 to 1	1 to 1.30	1.30 to 2.30	2.30 to 3.30	3.30 to 4.30	
MON	I			BOT	LUNCH BREAK				
	III		BOT						
	V							BOT3(P)	
TUE	I							BOT1(P)	
	III	BOT							
	V						BOT		
WED	I		BOT						
	III								
	V			BOT			BOT		
THUR	I								
	III		BOT						
	V	BOT		BOT					
FRI	I		BOT						
	III						BOT2(P)		
	V								
SAT	I		BOT						
	III							BOT4(P)	
	V			BOT					

Annexure – I (Credits)
Proposed CBCS Scheme for B.Sc.
w.e.f 2019-20

Courses		Papers	Total Credits	Credits for each paper / Semester					
				B.Sc.					
				I	II	III	IV	V	VI
Core Courses DSC	Optional-1	4	20	5	5	5	5	-	-
	Optional-2	4	20	5	5	5	5	-	-
	Optional-3	4	20	5	5	5	5	-	-
Elective Courses DSE	Optional-1	2	10	-	-	-	-	5	5
	Optional-2	2	10	-	-	-	-	5	5
	Optional-3	2	10	-	-	-	-	5	5
Language	English(First Language)	5	20	4	4	3	3	3	3
	Second Language	5	20	4	4	3	3	3	3
Ability Enhancement Compulsory Course AECC	Environmental Science / Basic Computer Skills	1	2	2	-	-	-	-	-
	Basic Computer Skills / Environmental Science	1	2	-	2	-	-	-	-
Skill Enhancement Course SEC	SEC1	1	2	-	-	2	-	-	-
	SEC2	1	2	-	-	2	-	-	-
	SEC3	1	2	-	-	-	2	-	-
	SEC4	1	2	-	-	-	2	-	-
Generic Elective GE	Open Stream	1	4	-	-	-	-	4	-
Project Work/Optionals		1	4	-	-	-	-	-	4
Total Credits in each semester				25	25	25	25	25	25
Total Credits in UG				150					
Credits under Non-CGPA		NSS /NCC /sports / Extra curricular	6	Upto 6 (2 in each year)					
		Summer Internship	4	Upto 4 (2 in each, after I & II years)					

Annexure II
Proposed New Grading System

SGPA (SEMESTER GRADE POINT AVERAGE)			
S. No.	Grade Point	Range of marks	Grade Letter
1	10	Equal to and above 90 Marks	A+
2	9	More than or equal to 80 and less than 90 Marks	A
3	8	More than or equal to 70 and less than 80 Marks	B+
4	7	More than or equal to 60 and less than 70 Marks	B
5	6	More than or equal to 55 and less than 60 Marks	C+
6	5	More than or equal to 50 and less than 55 Marks	C
7	4	More than or equal to 40 and less than 50 Marks	D
8	0	Below 40 Marks	F

21

Handwritten signatures and notes:
M. G. Gupta
B. G. ...
K. S. ...
Sushant
Bhanu
#H
J...

**TELANGANA STATE COUNCIL OF HIGHER EDUCATION
PROPOSED CBCS COMMON CORE SCHEME FOR B.SC. COURSE
OPTIONAL -1: BOTANY**

CODE	PAPER TITLE	Course Type	HPW	Credits
FIRST YEAR SEMSTER - I				
BS 104	PAPER-I : Microbial Diversity and Lower Plants	DSC-1A	4T+2P=6	4+1=5
FIRST YEAR SEMSTER - II				
BS 204	PAPER-II: Gymnosperms, Taxonomy of Angiosperms and Ecology	DSC-1B	4T+2P=6	4+1=5
SECOND YEAR SEMSTER - III				
BS 301	SEC-1: Nursery and Gardening	SEC-1	2	2
BS 302	SEC-2: Biofertilizers and Organic Farming	SEC-2	2	2
BS 304	PAPER-III: Plant Anatomy and Embryology	DSC-1C	4T+2P=6	4+1=5
SECOND YEAR SEMSTER - IV				
BS 401	SEC-3: Greenhouse Technology	SEC-3	2	2
BS 402	SEC-4: Mushroom Culture Technology	SEC-4	2	2
BS 404	PAPER-IV : Cell Biology, Genetics & Plant Physiology	DSC-1D	4T+2P=6	4+1=5

SECOND YEAR		SEMSTER - IV		
BS 401	SEC-3: Greenhouse Technology	SEC-3	2	2
BS 402	SEC-4: Mushroom Culture Technology	SEC-4	2	2
BS 404	PAPER-IV : Cell Biology, Genetics & Plant Physiology	DSC-1D	4T+2P=6	4+1=5
THIRD YEAR		SEMESTER - V		
BS 501	GE-1: Industrial Microbiology	GE-1	4T	4
BS 502	DSE -1A: Biodiversity & Conservation DSE -1B: Economic Botany DSE -1C: Seed Technology	DSE-1A / DSE-1B / DSE-1C	4+2	4+1
THIRD YEAR		SEMESTER - VI		
BS 601	DSE-3: Project	PROJECT	4	4
BS 602	DSE -2A: Plant Molecular Biology DSE -2B: Tissue Culture and Biotechnology DSE -2C: Analytical Techniques in Plant Sciences	DSE-2A / DSE-2B / DSE-5E	4T+2P=6	4+1=5

AECC: Ability Enhancement Compulsory Course, SEC: Skill Enhancement Course, GE: Generic Elective, DSC: Discipline Specific Core, DSE: Discipline Specific Elective.

[Handwritten signatures and notes in green and blue ink]

Blaw
B. Kishore
M. Gupta
K. S. Naik
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