



**A.S.D.Government Degree College for Women**

**An Autonomous Institution**

**Jagannaickpur, Kakinada, Andhra Pradesh-533002**

**Affiliated to Adikavi Nannaya University, Rajamahendravaram**



## **INTERNAL QUALITY ASSURANCE CELL**

### **2.3.3 Preparation and adherence of Academic Calender and Teaching Plans by the Institution**



**2022-23**

**Minutes of Meeting  
Proceeding of the Principal  
Academic Calender  
Teaching Plans**

The staff of the college met in the Principal's chamber on 06-06-2022 at 3.00 PM with Principal in chair to discuss on the academic matters and take resolutions.

### Agenda:-

1. Reopening of college on 06-06-2022 and commencement of classwork.
2. Status of syllabus completion of V Semester and commencement of Practicals and Sem End Exams.
3. Review on the I & III Semester Results released recently.
4. Conduct of Parents meeting to create awareness on Students Internship and CIP.
5. Preparations for 2022-2023 Admissions.
6. Preparation of Academic Calendar & Institutional Plan for the academic year 2022-2023.

Discussion: With the reopening of the college on 06-06-2022 after summer vacation Principal felt the need to discuss with the staff on the commencement of II & IV Semester classwork and mapping of the timetable in OTLP-App, conduct of V Semester End Exams after completion of syllabus, Review of I & III Sem results and any other important aspects and to take resolutions.

## Resolutions:

1. With the reopening of the college on 06-06-2022 Principal instructed the staff to attend II & IV & VI semester classwork and get the individual time-table of the classes mapped in OTLP App immediately.
2. Principal reviewed on the results of I & IV Semester End exams recently and advised the staff to consider the result group wise by conducting meetings at regular intervals with the faculty of a particular group including language teacher to raise the results group wise.
3. Principal reviewed on the status of completion of VI Semester Syllabus and resolved to conduct VI Semester Practical & Theory Exams from the third week of this month.
4. In view of taking up Students' Internship Programme in V / VI Semesters and CSP (Community Service Project) Principal advised the staff to conduct Parents Meeting & to create awareness on the need of doing projects, motivate them to support their children and also give their acceptance to send the students to the places as and when they are allotted.
5. In view of 2022-2023 Admissions of the College Principal discussed with the staff and resolved to make preparations for campaign by designing a pamphlet with the courses offered by

College and to give it for printing for distribution to local Jr. colleges and it also resolved for the preparation of Handbook.

6. It is resolved to prepare Academic Calendar and Institutional Plan for the academic year 2022-2023 by the committee constituted by Principal.

V. Anantha Reddy  
16/6/22  
PRINCIPAL

Staff Present:

Dept.:

- |                               |                             |
|-------------------------------|-----------------------------|
| 1. <u>Dr. Jyoti</u>           | English.                    |
| 2. <u>Mr. J. Reddy</u>        | Zoology                     |
| 3. <u>Dr. Venkata</u>         | physics                     |
| 4. <u>Dr. Anand</u>           | chemistry                   |
| 5. <u>H. Sivarajah</u> 6/6/22 | Home Science                |
| 6. <u>Dr. Jay</u>             | physical Education          |
| 7. <u>Dr. J. R.</u>           | History & political science |
| 8. <u>Dr. S. S.</u>           | Hindi                       |
| 9. <u>P. Shanthi</u>          | English                     |
| 10. <u>Dr. K. R.</u>          | Telugu                      |
| 11. <u>Dr. Leo</u>            | Neer Telugu                 |
| 12. <u>Dr. S. R.</u>          | Telugu                      |
| 13. <u>Dr. P. R.</u>          | Microbiology                |
| 14. <u>G. Salva Suresh</u>    | Computer Applications       |
| 15. <u>M. N. S. Gowri</u>     | Computer Science            |
| 16. <u>P. R. S. S.</u>        | commerce                    |
| 17. <u>G. Anitha</u>          | Home science                |
| 18. <u>Dr. K. Lakshmi</u>     | Home Science                |
| 19. <u>Y. Suresh Babu</u>     | English                     |

- |    |                       |                  |
|----|-----------------------|------------------|
| 16 | K. Thani / Lakshmi    | chemistry        |
| 17 | S. Purnima            | chemistry        |
| 18 | P. Leena              | chemistry        |
| 19 | M. Subbalakshmi       | cl in chemistry  |
| 20 | M. Sulakshana         | Botany           |
| 21 | K.N.V.S.N. Esakhi     | Botany           |
| 22 | K. Venkatesh          | physics          |
| 23 | A. Sankhya            | Commerce         |
| 24 | L. Bhavani Teja       | History          |
| 25 | L. Malleswari         | L. Man H. Sc     |
| 36 | K. N. B. Kumari       | K. N. B. K       |
| 37 | K. Suryalakshmi       | Computer Science |
| 38 | N. P. SHPA            | Math             |
| 39 | D. M. Ratna Kumari    | Mathematics      |
| 40 | Dr. G. Sowjanya       | Commerce         |
| 41 | N. P. V. Lalitha Devi | Commerce         |
| 42 | N. Nura Chandra       | Aquaculture      |
| 43 | S. Madhavi            | Zoology          |
| 44 | Ch. S.S.V. Prasad     | Commerce         |

**PROCEEDINGS OF THE PRINCIPAL, A.S.D.GOV'T DEGREE COLLEGE FOR  
WOMEN [AUTONOMOUS], KAKINADA**

**Present: Dr.V.Anantha Lakshmi, M.Sc.,M.Phil.,Ph.D.**

**Rc.No:Spl/B2/2022**

**Dated: 06-06-2022**

The Principal of A.S.D. Govt. Degree College for Women (Autonomous), Kakinada is pleased to nominate the following members for the preparation of Academic Calendar and Institutional Plan for the academic year 2022-2023

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**ORDER:**

The following members are nominated for the preparation of Academic Calendar and Institutional Plan for the academic year 2022-2023

- |                         |                                  |
|-------------------------|----------------------------------|
| 1. Dr.V.Ananthalakshmi  | Principal                        |
| 2. Ms.M.Suvarchala      | Vice Principal                   |
| 3. Ms.M.Vasanth Lakshmi | IQAC Coordinator                 |
| 4. Dr.K.Lavanya         | Academic Coordinator             |
| 5. Dr.P.Sanjotha        | Asst. Academic Coordinator       |
| 6. Dr.K.Yamuna          | Controller of Examinations (COE) |

V. Anantha Lakshmi

M. Suvarchala

Ms. M. Vasanth Lakshmi  
K. Lavanya

Dr. P. Sanjotha

K. Yamuna

Copy to the Concerned Members  
Copy to the Principal's table



V. Anantha Lakshmi  
PRINCIPAL  
A.S.D.GOV'T.DEGREE COLLEGE (W)  
AUTONOMOUS  
KAKINADA

**A.S.D.GOVERNMENT DEGREE COLLEGE FOR WOMEN(AUTONOMOUS)KAKINADA****(Affiliated to AdikaviNannaya University – Rajamahendravaram)****TENTATIVE ACADEMIC CALENDER 2022-23**

Sl.No.	Particulars	I Year	II Year	III Year
		I Semester	III Semester	V Semester
1	Induction Programme to newly admitted students	20.10.2022	-	-
2	Commencement of Odd Semester Class Work	31.10.2022	31.10.2022	10.12.2022
3	1 <sup>st</sup> Internal Examinations	28.12.2022 onwards	28.12.2022 onwards	09.02.2023 onwards
4	2 <sup>nd</sup> Internal Examinations	19.01.2023 onwards	19.01.2023 onwards	01.03.2023 onwards
5	Last day of Instruction	14.02.2023	14.02.2023	15.03.2023
6	Last date for submission of attendance particulars	14.02.2023	14.02.2023	15.03.2023
7	Odd Semester End Practical Examinations	15.02.2023 onwards	15.02.2023 onwards	16.03.2023
8	Odd Semester Theory End Examinations	24.02.2023 onwards	24.02.2023 onwards	28.03.2023
		II Semester	IV Semester	VI Semester
9	Commencement of Even Semester Class Work	06.03.2023	06.03.2023	05.04.2023 (OJT)
10	1 <sup>st</sup> Internal Examinations	10.04.2023 onwards	10.04.2023 onwards	-
11	2 <sup>nd</sup> Internal Examinations	07.05.2023 onwards	07.05.2023 onwards	-
12	Last day of Instruction	06.06.2023	06.06.2023	05.07.2023
13	Last Date for submission of attendance particulars	06.06.2023	06.06.2023	05.07.2023
14	Even Semester End Practical Examinations	07.06.2023	07.06.2023	-
15	Even Semester Theory End Examinations	19.06.2023	19.06.2023	-
16	Sem-end Community Service Project/Internship	25.06.2023	25.06.2023	-
17	Re-opening day for Academic Year 2023-24	04.08.2023	04.08.2023	-



V. N. D.  
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AUTONOMOUS  
KAKINADA

**English - Annual Academic Plan**  
**Semester –I**  
**2022-2023**

<b>Month</b>	<b>Paper I- A course in communication and soft skills</b>
October 2022	Introduction to Syllabus and Model Question Paper
November 2022	I-Unit Listening Skills <ol style="list-style-type: none"> <li>1. Importance of Listening</li> <li>2. Types of Listening</li> <li>3. Barriers to Listening</li> <li>4. Effective Listening</li> </ol>
December 2022	II-Unit Speaking Skills <ol style="list-style-type: none"> <li>1. Sounds of English: Vowels and Consonants</li> <li>2. Accent</li> <li>3. Intonation</li> </ol> III-Unit Grammar <ol style="list-style-type: none"> <li>a. Concord</li> <li>b. Modals</li> <li>c. Tenses</li> <li>d. Articles</li> </ol>
January 2023	e. Prepositions f. Question Tags g. Sentence Formation h. Error Correction IV-Unit Writing <ol style="list-style-type: none"> <li>1. Punctuation</li> <li>2. Spelling</li> <li>3. Paragraph Writing</li> </ol>
February 2023	V-Unit: Soft Skills <ol style="list-style-type: none"> <li>1. SWOC</li> <li>2. Attitude</li> <li>3. Emotional Intelligence</li> <li>4. Telephone Etiquette</li> <li>5. Interpersonal Skills</li> </ol>



**English- Annual Academic Plan  
Semester –II  
2022-2023**

<b>Month</b>	<b>Paper-II Reading and Writing Skills</b>
March 2023	<b>I. UNIT</b> Prose : 1. How to Avoid Foolish Opinions Bertrand Russell Skills : 2. Vocabulary: Conversion of Words 3. One Word Substitutes 4. Collocations 5. One Word Substitutes 6. Collocations
April 2023	3. One Word Substitutes 4. Collocations <b>II. UNIT</b> Prose : 1. The Doll House by Katherine Mansfield Poetry : 2. Ode to the West Wind by P B Shelley Non-Detailed Text : 3. Florence Nightingale by Abrar Moshin Skills 4. Skimming and Scanning
May 2023	<b>III. UNIT</b> Prose : 1. The Night Train at Deoli Ruskin Bond Poetry 2. Upagupta Rabindranath Tagore
June 2023	<b>III. UNIT</b> Skills : 3. Reading Comprehension Note Making/Taking <b>IV. UNIT</b> Poetry : 1. Coromandel Fishers Sarojini Naidu Skills : 2. Expansion of Ideas 3. Notices, Agendas and Minutes
July 2023	<b>V. UNIT</b> Non-Detailed Text : 1. An Astrologer's Day- R K Narayan Skills : 2. Curriculum Vitae and Resume : 3. Letters : 4. E-Correspondence

