

## QUALITY INDICATOR FRAMEWORK (QIF)

### **CRITERION-1**

#### **1.1.1 ACTION PLAN/ LESSON PLAN**

Sample Action Plan/Lesson Plan of all the Departments

Sl.no.	Year	Department	Page number
1	2016-17	Zoology	2 - 3
2	2018 -19	English	4 - 6
	2019-20		
	2020-21		
3	2017-18	Chemistry	7-8
	2019-20		
4	2019-20	Mathematics	9-10
	2020-21		
5	2019-20	Computer Science	11-12
6	2017-18	Physics	13-15
7	2017-18	Electronics	16-17
8	2020-21	Kannada	18
9	2017-18	Botany	19
10	2017-18	Chemistry	20-23

ACTION PLAN 2016  
DEPARTMENT OF ZOOLOGY  
KALPATARU FIRST GRADE SCIENCE COLLEGE  
TIPTUR  
SEMESTERS: I, III, and V (Odd Semester)

I, III, V SEMESTER B.Sc,CBZ Classes were run according to the Tumkur University Calendar of Events to complete the syllabus. Other than the completion of the syllabus following action plans were initiated in the department for the benefit of rural students

- To identify slow learners in these semesters mentioned earlier and extra remedial classes to be conducted.
- To solve previous year's question papers and provide a valuation scheme.
- To identify slow learners who were weak in practical and to provide extra coaching.
- To organize a visit to the nearby Poultry, Diary, Fish and Rabbit farming centres.
- To organize seminars for students to develop self-confidence.

**STAFF MEMBERS**

1 Y.R. SOMASHEKARIAH

*Y.R. Somashekariah*

2 L.N.BHARATH KUMAR

*Bharath Kumar*

*G.R. Jayadevayya*  
HOD OF ZOOLOGY **ARJUNASWAMY**  
MSc., PGDEE, M.Phil

Associate Professor  
and  
HoD of Zoology  
Kalpataru First Grade Science College  
TIPTUR - 572201

*Y. R. Somashekariah*  
Principal  
Kalpataru First Grade Science College  
TIPTUR - 572201

ACTION PLAN 2017  
DEPARTMENT OF ZOOLOGY  
KALPATARU FIRST GRADE SCIENCE COLLEGE

TIPTUR

**SEMESTERS: II, IV, and VI (Even Semester)**

**II, IV, VI SEMESTER B.Sc,CBZ Students Classes were run according to the Tumkur University Calendar of Events for completion of syllabus. Other than the completion of the syllabus following action plans were initiated in the department for the benefit of rural students**

- To identify slow learners in these semesters mentioned earlier and extra remedial classes to be conducted.
- To solve previous year's question papers and provide a valuation scheme.
- To identify slow learners who were weak in practical and provide extra coaching.
- To organize a visit to nearby Poultry, Diary and Fish and Rabbit farming centres.
- To organize seminars for students to develop self-confidence.
- To train students to make PPT presentations for their seminars.
- A demonstration has to be given for V and VI Sem students about Handling interactive Boards.
- Study tour to be organized for VI Sem students to Manipal anatomy Museum and specimen collection from coastal areas to understand coastal diversity of fauna.
- To prepare students for the JAM exam conducted by IISc and IIT
- To screen a documentary on life to understand animals' diversity and behaviour.
- To motivate students to pursue further education in Life science and other competitive exams.
- To provide necessary instruction and Guidance for the students of IV Sem for the Preparation of Human anatomy models for their practicals.
- To provide necessary instruction and Guidance for the students of VI Sem for the Preparation of a Project on Eco-Behavioural adaptations of Some selected Mammals.

**STAFF MEMBERS**

1 Y.R. SOMASHEKARIAH *Y.R. S. Special*

2 L.N.BHARATH KUMAR *Bharathy*

*G. Jayacharyan*  
**R. C. MALLIKARJUNASWAMY**  
HoD of Zoology  
MSc., PGDEE, M.Phil

Associate Professor  
and  
HoD of Zoology  
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*Principal*  
**Kalpataru First Grade Science College**  
**TIPTUR - 572201**

## **KALPATARU FIRST GRADE SCIENCE COLLEGE**

### **DEPARTMENT OF ENGLISH ( BSc and BCA)**

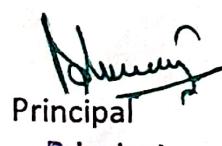
#### **ACTION PLAN FOR THE YEAR 2018-19**

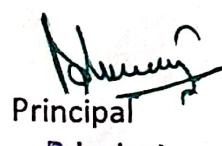
**Our Vision is to foster well-balanced, dynamic, and holistically empowered individuals.**

- To commence bridge courses for the first-semester students to familiarise them with basic English.
- To organise a seminar in association with Gandhi Bhavan on the 'Relevance of Gandhi.' for students.
- Talks are on to invite Sri Lakshmeesha Tolpadi, a scholar, to the college as a resource person for Prathibhashree or Dept of languages.
- To screen short films based on the themes prescribed in the syllabus and enhance critical and analytical ability. It aims to help students be empathetic to the world outside the classroom.
- To make the classes lively and interactive by initiating group discussions that engage self-expression, their opinions, and gender stereotypes.
- To give assignments based on previous question papers to familiarise them with question paper patterns.
- To conduct tests as per the Calendar of Events.
- To organise International Women's Day in association with Women Redressal Cell.
- We analyse the results to identify the student's strengths and weaknesses and focus our teaching where it's most needed.
- To encourage students to do practice papers to face the exams effectively.
- To encourage students to apply for various scholarships.
- To train them in soft skills, group discussion, corporate culture, personality development, interview etiquette, interpersonal relationships, etc., and digital learning tools.

 B.C.

Head of The Department

  
Principal

  
Principal  
Kalpataru First Grade Science College  
TIPTUR - 572201

# **KALPATARU FIRST GRADE SCIENCE COLLEGE**

## **DEPARTMENT OF ENGLISH ( BSc and BCA)**

### **ACTION PLAN FOR THE YEAR 2019-20**

**Our Vision is to foster well-balanced, dynamic, and holistically empowered individuals.**

- To begin practice exercises in grammar for the first-semester students to familiarise them with basic English.
- To celebrate National Mother's Language Day on 25-02-2020 to create awareness of the mother tongue and how it can shape our culture, define personality and shape our emotions and thoughts.
- Talks are on to invite folklorist Naadamani Nalkur as a special guest to address the students.
- To screen short films based on the themes prescribed in the syllabus and enhance critical and analytical ability. It aims to help students be empathetic to the world outside the classroom.
- To make the classes lively and interactive by initiating group discussions and sharing a story, an experience, and a character, you need to make life and the world a lot more empathetic, compassionate, healthy, inclusive, and a safe space to be in.
- To give assignments based on previous question papers to familiarise them with question paper patterns.
- To conduct tests as per the Calendar of Events.
- To organise International Women's Day in association with Women Redressal Cell.
- We analyse the results to identify the student's strengths and weaknesses and focus our teaching where it's most needed.
- To encourage students to apply for various scholarships.
- To encourage students to do practice papers to face the exams effectively.
- Encourage students to participate in Funfair, Ethnic day, and Sports and Cultural competitions.

B.C.

Head of The Department

  
Principal  
Kalpataru First Grade Science College  
TIPTUR - 572201

# **KALPATARU FIRST GRADE SCIENCE COLLEGE**

## **DEPARTMENT OF ENGLISH ( BSc and BCA)**

### **ACTION PLAN FOR THE YEAR 2020-21**

**Our Vision is to foster well-balanced, dynamic, and holistically empowered individuals.**

- To educate students about NEP and its multiple initiatives and objectives.
- To organise webinars for students and faculty on Interview Skills, Communication Skills, and the Effect of the Pandemic on Migrant Workers. We have contacted the resource persons over the telephone.
- Talks are on to invite folklorist Naadamani Nalkur as a special guest to address the students.
- To screen short films based on the themes prescribed in the syllabus and enhance critical and analytical ability. It aims to help students be empathetic to the world outside the classroom.
- To make the classes lively and interactive by initiating group discussions that engage self-expression, their opinions, and gender stereotypes.
- To give assignments based on previous question papers to familiarise them with question paper patterns.
- To conduct tests as per the Calendar of Events.
- To organise International Women's Day in association with Women Redressal Cell.
- We analyse the results to identify the student's strengths and weaknesses and focus our teaching where it's most needed.
- To encourage students to do practice papers to face the exams effectively.
- Encourage students to participate in Funfair, Ethnic day, and Sports and Cultural competitions.
- To enhance listening, speaking, reading, and writing skills.

Prathibha B.C.  
Head of The Department

Prathibha B.C.  
Principal  
Principal

Kalpataru First Grade Science College  
TIPTUR - 572201

## ACTION PLAN FOR THE YAER 2017 - 18

### DEPARTMENT OF CHEMISTRY

#### KFGSC, TIPTUR.

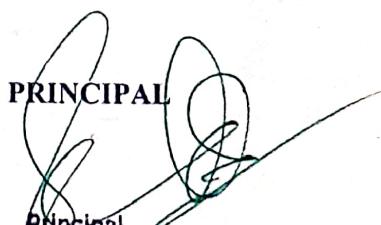
- Department of chemistry will continue to strive for excellence in its academic pursuits has always lead department in the college. Main focus will be systematic and progressive coverage of syllabus, practical work and applications of chemistry.
- To conduct bridge course for I B.Sc chemistry students.
- Stock verification of apparatus and chemicals of the department.
- To conduct seminar for the students of III B.Sc (Vsemester) and II B.Sc (III semester).
- Continue to engage the remedial classes for advanced and slow learners.
- Planned to conduct chemistry exhibition for High school students.
- To conduct tests for internal assessment.
- To organize special lecture for B.Sc students.
- Decided to organize industrial visit for final B.Sc students.
- Continue to check the hardness of water from different places by the students.
- To conduct unit test in the practical classes.
- Preparation of manuals for all semesters.
- Planning to visit IISc on open day.
- To conduct practical test.
- To organise National level seminar to create awareness and future trends in chemistry.