**English- Annual Academic Plan  
Semester –III  
2022-2023**

<b>Month</b>	<b>Paper -III Conversational Skills</b>
October 2022	Introduction to Syllabus and Model Question Paper
November 2022	<b>Unit -I</b> Speech :1. Tryist with Destiny Jawaharlal Nehru Skills: 2. Greetings 3.Introductions
December 2022	<b>Unit – III</b> Speech: 1. Yes, We Can Barack Obama Interview: 2. A Leader Should Know How to Manage Failure Dr.A.P.J.Abdul Kalam/ India Knowledge at Wharton Skills : 3. Requests
January 2023	<b>Unit – III</b> Interview: 1. Nelson Mandela's Interview with Larry King Skills: 2. Asking and Giving Information 3. Agreeing and Disagreeing <b>Unit – IV</b> Interview: 1. JRD Tata's Interview with T.N. Ninan Skills: 2. Dialogue Building 3. Giving Instructions/Directions
February 2023	<b>Unit – V</b> Speech: 1. You've Got to Find What You Love Steve Jobs Skills: 2. Debates 3. Descriptions 4. Role Play

*P. Shanthi*  
Lec in charge of the  
Dept of English

*V. S. D.*  
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AUTONOMOUS  
RAKINADA

**ASD GOVERNMENT COLLEGE FOR WOMEN (A) KAKINADA**  
**DEPARTMENT OF TELUGU**  
**ACADEMIC PLAN 2022-23**  
**I SEMESTER GENERAL TELUGU**

<b>MONTH</b>	<b>GENERAL TELUGU- PRACHEENA TELUGUKAVITVAM</b>
OCTOBER	RAJANEETHI
OCTOBER & NOVEMBER	RAJANEETHI & PARVATHI KAPATAVATU SAMVADAM VYAKARANAM
DECEMBER	DHOUMYA DHARMOPADESAM VYAKARANAM
JANUARY	PALANATI BEBBULI VYAKARANAM
FEBRUARY	SEETHAARAVANA SAMVADAM VYAKARANAM

**ASD GOVERNMENT COLLEGE FOR WOMEN (A)**  
**DEPARTMENT OF TELUGU**  
**ACADEMIC PLAN 2022-23**

**II SEMESTER GENERAL TELUGU**

<b>MONTH</b>	<b>GENERAL TELUGU - AADHUNIKAKAVITVAM</b>
MARCH	AADHUNIKA KAVITVAM PARICHAYAM- KONDAVEEDU- MATRUSANGEETHAM
APRIL	TATAKO NOOLUPOGU, TELUGUKATHA PARICHAYAM - BHAYAM, SWEDAMKHAREEDU KATHALU
MAY	TELUGU NAVALA PARICHAYAM RATHACHAKRALU NAVALA, SAMEEKSHA VYASAM
JUNE	TELUGU NATAKA PARICHAYAM YAKSHAGANAM NATAKA, SAMEEKSHAVYASAM
JULY	TELUGU SAHITYA VIMARSA- PARICHAYAM, VIMARSA SWAROOPASWABHAVALU, UTTAMA VIMARSAKUDU- LAKSHANALU

ASD GOVERNMENT COLLEGE FOR WOMEN (A)  
DEPARTMENT OF TELUGU  
ACADEMIC PLAN 2022-23

SEMESTER III  
GENERAL TELUGU & SPECIAL TELUGU

MONTH	GENERAL TELUGU SRUJANATMAKA RACHANA	SPECIAL TELUGU PRACHEENA KAVITHA PARICHAYAM
OCTOBER	VYAKTHEEKARANA NAIPUNYALU	PRAGNANNAYA YUGAM
OCTOBER & NOVEMBER	VYAKTHEEKARANA NAIPUNYAALU & SRUJANATMAKA RACHANA	PRAGNANNAYA YUGAM & ANUVADA YUGAM
DECEMBER	ANUVADA RACHANA	KAVYA-PURANA YUGAM
JANUARY	MADHYAMALAKU RACHANA-I	PRABANDHA YUGAM
FEBRUARY	MADHYAMALAKU RACHANA-II	DAKSHINANDHRA YUGAM

**ASD GOVERNMENT COLLEGE FOR WOMEN (A)**  
**DEPARTMENT OF TELUGU**  
**ACADEMIC PLAN 2022-23**  
**IV SEMESTER**  
**SPECIAL TELUGU**

MONTH	PAPER- IV AADHUNIKA TELUGU SAHITYA CHARITRA	PAPER- V AADHUNIKA TELUGU SAHITYA VIMARSA
MARCH	AADHUNIKA KAVITVAM- AAVIRBHAVA VIKASALU	KALALU- KAVYAM/KAVITVAM
APRIL	BHAVA KAVITVAM	KAVYA HETHUVULU, PRAYOJANALU. BHEDALU
MAY	ABHYUDAYA, VIPLAVA KAVITVALU	RASA TATHTHVAM
JUNE	VACHANA KAVITVAM	DWANI
JULY	SAMAKALEENA AADHUNIKA KAVITHAA DHORANULU	SAMPRADAYA SAHITYAM – VIMARSA PADHDHATHULU

ASD GOVERNMENT COLLEGE FOR WOMEN (A), KAKINADA  
DEPARTMENT OF TELUGU  
ACADEMIC PLAN 2022-23  
V SEMESTER SPECIAL TELUGU

MONTH	SPECIAL TELUGU PAPER- VI- A TELUGU BHASHA SWAROOPAM	SPECIAL TELUGU PAPER- VII-A TELUGU RACHANA REETHULU
DECEMBER	TELUGU VYAKARANA PARICHAYAM	TELUGU RACHANA REETHULU PARICHAYAM
JANUARY	SANDHI- SAMASAM	TELUGU RACHANA REETHULU PRASARA SAMAJIKA MADHYAMALU
FEBRUARY	KRIYAA VIJNANAM	ARTHA PARINAMA, DWANI PARINAMA REETHULU
MARCH	VAAKYA VIJNANAM	MANDALIKA VIJNANAM
APRIL	VAAKYA PRAYOGA REETHULU	SRUJANA RAMGAMLO TELUGU

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V. Ananta Lakshmi  
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AUTONOMOUS  
KAKINADA

ASD GOVERNMENT COLLEGE FOR WOMEN (A)

DEPARTMENT OF HINDI

ACADEMIC PLAN 2022-23

I SEMESTER ACADEMIC PLAN

MONTH	PAPER-I	UG – Life Skill Course (2022-23) Human Values and Professional ethics
OCTOBER	BRIDGE COURSE	Introduction, Definition, Importance, Process & Classifications of Value Education
OCTOBER & NOVEMBER	1. भारतीय सहित्य की एकता 2. आत्म निर्भरता 3. लिंग 4. कार्यालयीन शब्दावली	Classification Of Value Education: Understanding Personal Values, Social Values, Moral Values & Spiritual Values
DECEMBER	1. अंदर की पवित्रता 2. ठकुर का कुँ आ 3. वचन	Harmony In the Family – Understanding Values in Human Relationships.
JANUARY	1. वापसी 2. सदाचार की ताबीज 3. विलोम शब्द 4. छुट्टी पत्र	Professional Ethics in Education: Understanding about Professional Integrity, Respect & Equality, Privacy, Building Trusting Relationships.
FEBRUARY	1. पत्र लेखन -पिताजी के पत्र 2. काल -वर्तमान काल, भूय काल, भविष्य 3. पुस्तक विक्रेता के नाम पत्र 4. कारक चिह्न	Need for Value Education in the Present Day Professional Oriented Education.

Dep In-charge

  
(A. Swathi)



ASD GOVERNMENT COLLEGE FOR WOMEN (A)


DEPARTMENT OF HINDI

ACADEMIC PLAN 2022-23

II SEMESTER ACADEMIC PLAN

MONTH	PAPER-II:	LIFE SKILL COURSE - INDIAN CULTURE AND SCIENCE
MARCH	1. भारत मे सन्स्कृति संगम - राम्धारि सिम्ह दिन्कर. 2. समय पर मिलेवाला - हरिशन्कर पर्साई. 3. कारक चिह्न	Unity in Diversity in India - Coexistence of Various Religions since ancient times Hinduism, Buddhism, Jainism, Islam, and Christianity.
APRIL	1. हार की जीत - सुदर्शन 2. पुरष्कार - जयशन्कर प्रसाद 3. हिन्दी-अंग्रेजी कार्यालयीन शब्दावली	The Bhakti and Sufi Movements, Achievements in Literature, Cultural diversity, Importance of Seasonal Festivals.
MAY	1. HIV AIDS 2. सेवा - ममता कालिया 3. हिन्दी अंग्रेजी पदनाम	Social Reforms and Modern Society- Raja Rama Mohan Roy, Dayananda Saraswathi, Swamy Vivekananda etc.
JUNE	1. पत्र लेखन - आवेदन पत्र 2. शिकायती पत्र 3. काल	Science and Technology - Online Education, Developments in Industry, Agriculture, Medicine etc.

Dep In-charge

  
(A. Swathi)

ASD GOVERNMENT COLLEGE FOR WOMEN (A)


DEPARTMENT OF HINDI

ACADEMIC PLAN 2022-23

III SEMESTER ACADEMIC PLAN

OCTOBER	1. व्याकरण कारक चिह्न काल 2. समाज में नारी की भूमिका	
OCTOBER & NOVEMBER	1. साखी-दोहे-कबीरदास 2. बालवर्णन, विनय-सूरदास 3. परिपत्र 4. विश्व भाषा के रूप में हिंदी	
DECEMBER	1. आगे बढ़ो ऊँचे-चदो मैथिली शरण गुप्त 2. चरण चले ईमान चले ईमान चले-माखन लाल चतुर्वेदी। 3. कार्यालयीन ज्ञापन 4. मेरा प्रिय कवि	
JANUARY	1. हिंदी साहित्य का इतिहास -काल विभाजन 2. भक्ति काल की शाखाएँ और विशेषतः। 3. अधिसूचना 4. अनुवाद	
FEBRUARY	1. भक्ति काल में जानाश्रयी शाखा- कबीर 2. भक्ति काल में जानाश्रयी शाखा जायसो 3. अनुवाद अंग्रेजी से हिंदी 4. भारत की वर्तमान परिस्थितियों	

Department In-charge

  
(A. Swathi)

V. M. S. S.  
Principal.

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A.S.D. GOVT. DEGREE COLLEGE (W)  
AUTONOMOUS  
KAKINADA

ASD GOVERNMENT COLLEGE FOR WOMEN (A)

DEPARTMENT OF SANNSKRIT

ACADEMIC PLAN 2022-23

I SEMESTER ACADEMIC PLAN

MONTH	PAPER-I	UG – Life Skill Course (2022-23) Human Values and Professional ethics
OCTOBER	BRIDGE COURSE	Introduction, Definition, Importance, Process & Classifications of Value Education
OCTOBER & NOVEMBER	1. आर्यपादुकभिषेकः। 2. श्लोकपूरणं तथा भावं। 3. यक्षप्रश्नेषु : 4. विघटयत।	Classification Of Value Education: Understanding Personal Values, Social Values, Moral Values & Spiritual Values
DECEMBER	1. यक्षप्रश्नेषु वर्णीतान् लौकिकधर्मान् 2. विग्रहवाक्यानि 3. परस्मैपदिनःभू( लट)	Harmony In the Family – Understanding Values in Human Relationships.
JANUARY	1. विवेकानन्दसूक्तयः 2. श्रुगालःकथंलगुडेन मारितः 3. अहिंसां परमो धर्मः। गृहमागते आरवपि आथित्यंकार्यमुचितम्।	Professional Ethics in Education: Understanding about Professional Integrity, Respect & Equality, Privacy, Building Trusting Relationships.
FEBRUARY	1. सन्धत्ता। 2. वीरवरः कथं स्वमिभक्तिं प्रदर्शवान्। 3. शब्दा रूपाणि। अकारन्तः पुंलिन्डा शब्दाः 4. शब्दा रूपाणि। इकारान्तः स्त्रीलिन्डा शब्दाः।	Need for Value Education in the Present Day Professional Oriented Education.