**HOD**



Dept. of Chemistry  
KFGSC., Tiptur - 572202

**PRINCIPAL**



Principal  
Kalpataru First Grade  
Science College, Tiptur.

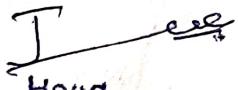
## **ACTION PLAN FOR THE YAER 2019-20**

### **DEPARTMENT OF CHEMISTRY**

#### **KFGSC, TIPTUR.**

- Department of chemistry will continue to strive for excellence in its academic pursuits has always lead department in the college. Main focus will be systematic and progressive coverage of syllabus, practical work and applications of chemistry.
- To conduct bridge course for I B.Sc chemistry students.
- Stock verification of apparatus and chemicals of the department.
- Continue to engage the remedial classes for advanced and slow learners.
- Decided to organize industrial visit for final B.Sc students.
- To conduct tests for internal assessment.
- To organize special lecture for B.Sc students.
- Planned to conduct chemistry exhibition for High school and PU students.
- Continue to check the hardness of water from different places by the students.
- To conduct practical test.
- To conduct unit test in the practical classes.
- Decided to take online classes.
- To conduct seminar for the students of III B.Sc (Vsemester) and II B.Sc (III semester).

#### **HOD**

  
Head  
Dept. of Chemistry  
KFGSC., Tiptur - 572202

#### **PRINCIPAL**

  
Principal  
Kalpataru First Grade  
Science College, Tiptur.

**ACTION PLAN FOR THE YEAR 2019-20**

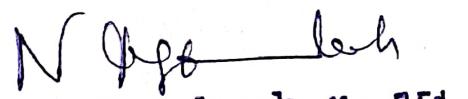
**DEPARTMENT OF MATHEMATICS**

- The department is conducting department meetings regularly once in two months, for prepare teaching plans ,allotment of syllabus,distribution of time table for both theories and labs.
- Faculty members are guide the students through model question papers and previous year question papers for the final examination.
- To increase performance level in Maths by giving tests,assignments and projects.
- To help the students develop their skills by making mathematics fascinating.
- Identify the topics in Mathematics that the learners least learned. And help them improve their skills in such matters.
- To conduct a bridge course for I B.Sc Mathematics students.
- Continue to engage the remedial classes for slow learners.
- To conduct internal assessment tests.
- To conduct the unit test in the practical classes.
- We decided to take online classes.
- Preparation of question papers for the final lab examinations according to the B.O.E guidance.
- Preparation for lab exams includes the number of answer booklets, mark lists, covers and systems etc.
- Extra classes and labs will be taken for the students who were admitted late.



Principal

Kalpataru First Grade Science College  
TIPTUR - 572201



N. Jagadeesh, M.Sc., B.Ed.,  
Prof. & HOD  
Dept. of Mathematics  
Kalpataru First Grade Science College  
TIPTUR - 572201

# KALPATARU FIRST GRADE SCIENCE COLLEGE, TIPTUR

## ACTION PLAN FOR THE YEAR 2020-21

### DEPARTMENT OF MATHEMATICS

- The department is conducting department meetings regularly once in two months, for prepare teaching plans ,allotment of syllabus,distribution of time table for both theories and labs.
- Faculty members are guide the students through model question papers and previous year question papers for the final examination.
- To help the students develop their skills by making maths fascinating
- Mathematical activities will be assigned to create the logical and reasoning abilities of the students.
- To organize special lectures for B.Sc students.
- To conduct bridge courses for I B.Sc Mathematics students.
- We decided to take online classes.
- To conduct the unit test in the practical classes.
- To conduct tests for internal assessment.
- Continue to engage the remedial classes for slow learners.
- Preparation of question papers for the final lab examinations according to the B.O.E guidance..
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Principal  
Kalpataru First Grade Science College  
TIPTUR - 572201

  
N. Jagadeesh, M.Sc., B.Ed.,  
Prof. & HOD  
Dept. of Mathematics  
Kalpataru First Grade Science College  
TIPTUR - 572201



### Action Plan for the Academic Year 2019-20

S.N.	Head	Action Plan for the year
1	Curricular Planning and Implementation	<ol style="list-style-type: none"><li>1. Academic activity calendar will be prepared by college for the Annual and Semester patterns.</li><li>2. Departmental Calendars of Activities (Academic and Co-curricular) are prepared by the department.</li><li>3. Objectives of the curriculum will be achieved by department.</li></ol>
2	Academic Flexibility	<ol style="list-style-type: none"><li>1. Semester and choice-based Curriculum will be adopted.</li><li>2. Provide software and uninterrupted laboratory facilities to prepare projects and reports.</li></ol>
3	Curriculum Enrichment	<ol style="list-style-type: none"><li>1. Department will ensure that Study tours, field visits, group discussions, and seminars are conducted in the department.</li><li>2. At least 1-2 Sensitization programs/ courses on cross-cutting issues like gender, environment, human values, and professional ethics will be organized.</li><li>3. No. of projects for students will be enhanced.</li></ol>
4	Feedback System	Feedback will be obtained from teachers, students, alumni, and Employers. Feedback will be analyzed and new initiatives will be introduced.
5	Catering to student diversity	<ol style="list-style-type: none"><li>1. Initiative to assess the learning levels of students will be enhanced</li><li>2. Proficiency/Diagnostic tests to identify slow and advanced learners.</li><li>3. Remedial classes for slow learners.</li></ol>
6	Teaching Learning Process	Department will observe the following teaching-learning <ol style="list-style-type: none"><li>1. Classroom teaching.</li><li>2. interactive teaching-learning methods,</li><li>3. Teaching by using PPT.</li><li>4. Video lectures</li></ol>
7	Teacher Quality	<ol style="list-style-type: none"><li>1. University will organize training workshops for ICT based skill enhancement for teachers.</li></ol>

  
**VINAY M. S.**  
HOD of Computer Science  
Kalpataru Pre-University College  
TIPTUR - 572 201.

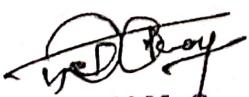
  
**Principal**  
Kalpataru First Grade Science College  
TIPTUR - 572201

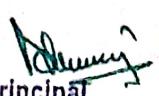


**KALPATARU VIDYA SAMSTHE®**  
**KALPATARU FIRST GRADE SCIENCE COLLEGE, TIPTUR**  
**DEPARTMENT OF COMPUTER SCIENCE**

E-mail: [yinayksc@gmail.com](mailto:yinayksc@gmail.com), Web Address: [www.kfgsciptur.in](http://www.kfgsciptur.in)  
(Re-accredited 'A' Grade by NAAC)

8	Evaluation Process and Reforms	1. Objective Test / Open book tests will be conducted. 2. Test series will be started in departments.
9	Student Performance and Learning Outcomes	1. Department will analyze students' performance during the complete evaluation process and steps will be taken to improve students' performance. 2. Group discussion, Viva test series will be conducted to identify slow and fast learners.
10	IT -Infrastructure	1. Number of nodes will be increased. 2. IT facilities will be kept updated. 3. Projector will be installed in most of classrooms and Seminar halls. 4. Free Wi-Fi facility will be available for students.
11	Student Mentoring and Support	1. Mentor system will be followed. 2. Remedial teaching will be provided to slow learners. 3. Projects will be allotted to the advanced learners. 4. Classes for competitive exams will be arranged 5. Co-curricular and Extracurricular activities will be run by each department for students. 6. 2 Career counseling activities will be done. 7. Placement activities/ drives will be arranged. 8. Welfare schemes for students will be enhanced. 9. Competitive examinations guidance activities will be conducted by the competitive exams guidance center. 10. Guidance to scholarship holder students by the college faculty.
12	Student Progression	1. Student progression to higher education will be enhanced by continuous counseling through the mentor system and career counseling cell. 2. Results and completion rate will be increased and drop out will be decreased
13	Student Participation and Activities	Will be ensured through the student council, NSS, Sport Department, Cultural committee, College magazine, , and through departmental activities.
14	Innovations and best practices	1. One new innovative practice will be started. 2. The report and photographs of Events held in the college will be given regularly to the college website for uploading.
15	Sports activities	The sports department will organize University level events and College-level sports events, including Yoga.

  
**VINAY M. S.**  
HOD of Computer Science  
Kalpataru Pre-University College  
TIPTUR - 572 201.

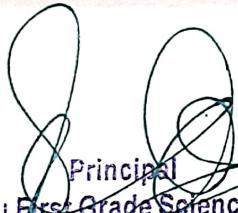
  
Principal  
Kalpataru First Grade Science College  
TIPTUR - 572201

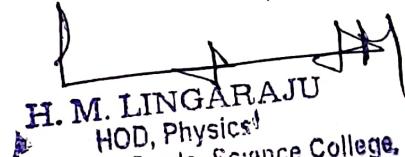
DEPARTMENT OF PHYSICS

ACTION PLAN FOR THE YEAR 2017-2018

Other than completing the Syllabus in a stipulated time following action plans are initiated in the department to benefit students.