Dept. Incharge

202-9

V. Ananta Lakshmi

PRINCIPAL  
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KARNATAKA

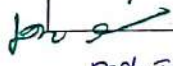
ASD GOVERNMENT COLLEGE FOR WOMEN (A)

DEPARTMENT OF SANSKRIT

ACADEMIC PLAN 2022-23

II SEMESTER ACADEMIC PLAN

MONTH	PAPER-II:	LIFE SKILL COURSE - INDIAN CULTURE AND SCIENCE
MARCH	1. इन्दुमती स्वयम्बरम्। 2. पु.लिन्ड शब्दाः। 3. बुद्धचरितम्। 3. स्त्रि लिन्ड शब्दाः I	Unity in Diversity in India - Coexistence of Various Religions since ancient times Hinduism, Buddhism, Jainism, Islam, and Christianity.
APRIL	1. गंडावतरणम्। 2. श्लोक भगम्। 3. व्याकरण परिचयम्।	The Bhakti and Sufi Movements, Achievements in Literature. Cultural diversity, Importance of Seasonal Festivals.
MAY	1. मोहपनोदा 2. बुद्धचरितम्। 3. अवन्तिसुन्दरि कथ।	Social Reforms and Modern Society- Raja Rama Mohan Roy, Dayananda Saraswathi, Swamy Vivekananda etc.
JUNE	1. दरिद्रछारुदत्त चरितम्। 2. शब्ध परिचयम्। 3. धातु रूपाणि।	Science and Technology - Online Education, Developments in Industry, Agriculture, Medicine etc.

  
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DEPARTMENT OF SANSKRIT

ACADEMIC PLAN 2022-23

III SEMESTER ACADEMIC PLAN

OCTOBER	1.रूपकविभागम् I 2. मद्यम व्ययोगम्	
OCTOBER & NOVEMBER	1. आधुनिक रूपक विभागम् संकल्पभलम् I 2. उपनिषद् विभागम् “दा “कार कथ	
DECEMBER	1.सिष्यानुशसनम् 2. अलंङ्कार विभागम्	
JANUARY	1.व्याकरण विभागम् I 2. शस्त्रकार विभागम्	
FEBRUARY	1.श्रद्धात्रय विभागयोगम्- उपनिषद् विभागम् 2.त्रिषुलिंङेषु सर्व नामशब्दाणि	

Deft. Incharge

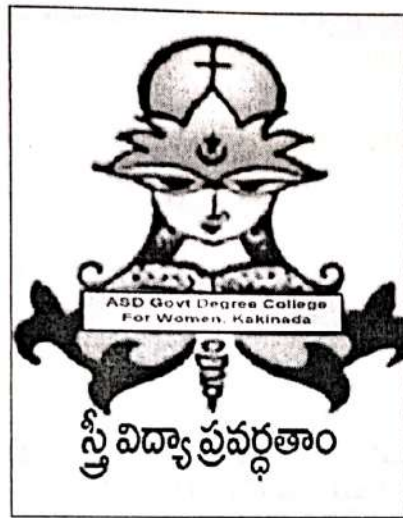
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V. A. C. S.

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**ACADEMIC PLAN 2022-2023**

**A.S.D.GOV.T. DEGREE COLLEGE FOR WOMEN (AUTONOMOUS)**  
**DEPARTMENT OF MATHEMATICS**  
**B.Sc.(M.P.C&M.P.Cs,M.S.Cs) ACADEMIC PLAN 2022-2023**  
**SEMESTER - I**  
**PAPER – I- Differential Equations**

MONTH	NAME OF THE TOPIC
OCTOBER 2022	Differential Equations of first order and first degree
NOVEMBER 2022	Differential Equations of first order but not first degree
	Equations solvable for p,y,x.Clairaut,s Equation
DECEMBER 2022	Higher order linear differential equation-I
	Solution of homogeneous & non homogeneous Equations
JANUARY 2023	Higher order linear differential equation-II
	Solution of non homogeneous equations with constant coefficients
FEBRUARY 2023	Higher order linear differential equation-III
	Method of variation of parameters

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**DEPARTMENT OF MATHEMATICS**  
**B.Sc.(MPC&MPCS) ACADEMIC PLAN 2021-2022**  
**SEMESTER – III**  
**PAPER- III- ABSTRACT ALGEBRA**

MONTH	NAME OF THE TOPIC
NOVEMBER 2022	Introduction to Binary Operation and Group definition
DECEMBER 2022	Sub groups –Complex definition ,theorems
	Product, union, Intersection of two subgroups , co-sets Lagrange's theorem
JANUARY 2023	Definition of Normal subgroups , intersection of two normal subgroups
	Index 2 is a normal sub group –quotient group criteria for the existence of a quotient group
FEBRUARY 2023	Definition of homomorphism –properties of homomorphism-isomorphism
	Kernel of a homomorphism-fundamental theorem on homomorphism and permutations
MARCH 2023	Rings definition Boolean rings division ring and fields characteristic of a field sub ring

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**DEPARTMENT OF MATHEMATICS**  
**B.Sc(M.P.C&M.P.Cs) ACADEMIC PLAN 2022-2023**  
**SEMESTER - V**  
**PAPER -VIA -NUMERICAL METHODS**

MONTH	NAME OF THE TOPIC
DECEMBER 2022	Symbolic relations Differences of functions
JANUARY 2023	Interpolation formulas, Differentiation for Interpolation formulas
FEBRUARY 2023	Maximum and minimum values of a tabulated function , General quadrature formula on errors
MARCH 2023	General quadrature formula on errors
	Euler Mclaurin formula , Runge Kutta methods

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**B.Sc.(M.P.C&M.P.Cs)ACADEMIC PLAN 2022-2023**  
**SEMESTER - VIB**  
**PAPER-VI- MATHEMATICAL SPECIAL FUNCTION**

MONTH	NAME OF THE TOPIC
DECEMBER 2021	Chebyshev polynomials, Beta Gamma function
JANUARY 2023	Power series , singular points regular and irregular singular points
	Hermite polynomials , orthogonal properties
FEBRUARY 2023	Find first few Hermite Polynomials
	Legendre polynomials recurrence formulas
MARCH 2023	Bessel's equation , first kind second kind



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**B.Sc(M.P.C&M.P.Cs,M.S.Cs) ACADEMIC PLAN 2022-2023**

**SEMESTER - II**

**THREE DIMENTIONAL ANALYTICAL SOLID GEOMETRY**

MONTH	NAME OF THE TOPIC
APRIAL , MAY 2023	Equation of plane through the given points,bisectors of angles between two planes,orthogonal projection on plane
JUNE 2023	Equation of a line angle between a line and a plane The shortest distance between two lines ,length of the perpendicular from a given points to a given line
JULY 2023	Definition and equation of the sphere equation of the sphere through four given points Equation of circle sphere through a given circle tangent plane ,plane of contact,polar plane,conjugate points &planes
AUGUST 2023	Definition of sphere and cone ,enveloping cone Reciprocal of a cone

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**B.Sc (M.P.C&M.P.Cs) ACADEMIC PLAN 2022-2023**

**SEMESTER - IV**

**REAL ANALYSIS**

MONTH	NAME OF THE TOPIC
APRIL ,MAY 2023	Introduction of real numbers Monotone sequence Cauchy,s general principal of convergence theorem
JUNE 2023	Cauchy,s general principal of convergence for series tests P-test, Cauchy,s root test,D-Alemberts test
JULY 2023	Boundedness of a function, Limits of a functions Infinite limits problems
AUGUST 2023	Differentiation and mean value theorems Riemann integration

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**B.Sc(M.P.C&M.P.Cs) ACADEMIC PLAN 2022-2023**  
**SEMESTER - IV**  
**LINEAR ALGEBRA**

MONTH	NAME OF THE TOPIC
APRIL , MAY 2023	Vector space definitions Linear span, linear independent, dependent of vectors
JUNE 2023	Basis of vectors ,basis of extension theorems Linear transformations ,Properties
JULY 2023	Rank and Nullity of linear transformations Characteristic values and vectors Cayley Hamilton theorem
AUGUST 2023	Inner product space orthonormal set , Gram- schmidt orthogonalisation process

*V. Ananta Reddy*

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**DEPARTMENT OF PHYSICS**

**ANNUAL ACADEMIC PLAN 2022-23**

**IB.Sc.,-Physics-I/ISemester**

**Mechanics, Waves and Oscillations**

<b>MONTH</b>	<b>TOPIC</b>
<b>November 2022</b>	<p><b>UNIT-I:</b></p> <p><b>Mechanics of Particles</b></p> <p>Review of Newton's Laws of Motion, Motion of variable mass system, Motion of a rocket, Multistage rocket, Concept of impact parameter, scattering cross-section, Rutherford scattering-Derivation.</p> <p><b>1. Mechanics of Rigid bodies</b></p> <p>Rigid body, rotational kinematic relations, Equation of motion for a rotating body, Angular momentum and Moment of inertia tensor, Euler equations, Precession of a spinning top, Gyroscope, Precession of the equinoxes</p>
<b>December 2022</b>	<p><b>Unit-II:</b></p> <p><b>2. Motion in a Central Force Field</b></p> <p>Central forces, definition and examples, characteristics of central forces, conservative nature of central forces, Equation of motion under a central force, Kepler's laws of planetary motion-Proofs, Motion of satellites, Basic idea of Global Positioning System (GPS), weightlessness, Physiological effects of astronauts</p>