- To conduct an exhibition for high school students
- To identify the weakness of students in academic performance and take corrective measures
- To prepare lab manuals and theory notes
- To conduct regular practical and theory tests
- Seminars by students to be made compulsory for final year students to develop self-confidence
- To guide the students to prepare ppt. for seminars
- To organize special lectures by the subject experts
- To celebrate National Science Day on 28<sup>th</sup> February

  
Principal  
Kalpataru First Grade Science College  
TIPTUR - 572201

  
H. M. LINGARAJU  
HOD, Physics  
Kalpataru First Grade Science College,  
TIPTUR - 572 202.

# Allotment of Syllabus to the Faculty for the Year 2017-18

## ODD SEMESTER

Sem/paper	Chapter	Allotted hours	Teachers assigned
I SEM	UNIT-1: Laws of Motion, Momentum and energy	15	KSM-PCM KSM-PME+Cs
	UNIT-2: Rotational Motion and Gravitation	15	BS-PCM BS -PME+Cs
	UNIT-3: Oscillations and Elasticity	15	TG-PCM TG-PME+Cs
	UNIT-4: Special theory of relativity	15	HML-PCM HML-PME+Cs

Sem/paper	Chapter	Allotted hours	Teachers assigned
III SEM	UNIT-1: Kinetic theory of gases	15	HML-PCM HML-PME+Cs
	UNIT-2 : Thermodynamics	15	KSM-PCM KSM -PME+Cs
	UNIT-3: Low temperature and radiation	15	TG-PCM TG-PME+Cs
	UNIT-4: Wave Optics and interference	15	BS-PCM BS -PME+Cs

Sem/paper	Chapter	allotted hours	teachers assigned
V SEM Paper- V (501)	UNIT-1: Newton s law of gravitation and composition of the atmosphere.	15	BS-PCM BS-PME+Cs
	UNIT-2 : Electronics-1	15	KSM-PCM KSM-PME+Cs
	UNIT-3.Electronics-2	15	SYP-PCM SYP-PME+Cs
V SEM Paper- VI (503)	UNIT-1:Development of quantum mechanics	15	HML-PCM HML-PME+Cs
	UNIT-2: Schrodinger's equation	15	GSM-PME+Cs GSM-PCM
	UNIT-3.:Vector model of the atom	15	SBR-PCM SBR-PME+Cs

# Allotment of Syllabus to the Faculty for the Year 2017-18

## EVEN SEMESTER

Sem/paper	Chapter	Allotted hours	Teachers assigned
II SEM	UNIT1:Vector analysis	15	BS-PCM BS-PME+Cs
	UNIT2: Magnetism	15	SBR-PCM SBR-PME+Cs
	UNIT3: Magnetic properties of materials and Maxwell's equations	15	KSM-PCM KSM-PME+Cs
	UNIT4: Transient current and Alternating current	15	TG-PCM HML-PME+Cs

Sem/paper	Chapter	Allotted hours	Teachers assigned
IV SEM	UNIT1: Superposition of two collinear harmonic oscillations and waves motion	15	HML-PCM HML-PME+Cs
	UNIT2: Sound and fluids	15	KBS-PCM KBS-PME+Cs
	UNIT3:Diffraction	15	GSM-PCM GSM-PME+Cs
	UNIT4: Statistical mechanics	15	SBR-PCM SBR-PME+Cs

Sem/paper	Chapter	Allotted hours	Teachers assigned
VI SEM Paper- VII (601)	UNIT-1: Statistical physics, free electron theory	15	BS-PCM BS-PME+Cs
	UNIT-2 : X-rays	15	SYP-PCM SYP-PME+Cs
	UNIT-3:Band Theory	15	KSM-PCM KSM-PME+Cs
VI SEM Paper- VIII (603)	UNIT-1:Relativity	15	HML-PCM HML-PME+Cs
	UNIT-2 : Astrophysics	15	GSM-PMC GSM-PME+Cs
	UNIT-3:Nuclear physics	15	KBS-PCM KBS-PME+Cs

Principal  
Kalpataru First Grade Science College  
TIPTUR - 572201

H. M. LINGARAJU  
HOD, Physics  
Kalpataru First Grade Science College  
TIPTUR - 572 202.

**DEPARTMENT OF ELECTRONICS**  
**Action plan for the academic year 2018-19**

1. Create a learning environment so that students feel at ease while discussing the topics covered in the syllabus.
2. The syllabus must be taught fully and convincingly so that students understand the topics and feel confident when facing the examinations.
3. The syllabus must be covered by teachers as distributed below:

Semester		Dr. Chitharanjan Rai (theory 06 hrs/week)	Prof. Vinod Phadke (theory 08hrs/week)
ODD SEMESTER	I Sem	Unit 1 Unit 3 and 4	Unit 2
	III Sem	-	Unit 1, 2, 3 and 4
	V Sem (Paper V)	Unit 1, 2, 3 and 4 (Microcontrollers)	-
	V Sem (Paper VI)	-	Unit 1, 2, 3 and 4 (Photonic devices and Power Electronics)
Semester		Dr. Chitharanjan Rai (theory 09 hrs/week)	Prof. Vinod Phadke (theory 05hrs/week)
EVEN SEMESTER	II Sem	Unit 1 and 3	Unit 2 and 4
	IV Sem	Unit 1, 2, 3 and 4 (C language and $\mu$ P 8085)	-
	VI Sem (Paper VII)	Unit 3 and 4 (Measuring Instruments and Verilog)	Unit 1 and 2 (Measuring Instruments and Verilog)
	VI Sem (Paper VIII)	Unit 2 and 3 (Antenna, Transmission lines and Wireless communication)	Unit 1 and 4 (Antenna, Transmission lines and Wireless Communication)

4. It is planned to convene a welcome function for the first-year students. The programme to be called "PARICHAYA" and it will be conducted by Second and Third year B.Sc. students. The programme to be conducted in the second week of August.
5. It is planned to encourage the students to participate in all the programmes conducted in the college.
6. We will conduct an educational tour in the last leg of the year (in the

month of Feb/March 2018) so that the students can gain some knowledge about the topic covered in the class. At the same time, we must try to imbibe a sense of pride of being a citizen of a great country of great civilization.

7. To conduct continuous evaluation methods in the form of regular tests, assignments.
8. Seminars to be conducted by the students (using PPT).
9. A farewell function to be conducted for the final year students by I and II-year students.



Dr. Chittaranjan Rai, M.Sc., Ph.D.,  
Associate Professor & Head of the Department  
Department of Electronics  
Kalpataru First Grade Science College  
TIPTUR - 572 202.



PRINCIPAL  
Kalpataru First Grade Science College  
TIPTUR

ಕಲ್ಲುತ್ತರು ಪ್ರಥಮ ದಳ್ಳೆ ವಿಷ್ಣುನ ಕಾಲೀಎ, ತಿಪ್ಪಣಿ - ೫೭೨೨೨೦೨೧

ಕನ್ನಡ ವಿಧಾನ

೨೦೨೦ - ೨೦೨೧ ಸಾರ್ವತ್ರಿಕ ಯೋಜನೆ.

1. 'ವಿಮಾನ ಹೊಸ ಮುಸ್ತಕ ಪರಿಭರ್ಯ' ಕಾರ್ಯಕ್ರಮದ್ವಿಯಲ್ಲ ಪ್ರತಿ ತರಗತಿಯಲ್ಲ ಬದು ನಿಮಿಷಗಳ ಕಾಲ ಹೊಸ ಮುಸ್ತಕಗಳನ್ನು ಪರಿಭರ್ಯ ಮಾಡಿಕೊಡುವ ಕಾರ್ಯಕ್ರಮ.
2. ವಿದ್ಯಾರ್ಥಿಗಳು ಪ್ರಾದೇಶಿಕ ಅರಿವನ್ನು ಉಂಟಾಡುವುದಕ್ಕಾಗಿ ಕರಾಜತ್ತಗಳನ್ನು ವರಿಜಿಯನುವುದು.
3. ವಿದ್ಯಾರ್ಥಿಗಳು ಸಂಪರ್ಕನ ಕೌಶಲ್ಯ ಬೆಳೆಸುವುದಕ್ಕಾಗಿ ಪ್ರಸಕ್ತ ವಿಷಯಗಳನ್ನು ಕುರಿತು ವಿದ್ಯಾರ್ಥಿಗಳಂಡೆ ಉಪನ್ಯಾಸ ಕಾರ್ಯಕ್ರಮ.
4. ವಿದ್ಯಾರ್ಥಿಗಳು ಸ್ವಜನತೀರ್ಥತೆಯನ್ನು ಉಂಟಾಡುವುದಕ್ಕಾಗಿ 'ಪ್ರಬಂಧ ಸ್ಥಳೆ' ಏರ್ಪಡಿಸುವ ಕಾರ್ಯಕ್ರಮ.
5. ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಪರಿಭರ್ಯಕ್ಕಾಗಿ ತಿಪ್ಪಣಿ ಸುತ್ತಮುತ್ತಳನ ಸಾಹಿತೀಗಳ ಮನೆಗಳಗೆ ವಿದ್ಯಾರ್ಥಿಗಳಂಡೆ ಭೇಂಟ ಕಾರ್ಯಕ್ರಮ.
6. ಬರವಣಿಗೆ ಮತ್ತು ಆಂತರಿಕ ಅಂಕಗಳನ್ನು ನೀಡುವುದಕ್ಕಾಗಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕಿರು ಪರಿಷ್ಕಾರಗಳ್ಯಾ ಯೋಜನೆಗಳು.
7. ಆಂತರಿಕ ಅಂಕಗಳಾಗಿ ವಿದ್ಯಾರ್ಥಿಗಳಂಡೆ ಪರ್ಯಾಯ ಉಪನ್ಯಾಸ ಕಾರ್ಯಕ್ರಮ.
8. ವಿದ್ಯಾರ್ಥಿಗಳಾಗಿ ಸ್ವೀಕಿತ ಶಿಕ್ಷಣದ ತರಗತಿಗಳನ್ನು ಏರ್ಪಡಿಸುವುದು.