<p style="text-align: center;"><b>January 2023</b></p>	<p><b>3. Relativistic Mechanics</b></p> <p>Introduction to relativity, Frames of reference, Galilean transformations, absolute frames, Michelson-Morley experiment, negative result, Postulates of Special theory of relativity, Lorentz transformation, time dilation, length contraction, variation of mass with velocity, Einstein's mass-energy relation</p>
<p style="text-align: center;"><b>February 2023</b></p>	<p><b>Unit-IV:</b></p> <p>Undamped, Damped and Forced oscillations: Relaxation time and Quality factor</p> <p>Coupled oscillations:</p> <p>Coupled oscillators-Introduction, Two coupled oscillators, Normal coordinates and Normal modes</p>
<p style="text-align: center;"><b>March 2023</b></p>	<p><b>Unit-V:</b></p> <p><b>4. Vibrating Strings:</b></p> <p>Transverse wave propagation along a stretched string, General solution of wave equation and its significance, Modes of vibration of stretched string clamped at ends, Overtones and Harmonics..</p> <p><b>5. Ultrasonics:</b></p> <p>Ultrasonics, General Properties of ultrasonic waves, Production of ultrasonics by piezoelectric and magnetostriction methods, detection of ultrasonics, Applications of ultrasonic waves, SONAR</p>

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**DEPARTMENT OF PHYSICS**

**ANNUALACADEMICPLAN2022-23**

***Course II: Wave Optics***

<b>MONTH</b>	<b>TOPIC</b>
April 2023	<p><b>UNIT-I Interference of light:</b> (12hrs)Introduction, Conditions for interference of light, Interference of light by division of wave front and amplitude,Phase change on reflection- Stokes' treatment, Lloyd's single mirror,Interference in thin films: Plane parallel and Determination of wavelength of monochromatic light, Michelson interferometer and determination of wavelength. Determination of wavelength of monochromatic light, Michelson interferometer and determination of wavelength</p>
May 2023	<p><b>UNIT-II Diffraction of light:(12hrs)</b></p> <p>Introduction, Types of diffraction: Fresnel and Fraunhofer diffractions, Distinction between Fresnel and Fraunhofer diffraction,Fraunhofer diffraction at a single slit, Plane diffraction grating,Determination of wavelength of light using diffraction grating, Resolving power of grating, Fresnel's half period zones, Explanation of rectilinear propagation of light, Zone plate, comparison of zone plate with convex lens.</p>

June 2023	<p><b>UNIT-III Polarisation of light:(12hrs)</b></p> <p>Polarized light: Methods of production of plane polarized light, Double refraction, Brewster's law, Malus law, Nicol prism, Nicol prism as polarizer and analyzer, Quarter wave plate, Half wave plate, Plane, Circularly and Elliptically polarized light-Production and detection, Optical activity, Laurent's half shade polarimeter: determination of specific rotation,</p>
July 2023	<p><b>UNIT-IV Aberrations and Fibre Optics: (12hrs)</b></p> <p>Monochromatic aberrations, Spherical aberration, Methods of minimizing spherical aberration, Coma, Astigmatism and Curvature of field, Distortion; Chromatic aberration-the achromatic doublet; Achromatism for two lenses (i) in contact and (ii) separated by a distance.</p> <p>Fibre optics: Introduction to Fibers, different types of fibers, rays and modes in an optical fiber, Principles of fiber communication (qualitative treatment only), Advantages of fiber optic communication.</p>
August 2023	<p><b>UNIT-V Lasers and Holography:(12hrs)</b></p> <p>Lasers: Introduction, Spontaneous emission, stimulated emission, Population Inversion, Laser principle, Einstein coefficients, Types of lasers-He-Ne laser, Ruby laser, Applications of lasers; Holography: Basic principle of holography, Applications of holography.</p>

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**DEPARTMENT OF PHYSICS**

**ANNUAL ACADEMIC PLAN 2022-2023**

**III Semester–Paper–III**

II Year B.Sc.-Physics: III Semester

Course-III: HEAT AND

THERMODYNAMICS

<b>MONTH</b>	<b>TOPIC</b>
<b>NOVEMBER 2022</b>	<p>UNIT-I: Kinetic Theory of gases:</p> <p>Kinetic Theory of gases-Introduction, Maxwell's law of distribution of molecular velocities (qualitative treatment only) and its experimental verification, Mean free path, Degrees of freedom, Principle of equipartition of energy (Qualitative ideas only), Transport phenomenon in ideal gases: viscosity, Thermal conductivity and diffusion of gases.</p> <p>UNIT-II: Thermodynamics:</p> <p>Introduction- Isothermal and Adiabatic processes, Reversible and irreversible processes, Carnot's engine and its efficiency, Carnot's theorem, Thermodynamic scale of temperature</p>
<b>DECEMBER 2022</b>	<p>and its identity with perfect gas scale, Second law of thermodynamics: Kelvin's and Clausius statements, Principle of refrigeration, Entropy, Physical significance, Change in entropy in reversible and irreversible processes; Entropy and disorder-Entropy of Universe; Temperature-Entropy (T-S) diagram and its uses ; change of entropy when ice changes into steam.</p>

<p><b>JANUAR Y2023</b></p>	<p><b>UNIT-III: Thermodynamic Potentials and Maxwell's equations:</b>  <b>Applications to (i) Clausius-Clayperon's equation (ii) Value of CP- CV (iii) Value of CP/CV (iv) Joule-Kelvin coefficient for ideal gases.</b></p> <p><b>UNIT-IV: Low temperature Physics:</b>  <b>Liquefaction of air by Linde's method, Production of low temperatures by adiabatic demagnetization (qualitative), Practical applications of substancesat low temperatures.</b></p>
<p><b>FEBRUA RY2023</b></p>	<p><b>UNIT-V: Quantum theory of radiation:</b>  <b>radiation-Derivation, Deduction of Wein's law and Rayleigh-Jean's law from Planck's law, Solar constant and its determination using Angstrompyroheliometer, Estimation of surface temperature of Sun.</b></p>



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**DEPARTMENT OF PHYSICS**

**ANNUAL ACADEMIC PLAN 2022-2023**

**IIB.Sc.PHYSICS IV Semester**

**PAPER-IV: Course-IV: ELECTRICITY, MAGNETISM AND ELECTRONICS**

MONTH	TOPIC
March 2023	<p><b>UNIT-I</b></p> <p><b>1. Electrostatics: (6hrs)</b></p> <p>Gauss's law-Statement and its proof, Electric field intensity due to (i) uniformly charged solid sphere and (ii) an infinite conducting sheet of charge, Deduction of Coulomb's law from Gauss law, Electrical potential-Equipotential surfaces, Potential due to a (i) dipole (ii)uniformly charged sphere</p> <p><b>2.Dielectrics:</b></p> <p>Dielectrics-Polar and Non-polar dielectrics- Effect of electric field on dielectrics,Dielectric strength, Capacitance of a parallel plate condenser with dielectric slab between the plates, Electric displacement D, electric polarization P,Relation between D, E and P, Dielectric constant and electric susceptibility.</p>

<p><b>April 2023</b></p>	<p><b>UNIT-II</b></p> <p><b>1.Magnetostatics:</b></p> <p>Biot-Savart’s law and its applications: (i) circular loop and (ii) solenoid, Divergence and curl of magnetic field, Ampere’s Circuital Law and its application to Solenoid,Hall effect, determination of Hall coefficient and applications.</p> <p><b>2.Electromagnetic Induction:</b></p> <p>Faraday’s laws of electromagnetic induction, Lenz’s law,Self induction and Mutual induction,Self inductance of a long solenoid, Mutual inductance of two coils, Energy stored in magnetic field, Eddy currents and Electromagnetic damping</p>
<p><b>May 2023</b></p>	<p><b>UNIT-III</b></p> <p><b>1.Alternating currents:</b></p> <p><b>3.</b>Alternating current - Relation between current and voltage in LR and CR circuits,Phasor and Vector diagrams, LCR series and parallel resonant circui</p> <p><b>4.</b>Electromagnetic waves-Maxwell’s equations:</p> <p>(6 hrs) Idea of displacement current,Maxwell’s equations-Derivation, Maxwell’s wave equation (with derivation), Transverse nature of electromagnetic waves, Poynting theorem (Statement andproof)</p> <p>.</p>

<p><b>June 2023</b></p>	<p>UNIT-IV</p> <p><b>1. Basic Electronic devices: (12 hrs)</b></p> <p>PN junction diode, Zener diode and Light Emitting Diode (LED) and their I-V characteristics, Zener diode as a regulator- Transistors and its operation, CB, CE and CC configurations, Input and output characteristics of a transistor in CE mode, Relation between alpha, beta and gamma; Hybrid parameters, Determination of hybrid parameters from transistor characteristics; Transistor as an amplifier.</p>
<p><b>AUGUST 2023</b></p>	<p>UNIT-V:</p> <p><b>1. Digital Electronics: (12 hrs)</b></p> <p>Number systems, Conversion of binary to decimal system and vice versa, Binary addition &amp; Binary subtraction (1's and 2's complement methods), Laws of Boolean algebra, DeMorgan's laws- Statements and Proofs, Basic logic gates, NAND and NOR as universal gates, Exclusive-OR gate, Half adder and Full adder circuits.</p>

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**ANNUALACADEMICPLAN2022-2023**

**IIB.Sc.PHYSICS IV Semester**

**PAPER–IV: Course-V: Modern Physics**

<b>MONTH</b>	<b>TOPIC</b>
<b>March 2023</b>	<b>UNIT-I :</b> <b>1. Atomic and Molecular Physics:(12 hrs)</b> Vector atom model and Stern-Gerlach experiment, Quantum numbers associated with it, Angular momentum of the atom, Coupling schemes, Spectral terms and spectral notations, Selection rules, Intensity rules, Fine structure of Sodium D-lines, Zeeman effect, Experimental arrangement to study Zeeman effect; Raman effect, Characteristics of Raman effect,

<p><b>April 2023</b></p>	<p><b>Experimental arrangement to study Raman effect, Quantum theory of Raman effect, Applications of Raman effect.</b></p> <p><b>UNIT-II:</b></p> <p><b>1. Matter waves &amp; Uncertainty Principle: (12 hrs)</b>  Matter waves, de Broglie's hypothesis, Wave length of matter waves, Properties of matter waves, Davisson and Germer's experiment, Phase and group velocities, Heisenberg's uncertainty principle for position and momentum &amp; energy and time, Illustration of uncertainty principle using diffraction of beam of electrons (Diffraction by a single slit) and photons (Gamma ray microscope), Bohr's principle of complementarity</p>
<p><b>May 2023</b></p>	<p><b>2. Quantum (Wave) Mechanics: (12 hrs)</b></p> <p>Basic postulates of quantum mechanics, Schrodinger time independent and time dependent wave equations - Derivations, Physical interpretation of wave function, Eigen functions, Eigen values, Application of Schrodinger wave equation to (i) one dimensional potential box of infinite height (Infinite Potential Well) and (ii) one dimensional harmonic oscillator</p>
<p><b>June 2023</b></p>	<p><b>UNIT-IV:</b></p> <p><b>3. Nuclear Physics: (12 hrs)</b></p> <p><i>Nuclear Structure:</i> General Properties of Nuclei, Mass defect, Binding energy; <i>Nuclear forces:</i> Characteristics of nuclear forces - Yukawa's meson theory; <i>Nuclear Models:</i> Liquid drop model, The Shell model, Magic numbers; <i>Nuclear Radiation detectors:</i> G.M. Counter, Cloud chamber, Solid State detector; <i>Elementary Particles:</i></p>

	Elementary Particles and their classification
<b>July 2023</b>	<p><b>4. Nano materials:(7hrs)</b></p> <p>Nanomaterials – Introduction, Electron confinement, Size effect, Surface to volume ratio, Classification of nano materials– (0D, 1D, 2D); Quantum dots, Nano wires, Fullerene, CNT, Graphene(Mention of structures and properties),Distinct properties of nano materials (Mention-<i>mechanical, optical, electrical, and magnetic properties</i>); Mention of applications of</p>
August 2023	<p>nano materials: (<i>Fuel cells, Phosphors for HD TV, Next Generation Computer chips, elimination of pollutants, sensors</i>)</p> <p><b>5. Superconductivity:</b></p> <p>Introduction to Superconductivity, Experimental results-critical temperature, critical magnetic field, Meissner effect , Isotope effect, Type I and Type II superconductors, BCS theory (elementary ideas only), Applications of superconductors</p>

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**DEPARTMENT OF PHYSICS**

**ANNUALACADEMICPLAN 2022-2023**

**III B.Sc. PHYSICS V Semester Paper – VI  
Paper VI (B): LOW TEMPERATURE PHYSICS**

<b>MONTH</b>	<b>TOPIC</b>
<b>December 2022</b>	<b>UNIT-I PRODUCTION OF LOW TEMPERATURE (10 hrs)</b> Production of low temperatures-Introduction, Freezing mixtures, Joule-Thomson effect, Regenerative cooling, Different methods of liquefaction of gases, liquefaction of air, Production of liquid hydrogen and nitrogen, Adiabatic demagnetization, Properties of materials at low temperatures, Superconductivity
<b>January 2023</b>	<b>UNIT-II MEASUREMENT OF LOW TEMPERATURE (10 hrs)</b> Gas thermometer and its correction and calibration, Secondary thermometers, resistance thermometers, thermocouples, Vapour pressure thermometers, Magnetic thermometers, Advantages and drawbacks of each type of thermometer.

<p><b>February 2023</b></p>	<p><b>UNIT-III PRINCIPLES OF REFRIGERATION (10 hrs)</b>  Introduction to Refrigeration- Natural and artificial refrigeration , Stages of refrigeration, Types of refrigeration - Vapor compression and vapor absorption refrigeration systems, Refrigeration cycle and explanation with a block diagram, Introductory ideas on air-conditioning.</p> <p>Refrigerants-Introduction, Ideal refrigerant, Properties of refrigerant, Classification of refrigerants, commonly used refrigerants, Eco-friendly refrigerants</p>
<p>March 2023</p>	<p><b>UNIT-IV COMPONENTS OF REFRIGERATOR (10 hrs)</b>  Refrigerator and its working, Block diagram, Coefficient of Performance (COP), Tons of refrigeration (TR) and Energy Efficiency Ratio (EER), Refrigerator components: Types of compressors, evaporators and condensers and their functional aspects, defrosting in a refrigerator, Refrigerant leakage and detection.</p>
<p>April 2023</p>	<p><b>UNIT-V APPLICATIONS OF LOW TEMPERATURE &amp; REFRIGERATION (10 hrs.)</b></p> <p><i>Applications of Low temperatures:</i> Preservation of biological material, Food freezing, liquid nitrogen and liquid hydrogen in medical field, Superconducting magnets in MRI- Tissue ablation (cryosurgery) - Cryogenic rocket propulsion system.</p> <p><i>Applications of refrigeration:</i> Domestic refrigerators, Water coolers, Cold storages, Ice plants, Food preservation methods, Chemical and Process industries, Cold treatment of metals, Construction field, Desalination of water, Data centers.</p>



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**DEPARTMENT OF PHYSICS**

**ANNUALACADEMICPLAN2022-2023**

**III B.Sc., V-SEMESTER,PHYSICS PAPER- VII (B): SOLAR ENERGY  
(For Maths Combinations)**

<b>MONTH</b>	<b>TOPIC</b>
DECEMBER 2022	<p><b>Unit - I: BASIC CONCEPTS OF SOLAR ENERGY (10hrs)</b> Spectral distribution of solar radiation, Solar constant , zenith angle and Air-Mass, standard time, local apparent time, equation of time, direct, diffuse and total radiations. Pyrheliometer - working principle, direct radiation measurement, Pyrometer-working Principle, diffuse radiation measurement, Distinction between the two <b>meters</b>.</p>
JANUARY 2023	<p><b>Unit - II: SOLAR THERMAL COLLECTORS (10hrs)</b> Solar Thermal Collectors-Introduction, Types of Thermal collectors, Flat plate collector – liquid heating type, Energy balance equation and efficiency, Evacuated tube collector, collector overall heat loss coefficient, Definitions of collector efficiency factor, collector heat-removal factor and collector flow factor, Testing of flat-plate collector, solar water heating system, natural and forced circulation types, Concentrating collectors, Solar cookers, Solar dryers, Solar desalinators.</p>
FEBRUARY 2023	<p><b>Unit - III: FUNDAMENTALS OF SOLAR CELLS (10hrs)</b> Semiconductor interface, Types, homo junction, hetero junction and Schottky barrier, advantages and drawbacks, Photovoltaic cell, equivalent circuit, output parameters, conversion efficiency, quantum efficiency, Measurement of I-V characteristics, series and shunt resistance, their effect on efficiency, Effect of light intensity, inclination and temperature on efficiency</p>
MARCH 2023	<p><b>Unit -IV: TYPES OF SOLARCELLS AND MODULES (10 hrs)</b> Types of solar cells, Crystalline silicon solar cells, I-V characteristics, poly-Si cells, Amorphous silicon cells, Thin film solar cells-CdTe/CdS and CuInGaSe<sub>2</sub>/CdS cell configurations, structures, advantages and limitations, Multi junction cells – Double and triple junction cells. Module fabrication steps, Modules in series and parallel, Bypass and blocking diodes</p>

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SEM -VI Long term Internship (APRIL 20023-JUJY-2023 )

Students were sent to long term internship to selected industries. In the month of August, evaluation of the internship program was completed

*Devati Bis*

**LECTURER IN CHARGE**  
**Department of Physics**  
**A. S. Govt. Degree College for Women**  
**KAKINADA.**

*V. Ananta Lakshmi*

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# DEPARTMENT OF CHEMISTRY

## ACADEMIC PLAN 2022 - 2023

### I B.Sc., PAPER - I SEMESTER - I (INORGANIC & PHYSICAL CHEMISTRY)

Month	Inorganic Chemistry	Physical Chemistry
November, 2022	CHEMISTRY OF P-BLOCK ELEMENTS	SOLID STATE
December 2022	CHEMISTRY OF D -BLOCK ELEMENTS	GASEOUS STATE AND LIQUID STATE
January 2023	CHEMISTRY OF F - BLOCK ELEMENTS	SOLUTIONS AND IONIC EQUILIBRIUM
February 2023	THEORIES OF BONDING IN METALS	DILUTE SOLUTIONS
March 2023	REVISION FOR SEMESTER EXAMS	REVISION FOR SEMESTER EXAMS

### I B.Sc., PAPER - II SEMESTER - II (ORGANIC & GENERAL CHEMISTRY)

Month	Organic Chemistry	General Chemistry
APRIL, 2023	ALKANES	HSAB
MAY, 2023	CYCLOALKANES	SURFACE CHEMISTRY
JUNE, 2023	ALKENES	CHEMICAL FOUNDING
JULY, 2023	ALKYNES	STEREOCHEMISTRY
AUGUST 2023	BENZENE AND ITS REACTIVITY	REVISION FOR SEMESTER EXAMS

### II B.Sc., PAPER-III SEMESTER - III (ORGANIC & SPECTROSCOPY)

MONTH	ORGANIC CHEMISTRY	SPECTROSCOPY
NOVEMBER 2023	Chemistry of Halogenated Compounds	Molecular Spectroscopy Rotation Spectroscopy
DECEMBER 2023	Alcohols	Vibrational Spectroscopy
JANUARY 2023	Phenols	Electronic Spectroscopy
FEBRUARY 2023	Carbonyl Compounds	NMR Spectroscopy
MARCH 2023	Carboxyl Acids and their Derivates	Application of Spectroscopy to Simple Organic Molecules

**II B.Sc., PAPER-IV - SEMESTER - IV**  
**(INORGANIC & ORGANIC AND PHYSICAL CHEMISTRY)**

<b>MONTH</b>	<b>INORGANIC CHEMISTRY</b>	<b>ORGANIC CHEMISTRY PHYSICAL CHEMISTRY</b>
APRIL,2023	ORGANOMETALLIC COMPOUNDS	NITROHYDRO COMPOUNDS
MAY,2023	CARBOHYDRATES	AMINES
JUNE,2023	AMINIACIDS AND PROTEINS	PHOTOCHEMISTRY
JULY,2023	NITROHYDRO COMPOUNDS	THERMODYNAMICS
AUGUST,2023	AMINES	THERMODYNAMICS

**II B.Sc., PAPER - V SEMESTER -IV**  
**(INORGANIC, ORGANIC & PHYSICAL CHEMISTRY)**


<b>MONTH</b>	<b>INORGANIC CHEMISTRY</b>	<b>PHYSICAL CHEMISTRY</b>
APRIL,2023	COORDINATION CHEMISTRY	PHASE RULE
MAY,2023	COORDINATION CHEMISTRY	ELECTROCHEMISTRY
JUNE,2023	INORGANIC REACTION MECHANISM	ELECTROCHEMISTRY
JULY,2023	STABILITY OF METAL COMPLEXES	CHEMICAL KINETICS
AUGUST,2023	BIOINORGANIC CHEMISTRY	CHEMICAL KINETICS

**III B.Sc., PAPER - 6 D, SEMESTER -V  
(ENVIRONMENTAL CHEMISTRY)**

<b>MONTH</b>	<b>TOPIC</b>
DECEMBER 2022	INTRODUCTION
JANUARY 2023	AIR POLLUTION
FEBRUARY 2023	WATER POLLUTION
MARCH 2023	CHEMICAL TOXICOLOGY
APRIL,2023	ECOSYSTEM AND BIODIVERSITY

**III B.Sc., SEMESTER -V,PAPER 7D  
(GREEN CHEMISTRY AND NANOTECHNOLOGY)**

<b>MONTH</b>	<b>TOPIC</b>
DECEMBER 2022	GREEN CHEMISTRY PART-I
JANUARY 2023	GREEN CHEMISTRY PART-II
FEBRUARY 2023	MICROWAVE AND ULTRASOUND ASSISTED GREEN SYNTHESIS
MARCH 2023	GREEN CATALYSIS AND GREEN SYNTHESIS
APRIL,2023	NANOTECHNOLOGY IN GREEN CHEMISTRY

  
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**B.Com(C.A) ACADEMIC PLAN 2022-2023**  
**SEMESTER - I**  
**PAPER –I-INFORMATION TECHNOLOGY**