✓  
ಬ್ರಾಹ್ಮಂದು ವಿಧಾನ ಕಾರ್ಯಕ್ರಮ  
ಕಲ್ಲುತ್ತರು ಪ್ರಥಮ ದಳ್ಳೆ ವಿಷ್ಣುನ ಕಾಲೀಎ

ತಿಪ್ಪಣಿ - ೫೭೨೨೦೧

ಮುಖ್ಯಸ್ಥರು ೨೮೩/೨೦೨೩  
ಕನ್ನಡ ವಿಧಾನ  
ಕಲ್ಲುತ್ತರು ಪ್ರಥಮ ದಳ್ಳೆ ವಿಷ್ಣುನ ಕಾಲೀಎ  
ತಿಪ್ಪಣಿ - ೫೭೨೨೦೧

DEPARTMENT OF BOTANY

Action Plan: Date:20-06-2017

SEM/PAPER	CHAPTER	CONTENTS TO BE COMPLETED/TARGET	HOURS ALLOTTED	TEACHER
I-SEM PAPER-I	Microbes	Virology- discovery -contributions of different virologists- general structure, replication of TMV,HIV and T -phage -, viral disease in plants,- Leaf curl of papaya and Bunchy top of banana.	12	PR
	Algae	bacteriophages, general characteristics of cell structure- and reproduction –vegetative, asexual reproduction	12	BMC
	Bryophytes	General characters, classification[GM Smith], Thallus organization and economic importance, General characters and classification,morphology,anatomy and reproduction in Marchantia	10	BMB
III-SEM PAPER-III	Introduction to embryology	Contribution of Indian embryologists P.Maheswari,Bhojawani and Bhatnagar,BGL Swamy and Kashyap	12	BMC
	Angiosperm flower	St and organization of flower microsporangium and development of mature anther tapetum microsporogenesis		
	Plant tissues culture	Definition and concept of totipotency .instuments used in pt tissues culture Megasporogenesis	20	PR
V-SEM PAPER-V	Taxonomy	Classification of plants- Bentham & Hooker Classification, Engler & Prontle, Cronquist system of classification Plant Nomenclature- Chemo, Cyto, and Numerical Taxonomy. Herbarium techniques, Botanical gardens	10	PR
	Cytology	Fluorescent & Electron microscope- chromosome structure, nucleosome model, karyotype & ideogram, chromosomal aberrations, polyploidy Cell division- cell cycle- mitosis & meiosis and their significance, mitotic apparatus, synaptonemal complex, crossing over	16	BMC
PAPER-VI				

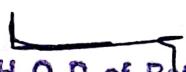
Bacterial culture in the lab for this semester.

Raise onion plants to collect flower buds for cytological studies.

Selection of 25 to 30 students from the 3<sup>rd</sup> Bsc for the Jatrasal project with the aegis of German Jatrasal company and BAIF as an extension programme.

Hybridization training for students on 17<sup>th</sup> 1nd 18 th of July 2017

Field visit BAIF for plant collection by final-year students.

  
**H. O. D. of Botany**  
 Kalpataru First Grade Science College  
 TIPTUR - 572 201.



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Lesson-Plan

(2 hrs/week)

Month Class II B.Sc (III Semester) CBCS (PCMTCBZ)  
June- Organic Compounds Containing Nitrogen  
July Introduction to Organic chemistry  
classification of organic compd. based on the functional group.  
Amines:- Introduction, Defn, Examples, classification of Amines into pri, sec. and tertiary - their G.F, F.GP and examples.  
Naming of 1°, 2° and 3° amines according to IUPAC system.

General methods of preparation:- From (i) Alkyl halides (ii) Nitro compd (iii) Hofmann's Bromamide reaction (iv) Gabriel's phthalimide synthesis.

Chemical properties:- Carbylamine reaction, reaction with alkyl halides, Acylation reaction, Hofmann's elimination with mechanism, reaction with  $\text{HNO}_2$ .

Distinguishing tests for 1°, 2° and 3° amine by Hofmann's method. and. Hinsberg's method.

05 Hrs  
Aug Diazonium salts- Diazotisation-Defn, preparation of BDC with mechanism. Synthetic applications of BDC (i) conversion to Benzene and phenol, Sandmeyer's reaction, reduction to phenyl hydrazine. Coupling reaction-formation of azo dyes- p-hydroxy azobenzene and 1-phenylazo-2-naphthol. Preparation of Methyl orange- Reason

-01-

for colour change with pH.

Diazo Compds- synthesis of Diazomethane Synthetic applications of Diazomethane (i) Synthesis of Methyl Ester (ii) methyl Ketone from aldehydes (iii) cyclopropane. Nitro Compds- preparation of alkyl nitrates from alkoxes and alkyl halides, prepn. of m-nitrobenzene and TNT, redn. products of nitrobenzene in various media. (i) H/pt (or) Ni. sn/Conc. HCl or LiAlH<sub>4</sub> in ether. (ii) Zn/NH<sub>4</sub>Cl.