MONTH	NAME OF THE TOPIC
NOVEMBER 2022	Introduction Of Computers
DECEMBER 2022	MS word
JANUARY 2023	MS Excel
FEBRAVARY 2023	MS Power point
MARCH 2023	MS Access

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**SEMESTER - III**  
**PAPER-III- PROGRAMMING WITH C & C++**

MONTH	NAME OF THE TOPIC
NOVEMBER 2022	Introduction and Control Structure
DECEMBER 2022	Loops And Arrays
	Strings And Functions
JANUARY 2023	Principles of Object Oriented Programming
FEBRAVARY 2023	Classes And Objects

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**SEMESTER - V**  
**PAPER – VI-A – BIG DATA ANALYTICS USING R**

MONTH	NAME OF THE TOPIC
DECEMBER 2022	Introduction to Big data
JANUARY 2023	Big data Analytics
FEBRUARY 2023	Introduction to R and getting started with R
MARCH 2023	Exploring data in R
APRIL 2023	Data Visualization using R

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**SEMESTER – V - PAPER- VII-A- DATA SCIENCE USING PYTHON**

MONTH	NAME OF THE TOPIC
DECEMBER 2022	Introduction to data science
JANUARY 2023	Introduction to Python
FEBRUARY 2023	Control structures and strings
MARCH 2023	Functions and modules
APRIL 2023	Classes & Object

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**SEMESTER – II - E-COMMERCE AND WEB DESIGNING**

MONTH	NAME OF THE TOPIC
MARCH 2023	Introduction
	Technology used in E-commerce
APRIL 2023	E-Payment System
MAY 2023	On-line Business Transactions
JUNE 2023	Website designing
JULY 2023	Website designing
AUGUST 2023	Security and Encryption

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**SEMESTER - IV - DATABASE MANAGEMENT SYSTEMS**

MONTH	NAME OF THE TOPIC
MARCH 2023	Overview of Database Management System
APRIL 2023	File-Based System
MAY 2023	Entity-Relationship Model
JUNE 2023	Structured Query Language
JULY 2023	PL/SQL Operators, Procedures
AUGUST 2023	PL/SQL

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**B.Sc.(M.P.Cs) ACADEMIC PLAN 2022-2023**  
**SEMESTER - I**  
**PAPER -I – PROBLEM SOLVING IN C**

MONTH	NAME OF THE TOPIC
NOVEMBER 2022	General Fundamentals
	Introduction to Algorithms and Programming Language
DECEMBER 2022	Introduction to C
	Decision control and Looping Statements
JANUARY 2023	Arrays
FEBRUARY 2023	Functions
	Structure, Union, and Enumerated Data Types
MARCH 2023	Pointers
	Files

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**SEMESTER - III**  
**PAPER-III- DATABASE MANAGEMENT SYSTEM**

MONTH	NAME OF THE TOPIC
NOVEMBER 2022	Overview of Database Management System
DECEMBER 2022	Entity- Relationship Model
JANUARY 2023	Relational Model
FEBRUARY 2023	Structure Query Language
MARCH 2023	PL/SQL



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B.Sc.(MPCS)ACADEMIC PLAN 2022-2023  
SEMESTER – II  
PAPER- II- DATA STRUCTURES USING C**

<b>MONTH</b>	<b>NAME OF THE TOPIC</b>
MARCH 2023	Introduction to Data Structures
APRIL 2023	Principles of Programming and Analysis of Algorithms
	Introduction to Arrays
MAY 2023	Linked Lists
JUNE 2023	Stacks
JULY 2023	Queues
	Binary Trees
AUGUST 2023	Searching & Sorting
	Graphs

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SEMESTER - IV  
PAPER – IV – OBJECT ORIENTED PROGRAMMING THROUGH JAVA**

<b>MONTH</b>	<b>NAME OF THE TOPIC</b>
MARCH 2023 APRIL 2023	Introduction to Java and Data Types in Java
	Operators and Control Statements in Java
	Arrays In Java
MAY 2023	Strings In Java
JUNE 2023	Introduction to Oops and Classes And Objects
JULY 2023	Methods in Java and Inheritance
	Polymorphism, Type Casting, and Interfaces
AUGUST 2023	Packages , Exception Handling in Java
	Streams and Threads
MARCH 2023	Applets
	Java Database Connectivity

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**SEMESTER - IV**  
**PAPER – V – OPERATING SYSTEMS**

<b>MONTH</b>	<b>NAME OF THE TOPIC</b>
<b>MARCH 2023</b>	History and Evaluation of Operating system
	Time Sharing Systems
<b>APRIL 2023</b>	Processor and User Modes
<b>MAY 2023</b>	Process Management
	Concurrent and dependent Processes
<b>JUNE 2023</b>	Memory Management
<b>JULY 2023</b>	File and I/O Management, OS Security
<b>AUGUST 2023</b>	Android Application Development

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*V. Ananta Lakshmi*  
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**ANNUAL ACADEMIC PLAN 2022-2023**

**I B.Sc., -Botany-I/ I Semester End (W.E.F. 2020-21)**

**FUNDAMENTAL OF MICROBES AND NON- VASCULAR PLANTS**

<b>MONTH</b>	<b>TOPIC</b>
<b>November 2022</b>	<p><b>ORIGIN OF LIFE AND VIRUSES</b> Origin of life, concept of primary Abiogenesis; Miller and Urey experiment. Five kingdom classification of R.H. Whittaker Discovery of microorganisms, Pasteur experiments, germ theory of diseases. Shape and symmetry of viruses; structure of TMV and Gemini virus; multiplication of TMV; A brief account of Prions and Viroids. A general account on symptoms of plant diseases caused by Viruses. Transmission of plant viruses and their control. Significance of viruses in vaccine production, bio-pesticides and as cloning vectors.</p>
<b>November 2022</b>	<p><b>SPECIAL GROUPS OF BACTERIA AND EUBACTERIA</b> Brief account of Archaeobacteria, Actinomycetes and Cyanobacteria. . Cell structure and nutrition of Eubacteria.. Reproduction- Asexual (Binary fission and endospores) and bacterial recombination (Conjugation, transformation, Transduction).. Economic importance of Bacteria with reference to their role in Agriculture and industry(fermentation and medicine). A general account on symptoms of plant diseases caused by Bacteria; Citrus canker.</p>
<b>December 2022</b>	<p><b>FUNGI &amp; LICHENS</b> General characteristics of fungi and Ainsworth classification (upto classes).</p>

	<p>Structure, reproduction and life history of (a) Rhizopus (Zygomycota) and (b) Puccinia (Basidiomycota).  Economic uses of fungi in food industry, pharmacy and agriculture.  A general account on symptoms of plant diseases caused by Fungi; Blast of Rice.  Lichens- structure and reproduction; ecological and economic importance.</p>
January 2023	<p><b>ALGAE</b>  General characteristics of Algae (pigments, flagella and reserve food material); Fritsch classification (upto classes).  Thallus organization and life cycles in Algae.  Occurrence, structure, reproduction and life cycle of (a) Spirogyra (Chlorophyceae) and (b) Polysiphonia (Rhodophyceae).  Economic importance of Algae.</p>
January 2023	<p><b>BRYOPHYTES</b>  General characteristics of Bryophytes; classification upto classes.  Occurrence, morphology, anatomy, reproduction (developmental details are not needed)</p>
February 2023	<p>life cycle of (a) Marchantia (Hepaticopsida) and (b) Funaria (Bryopsida).  General account on evolution of sporophytes in Bryophyta.</p>

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**I B.Sc., -Botany-II/ II Semester End (W.E.F. 2020-21)**

**BASICS OF VASCULAR PLANTS AND PHYTOGEOGRAPHY**

MONTH	TOPIC
March 2023	<b>PTERIDOPHYTES</b> General characteristics of Pteridophyta; classification of Smith (1955) upto divisions. Occurrence, morphology, anatomy, reproduction (developmental details are not needed) and life history of (a) Lycopodium (Lycopsidea) and (b) Marsilea (Filicopsida). Stelar evolution in Pteridophytes; Heterospory and seed habit.
April 2023	<b>GYMNOSPERMS</b> General characteristics of Gymnosperms; Sporne classification upto classes. Occurrence, morphology, anatomy, reproduction (developmental details are not needed) and life history of (a) Cycas (Cycadopsida) and (b) Gnetum (Gnetopsida). Outlines of geological timescale. A brief account on Cycadeoidea
May 2023	<b>BASIC ASPECTS OF TAXONOMY</b> Aim and scope of taxonomy; Species concept: Taxonomic hierarchy, species, genus and family. Plant nomenclature: Binomial system, ICBN- rules for nomenclature.

Mjay 2023

JUNE 2023

Herbarium and its techniques, BSI herbarium and Kew herbarium; concept of digital herbaria.  
Bentham and Hooker system of classification;  
Systematic description and economic importance of the following families:  
(a) Annonaceae (b) Curcubitaceae

July 2023

**SYSTEMATIC TAXONOMY**  
Systematic description and economic importance of the following families:  
(a) Asteraceae (b) Asclepiadaceae (c) Amaranthaceae  
(d) Euphorbiaceae (e) Arecaceae and (f) Poaceae  
Outlines of Angiosperm Phylogeny Group (APGIV).

August 2023

**PHYTOGEOGRAPHY**  
Principles of Phytogeography, Distribution (wides, endemic, discontinuous species)  
Endemism – types and causes.  
Phytogeographic regions of World.  
Phytogeographic regions of India.  
Vegetation types in Andhra Pradesh.



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**DEPARTMENT OF BOTANY  
ANNUAL ACADEMIC PLAN 2022-2023**

III Semester – Paper – III

**Anatomy and Embryology of Angiosperms, Plant Ecology and Biodiversity**

MONTH	TOPIC
NOVEMBER 2022	<p>ANATOMY OF ANGIOSPERMS</p> <ol style="list-style-type: none"><li>1. Organization of apical meristems: Tunica-carpus theory and Histogen theory.</li><li>2. Tissue systems–Epidermal, ground and vascular.</li><li>3. Anomalous secondary growth in <i>Boerhaavia</i> and <i>Dracaena</i>.</li><li>4. Study of timbers of economic importance - Teak, Red sanders and Rosewood</li></ol> <p>Additional topics (Nodal Anatomy, Floral Anatomy</p> <p>:</p>
DECEMBER 2022	<p>EMBRYOLOGY OF ANGIOSPERMS</p> <ol style="list-style-type: none"><li>1. Structure of anther, anther wall, types of tapetum. Microsporogenesis and development of male gametophyte.</li><li>2. Structure of ovule, megasporogenesis; monosporic (<i>Polygonum</i>), bisporic (<i>Allium</i>) and tetrasporic (<i>Peperomia</i>) types of embryo sacs.</li><li>3. Outlines of pollination, pollen – pistil interaction and fertilization.</li><li>4. Endosperm - Types and biological importance - Free nuclear, cellular, helobial and druminate. Development of Dicot (<i>Capsella bursa-pastoris</i>) embryo</li></ol>

<p><b>JANUARY 2023</b></p>	<p><b>BASICS OF ECOLOGY</b>          Ecology: definition, branches and significance of ecology.          Ecosystem: Concept and components, energy flow, food chain, food web, ecological pyramids.          Plants and environment: Climatic (light and temperature), edaphic and biotic factors.          Ecological succession: Hydrosere and Xerosere  <b>POPULATION, COMMUNITY AND PRODUCTION ECOLOGY</b>          Population ecology: Natalty, mortality, growth curves, ecotypes, ecads          Community ecology: Frequency, density, cover, life forms, biological spectrum</p>
<p><b>FEBRUARY 2023</b></p>	<p>Concepts of productivity: GPP, NPP and Community Respiration          Secondary production, P/R ratio and Ecosystems  <b>BASICS OF BIODIVERSITY</b>          Biodiversity: Basic concepts, Convention on Biodiversity - Earth Summit.          Value of Biodiversity; types and levels of biodiversity and Threats to biodiversity          Biodiversity Hot spots in India. Biodiversity in North Eastern Himalayas and Western Ghats.          Principles of conservation: IUCN threat-categories, RED data book Role of NBPGR and NBA in the conservation of Biodiversity.</p>

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**ANNUAL ACADEMIC PLAN 2022-2023**

**II B.Sc. BOTANY IV Semester**

**PAPER -IV : PLANT PHYSIOLOGY AND METABOLISM**

MONTH	TOPIC
NOVEMBER 2023	<p>Plant-Water relations</p> <p>Importance of water to plant life, physical properties of water, diffusion,imbibition, osmosis. water potential, osmotic potential, pressure potential. Absorption and lateral transport of water; Ascent of sap Transpiration: stomata structure and mechanism of stomatal movements (<math>K^+</math> ionflux). Mechanism of phloem transport; source-sink relationships</p> <p>Mineral nutrition, Enzymes and Respiration</p>
December 2023	<p>1. Essential macro and micro mineral nutrients and their role in plants; symptoms of mineral deficiency</p> <p>1. Absorption of mineral ions; passive and active processes. Characteristics, nomenclature and classification of Enzymes. Mechanism of enzyme action,enzyme kinetics Respiration: Aerobic and Anaerobic; Glycolysis, Krebs cycle; electron transportsystem Mechanism of Oxidative phosphorylation , Pentose phosphate pathway Photosynthesis and Photorespiration</p> <p>Photosynthesis: Photosynthetic pigments, absorption and action spectra; Red dropand Emersonenhancement effect Concept of two photosystems; mechanism of photosynthetic electron transportand evolutionof oxygen; photophosphorylation</p> <p>Carbon assimilation pathways (C<sub>3</sub>,C<sub>4</sub> and CAM);Photorespiration -</p>

January 2023

C2 pathway

. Nitrogen and lipid metabolism

Nitrogen metabolism: Biological nitrogen fixation –  
asymbiotic and symbiotic nitrogen fixing organisms.

Nitrogenase enzyme system.

Lipid metabolism: Classification of Plant lipids, saturated and  
unsaturated fatty acids. Anabolism of triglycerides,  $\beta$ -oxidation of  
fatty acids, Glyoxylate cycle

Plant growth - development and stress physiology

Growth and Development: Definition, phases and kinetics of  
growth.

Physiological effects of Plant Growth Regulators (PGRs) –  
auxins gibberellins, cytokinins, ABA, ethylene and brassinosteroids  
Physiology of flowering: Photoperiodism, role of phytochrome in  
flowering.

Seed germination and senescence; physiological changes.

Physiological changes in plants during Water stress

February 2023

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ACADEMIC PLAN 2022-2023

II B.Sc. BOTANY IV Semester Paper – V

CELL BIOLOGY, GENETICS AND PLANT BREEDING

MONTH	TOPIC
NOVEMBER 2023	<b>The Cell</b> <ul style="list-style-type: none"><li>Cell theory; prokaryotic vs eukaryotic cell; animal vs plant cell; a brief account on ultra-structure of a plant cell.</li><li>Ultra-structure of cell wall.</li><li>Ultra-structure of plasma membrane and various theories on its organization.</li><li>Polymorphic cell organelles (Plastids); ultra structure of chloroplast. Plastid DNA</li></ul>
December 2023	<b>Chromosomes</b> <ol style="list-style-type: none"><li>1. Prokaryotic vs eukaryotic chromosome. Morphology of a eukayotic chromosome.</li><li>2. Euchromatin and Heterochromatin; Karyotype and ideogram.</li><li>3. Brief account of chromosomal aberrations - structural and numerical changes</li><li>4. Organization of DNA in a chromosome (solenoid and nucleosome models).</li></ol>

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January 2023

### Mendelian and Non-Mendelian genetics

1. Mendel's laws of inheritance. Incomplete dominance and co-dominance; Multipleallelism.
2. Complementary, supplementary and duplicate gene interactions (plant based examples are to be dealt).
3. A brief account of linkage and crossing over; Chromosomal mapping - 2 pointand 3 point test cross.
4. Concept of maternal inheritance (Corren's experiment on *Mirabilis jalapa*); Mitochondrial DNA.

### Structure and functions of DNA

1. Watson and Crick model of DNA. Brief account on DNA Replication (Semi-conservative method).
2. Brief account on Transcription, types and functions of RNA. Gene concept andgenetic code and Translation.
3. Regulation of gene expression in prokaryotes - Lac Operon.

February 2023

### Plant Breeding

1. Plant Breeding and its scope; Genetic basis for plant breeding. Plant Introductionand acclimatization.
2. Definition, procedure; applications and uses; advantages and limitations of :  
(a)Mass selection, (b) Pure line selection and (c) Clonal selection.
3. Hybridization – schemes, and technique; Heterosis(hybrid vigour).
4. A brief account on Molecular breeding – DNA markers in plant breeding. RAPD, RFLP.

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**Kakinada 533002 EASTGODAVARI, ANDHRA PRADESH**  
**III B.Sc. DEGREE EXAMINATION 2022-2023**  
 (At the End of V Semester)  
**Botany Syllabus Paper - VI**  
**Course 6A : PLANT PROPAGATION**

MONTH	TOPIC
January 2023	<p><b><u>: Basic concepts of propagation</u></b></p> <ol style="list-style-type: none"> <li>1. Propagation: Definition, need and potentialities for plant multiplication; asexual and sexual methods of propagation - advantages and disadvantages.</li> <li>2. Propagation facilities: Mist chamber, humidifiers, greenhouses, glasshouses, cold frames, hot beds, poly-houses, phytotrons nursery - tools and implements.</li> </ol> <p>Identification and propagation by division and separation: Bulbs, pseudobulbs, corms, tubers and rhizomes; runners, stolons, suckers and offsets.</p>
February 2023	<p><b><u>Apomictics in plant propagation</u></b></p> <ol style="list-style-type: none"> <li>1. Apomixis: Definition, facultative and obligate; types – recurrent, non-recurrent, adventitious and vegetative; advantages and disadvantages.</li> <li>2. Polyembryony: Definition, classification, horticultural significance; chimera and bud sport.</li> <li>3. Propagation of mango, <i>Citrus</i> and <i>Allium</i> using apomictic embryos.</li> </ol>
March 2023	<p><b><u>Propagation by cuttings</u></b></p> <ol style="list-style-type: none"> <li>1. Cuttings: Definition, different methods of cuttings; root and leaf cuttings.</li> <li>1. Stem cuttings: Definition of stem tip and section cuttings; plant propagation by herbaceous, soft wood, semi hard wood, hard wood and coniferous stem cuttings.</li> <li>2. Physiological and bio chemical basis of rooting; factors influencing rooting of cuttings; Use of plant growth regulators in rooting of cuttings.</li> </ol>

April 2023

### **Propagation by layering**

1. Layering: Definition, principle and factors influencing layering.
2. Plant propagation by layering: Ground layering – tip layering, simple layering, trenchlayering, mound (stool) layering and compound (serpentine layering).
3. Air layering technique – application in woody trees.

### **Propagation by grafting and budding**

1. Grafting: Definition, principle, types, graft incompatibility, collection of scion woodstick, scion-stock relationship, and their influences, bud wood certification; micrografting.
2. Propagation by veneer, whip, cleft, side and bark grafting techniques.

Budding: Definition; techniques of 'T', inverted 'T', patch and chip budding

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(At the End of V Semester)

Botany Syllabus Paper - VI

**Course-7A: Seed Technology**

MONTH	TOPIC
January 2023	<ol style="list-style-type: none"><li>1. Seed and grain: Definitions, importance of seed; structure of Dicot and Monocot seed.</li><li>2. Role and goals of seed technology; characteristics of quality seed material.</li><li>3. Dormancy: Definition, causes for seed dormancy; methods to break seed dormancy.</li></ol> <p style="text-align: center;"><b><u>Seed processing and storage</u></b></p> <ol style="list-style-type: none"><li>1. Principles of seed processing: seed pre-cleaning, precuring, drying, seed extraction; cleaning, grading, pre-storage treatments; bagging and labelling, safety precautions during processing.</li><li>2. Seed storage; orthodox and recalcitrant seeds, natural longevity of seeds. Factors affecting longevity in storage; storage conditions, methods and containers</li></ol>
February 2023	<p style="text-align: center;"><b><u>: Seed testing</u></b></p> <ol style="list-style-type: none"><li>1. Definition of seed vigour, viability and longevity; seed sampling and equipment; physical purity analysis.</li><li>2. Seed moisture – importance – methods of moisture determination.</li><li>3. Seed germination tests using paper, sand or soil – standard germination test; TZ test to determine seed viability; seed health testing.</li></ol>
March 2023	<p style="text-align: center;"><b><u>Seed borne diseases</u></b></p> <ol style="list-style-type: none"><li>1. A brief account of different seed borne diseases and their transmission.</li><li>2. Different seed health testing methods for detecting microorganisms.</li></ol> <p style="text-align: center;"><b>Management of seed borne diseases; seed treatment methods: spraying and dusting</b></p>
April 2023	<p style="text-align: center;"><b><u>Seed certification</u></b></p> <ol style="list-style-type: none"><li>1. Objectives - Indian seed Act; seed rules and seed order; new seed policy (1988).</li><li>2. Seed Inspector: Duties and responsibilities; classes of seeds, phases of certification standards (i.e., Land requirement, isolation distance) etc.</li></ol> <p>Issue of certificates, tags and sealing; pre and post control check: Genetic purity verification, certification, records and reporting</p>

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# A.S.D GOVT. DEGREE COLLEGE FOR WOMEN (A)

(Re-Accredited by NAAC with 'B')

KAKINADA 533002 EASTGODAVARI, ANDHRA PRADESH

**I B.Sc HORTICULTURE THEORY SYLLABUS** for the Academic Year 2022-2023

**SEMESTER - I, COURSE – I**

**FUNDAMENTALS OF HORTICULTURE AND SOIL SCIENCE**

MONTH	TOPIC
November 2022	<p><b>Introduction to Horticulture</b></p> <ol style="list-style-type: none"><li>1. Horticulture: Definition, importance of horticulture in terms of economy, production, employment generation, environmental protection and human resource development.</li><li>2. Divisions of horticulture with suitable examples and their importance.</li><li>3. Area, production of Horticultural crops in A.P. and India.</li><li>4. Fruit and vegetable zones of India and Andhra Pradesh.</li><li>5. Export scenario and scope for Horticulture in India.</li></ol>
November 2022	<p><b>Classification Horticulture Crops</b></p> <ol style="list-style-type: none"><li>1. Classification of horticultural crops based on soil and climatic requirements.</li><li>2. Vegetable crop gardens – Nutrition and kitchen garden – tracer garden – vegetable forcing – market garden – roof garden.</li><li>3. Gardens in floriculture – flower gardens – soil and mixed gardens; land scape Horticulture.</li></ol>



### **Characteristics of Orchards**

**DECEMBER -2022**

1. Orchard: Definition, different systems of planting orchards – square, rectangular Quincunx, hexagonal and contour.
2. Calculation of planting densities in different systems of planting.
3. Different types and methods of pruning.
4. Training: Definition, principles and objectives; merits and demerits of open and close centered, and modified leader systems.