05 Hrs

Sep- Heterocyclic Compds-  
Oct 10th Introduction, classification, nomenclature  
2017 Methods of preparation; Furan-from terecic acid and furfural. Thiophene- from acetylene and n-butane, Pyrrole- from acetylene and ammonium mectate. pyridine- from Nicotinic acid and acetylene, Quinoline- by Skraup synthesis; Indole by Fischer synthesis. Properties of furan, pyrrole, Thiophene. Nitration of Indole and Quinoline. Chichibabin reaction of pyridine. Aromaticity- Conditions, aromaticity of furan, thiophene, pyrrole and pyridine. Comparison of Basicity of pyridine and pyrrole.

05 Hrs

-02-

Month: June  
class II B.Sc(V Semester) (2 hrs/week)  
paper-V (Organic Chemistry) (PCM+CBZ)  
July  
Natural products  
Terpenes:- Introduction, Occurrence, Ingold's Isoprene rule, its importance, classification with examples, Str. elucidation and synthesis of Citral and Zingiberene, etc. and uses of Limonene, Menthol, Camphor,  $\beta$ -Carotene, Vit-A.  
Alkaloids: Introduction, classification, general characteristics, Str. and functions of Nicotine, Caffeine, Conine, Piperine, Str. elucidation and synthesis of Nicotine from 3-Cyano pyridine  
05 hrs.

Aug Pheromones:- Introduction, classification, sources, Str. and uses of Grandisol and Booby Kol.

Drugs:- Defn, chemotherapy, defn, classification of drugs - Antipyretic, Analgesic, Antibacterial drug, Antiseptical drug, Antibiotic, Tranquillizer, Hypnotic.

Synthesis and uses of paracetamol, Sulphamylonide, chloramphenicol, Diclofenac and Ranitidine.

05 hrs.

Sep- Oct 10<sup>th</sup> Pesticides:- Introduction, types, synthesis of DDT, Gammahexane, Choroxin, Attackor.  
2017 Cosmetics:- Introduction, classification, ingredients and uses of different cosmetics, Harmful effects.

Foods:- Introduction, classification,

Definitions of food additive, food preservatives, artificial sweeteners, antioxidants, food colour, junk food. harmful effects on the human body, Str. of BHA and BHT, artificial ripening of fruits and its side effects.

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Month: July  
class: III B.Sc (VI Semester) (PCM+CBZ)  
paper-VIII (Biochemistry) (4 hrs/week)

Lipids:- Defn, classification - Simple, Complex and derived lipids: oil and fats- Defn, examples and differences, Str. of fatty acids - Saturated and unsaturated fatty acids, essential fatty acids, Omega-3-fatty acids, Bio-Importance, Acyl glycerols - Str. and biological importance of triglycerides, properties - Hydrogenation, Saponification & no. Iodine no, viscosity - types and prevention.

Phospholipids:- Str. and biological importance.

Glycolipids and sterols - Str. and biological importance of cholesterol, Nucleic acids:- Types, Components, bases, Sugars and phosphate group.

Nucleosides and Nucleotides - Defn, Str., polynucleotides - type and Str. of DNA (Watson and Crick model),

biological importance of DNA, RNA - types and roles, Central dogma of mol. biology, genetic code - features, Replications, transcription and translation.

10 Hrs.

February Enzymes: - Introduction, General characteristics of enzymes, classification according to IUB with examples (6 classes), Active site & defn. characteristics, enzyme specificity - Absolute, Group and stereo-specificity, Mechanism of enzyme action, Lineweaver's and Koshland's models, Co-enzymes and co-factors and their role in biological reactions.

Factors affecting enzyme action - effect of pH, temper., [E] and [S] on the rate of enzyme catalyzed reactions, MM equation, significance of  $K_m$  and  $V_{max}$ , Enzyme Inhibition - Defn. and types.

Bio-Inorganic chemistry: - Introduction, Role of metal ions in biological systems, ( $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Mg}^{2+}$ ),  $\text{Na}^+/\text{K}^+$  pump, Role of  $\text{Mg}^{2+}$  ion in energy production and in chlorophyll, Role of  $\text{Ca}^{2+}$  in blood clotting, Stabilization of protein strds and its role in bones.

10 Hrs.

March  
April-  
2018

Metabolism: - Defn, types - catabolism and Anabolism, Comparison, Stages in catabolism.

Carbohydrate metabolism - EMP pathway, reactions and enzymes

— 05 —

ATP yield during glycolysis, Fates of pyruvate - Lactate formation and Ethanol production, Aerobic oxidation of acetyl-S-CoA through Kreb's cycle, reaction, Co-enzymes and ATP yield.

Fatty acid Metabolism: - Activation, mechanism of  $\beta$ -oxidation of fatty acids, Calculation of ATP yield.

AA metabolism: Transamination, deamination & decarboxylation with ex., Calorific value of food. Inter relationships in the metabolic pathways of proteins, fats and Carbohydrates.

10 Hrs.

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— 06 —