### **Physico-chemical characteristics of Soil**

**JANUARY- 2023**

1. Soil: Definition, minerals and weathering to form soils; factors of soil formation.
2. Soil taxonomy; soil color, texture and structure; other physical properties and stability.
3. Soil colloids and charges; ion adsorption and exchange; soil temperature and soil air.
4. Soil pH and acidity; soil alkalinity and salinity.

### **Unit V: Soil as a living matter**

**FEBRUARY -2023**

1. Soil organic matter – composition and decomposability.
2. Humus – fractionation of organic matter.
3. Soil biology: Soil microorganisms and fauna – beneficial and harmful roles.
4. Integrated nutrient management and soil tests.


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**II B.Sc HORTICULTURE ANNUAL ACADEMIC PLAN 2022-2023**  
**SEMESTER - III, COURSE – III**  
**BASICS OF VEGETABLE SCIENCE (OLERICULTURE)**

MONTH	TOPIC
NOVEMBER 2022	<b>Unit – 1 : Introduction to Vegetable Crops</b> 1. Importance of vegetable cultivation in India and Andhra Pradesh. 2. Classification and Nutritive value of vegetables. 3. Area and production of vegetables in India and Andhra Pradesh. 4. Export and import potential of vegetables in India. Constraints in vegetable production and remedies to overcome them.
DECEMBER 2022	<b>Unit – 2 : Solanaceous and Leafy Vegetables.</b> Cultivation of (a) Brinjal (b) Tomato (c) <i>Capsicum</i> (d) Spinach (c) Coriander and (d) <i>Mentha</i>
JANUARY 2023	<b>Unit – 3 : Root and Tuber Crops</b> Cultivation of (a) Carrot (b) Beet root (c) Tapioca and (d) <i>Colocasia</i>
FEBRUARY 2023	<b>Unit – 4 : Cole Crops</b> Cultivation of (a) Cabbage and (b) Cauliflower <b>Unit – 5 : Leguminous Vegetables</b> Cultivation of (a) Cluster bean (b) Cow pea and (d) <i>Dolichos</i>

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II B.Sc HORTICULTURE ANNUAL ACADEMIC PLAN  
2022-2023

SEMESTER - IV, COURSE – IV  
BASICS OF FRUIT SCIENCE (POMOLOGY)

MONTH	TOPIC
MARCH 2023	<b>Unit – 1 : Introduction to Fruit crops 12 Hrs.</b> 1. Importance of fruit growing in India and Andhra Pradesh. 2. Nutritive value of fruits. 3. Area and production of India and Andhra Pradesh.
APRIL 2023	4. Export and import potential of fruits in India. Constraints in fruit production and remedies to overcome them. <b>Unit – 2 : Tropical Fruit Crops</b> (a) Mango
MAY 2023	<b>Unit – 2 :</b> (b) Guava and (c) Papaya <b>Unit – 3 : Sub-tropical and Temperate Fruit Crops</b> (a) Grapes (b) Pomegranate (c) Citrus and (d) Apple
JUNE 2023	<b>Unit – 4 : Arid and Minor Fruit crops</b> (a) Amla (b) Dates and (c) Wood apple <b>Unit – 5 : Management Practices for Fruit Crops</b>
JULY 2023	1. Sustainable Production Practices for Local Fruit Production. 2. Integrated Orchard Management/Principles of IPM.
AUGUST - 2023	3. Harvesting and Labor Concerns 4. Grading, packing, storage and marketing of fruits.


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 III Year B.Sc Degree Examinations at the end of V Semester 2022-2023  
**HORTICULTURE SEMESTER - V, COURSE – 6A Theory Syllabus**  
**ORNAMENTAL HORTICULTURE**  
 (Skill Enhancement Course (Elective))

MONTH	TOPIC
JUNE - 2023	<b>Introduction to Ornamental Horticulture</b> (10h) 1. History, Definition, scope of gardening, aesthetic values; types of gardens in India. 2. Landscaping, basic principles and basic components. 3. Principles of gardening, garden components and adornments. 4. Lawn types, establishment and maintenance; methods of designing rockery and water garden.
JULY - 2023	<b>Types of Ornamental gardens</b> 1. Special types of gardens, trees, their design, their walk-paths, bridges, constructed features. 2. Garden structures – greenhouse, glass house, net house. 3. Values in landscaping; propagation-planting of shrubs and herbaceous perennials.
MAY 2023  JUNE 2023	<b>Plants in Ornamental gardens</b> 1. Importance, design values, propagation, planting of following annuals, biennials and perennials: (a) Climbers (b) Creepers (c) Palms (b) (d) Ferns (e) Grasses (f) Cacti (g) Succulents
JULY 2023  AUGUST -2023	<b>Ornamental gardening – public utility</b> 1 Cultural operations in ornamental gardens. 2 Bio-aesthetic planning, definition, need; round country planning; urban planning and planting - avenues, educational institutions, villages. 3. Beautifying railway stations, dam sites, hydroelectric stations, colonies, river banks, Planting material for play grounds.
SEPTEMBER – 2023	<b>Ornamental gardening in residences</b> 1. Bottle garden, terrariums. 2. Vertical gardens, roof gardens. 3. Culture of bonsai, art of making bonsai

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**HORTICULTURE SEMESTER - V, COURSE – 7A Theory Syllabus**  
**COURSE 7A: COMMERCIAL FLORICULTURE**  
 (Skill Enhancement Course (Elective))

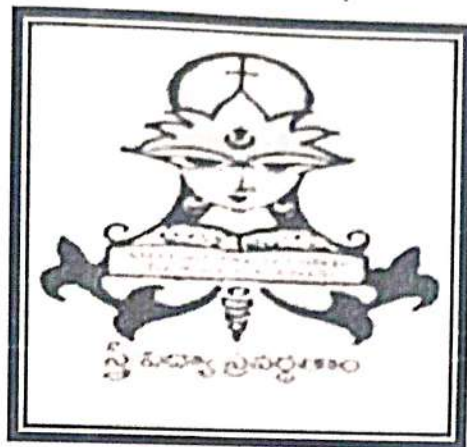
MONTH	TOPIC
JUNE - 2023	<b>Basic concepts of floriculture</b> (10h) 1. Aesthetic, cultural and industrial importance of flowers; domestic and export marketing of flowers. 2. Floriculture - Importance, area and production in Andhra Pradesh and India. 3. Scope and importance of commercial floriculture in A.P., and India.
JULY - 2023	<b>Production technology-1</b> (10h) 1. Production techniques of following flowering plants for domestic and export market: (a) Rose (b) <i>Chrysanthemum</i> (c) Marigold (d) Tuberose (e) <i>Crossandra</i> (f) Jasmine
MAY 2023	<b>Production technology-2</b> (10h) 1. Production techniques of following flowering plants for domestic and export market: (a) <i>Anthurium</i> (b) <i>Gerbera</i> (c) <i>Gladiolus</i> (d) <i>Dahlia</i> (e) <i>Heliconia</i> (f) Orchid
JUNE 2023	
JULY 2023	<b>Plant breeding of flowering ornamentals</b> (10h) 1. Objectives and techniques in ornamental plant breeding. 2. Introduction, selection, hybridization, mutation and biotechnological technique for improvement of following ornamental and flower crops.
AUGUST -2023	(a) Carnation (b) <i>Petunia</i> (c) <i>Geranium</i> (d) <i>Cosmos</i> (e) <i>Hibiscus</i> (f) Snapdragon
SEPTEMBER – 2023	<b>Unit-5: Post-harvest practices in floriculture</b> (10h) 1. Growing of flowering plants under protected environments such as glass house, plastic house, net house, etc. 2. Importance of flower arrangement; Ikebana - techniques, types, suitable flowers and cut foliage. 3. Post-harvest technology of cut and loose flowers in respect of commercial flower crops. 4. Dehydration techniques for drying of flowers, scope importance and status.

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ACADEMIC PLAN

2022-2023

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I B.Sc. ZOOLOGY ACADEMIC PLAN 2022-23

SEMESTER –I PAPER-I ANIMAL DIVERSITY – BIOLOGY OF NON-CHORDATES

MONTH	TOPIC COVERED
November'22	<p><b>UNIT I:</b>                      1.1 Principles of Taxonomy – Binomial nomenclature – Rules of nomenclature                      1.2 Whittaker's five kingdom concept and classification of Animal Kingdom.  <b>Phylum Protozoa:</b>                      1.3 General Characters and classification of protozoa up to species level with suitable examples                      1.4 Locomotion, nutrition and reproduction in Protozoan's                      1.5 Elphidium (type study).</p>
December'22	<p><b>UNIT II:</b>  <b>Phylum Porifera:</b>                      2.1 General characters and classification up to species level with suitable examples                      2.2 Skelton in Sponges                      2.3 Canal system in sponges  <b>Phylum Coelenterate:</b>                      2.4 General characters and classification up to species level with suitable examples                      2.5 Mutagenesis in Obelia,                      2.6 Polymorphism in coelenterates,                      2.7 Corals and coral reefs formation  <b>Phylum Ctenophore:</b>                      2.8 General Characters and Evolutionary significance (affinities)</p>
January'23	<p><b>UNIT III:</b>  <b>Phylum Platy helminthes:</b>                      3.1 General characters and classification up to species level with suitable examples                      3.2 Life cycle and pathogen city of Fasciola hepatica                      3.3 Parasitic Adaptations in helminthes Phylum  <b>Nemathelminthes:</b>                      3.4 General characters and classification up to species level with suitable examples                      3.5 Life cycle and pathogen city of Ascaris lumbricoides</p>
February'23	<p><b>UNIT IV:</b>  <b>Phylum Annelida:</b>                      4.1 General characters and classification up to species level with suitable examples  <b>4.2 Hirudinaria granulosa-</b> External characters, digestive system, excretory system and reproductive system. Evolution of Coelom and Coelomoducts.                      4.3 Vermiculture - Scope, significance, earthworm species, processing. – Vermicompost, economic importance of vermin compost  <b>Phylum Arthropoda :</b></p>

	<p>4.4 General characters and classification up to species level with suitable examples</p> <p>4.5 Prawn External characters, appendages, respiratory system and circulatory system</p> <p>4.6 Vision and respiration in Arthropoda,</p> <p>4.7 Metamorphosis in Insects</p> <p>4.8 Peripatus- Structure and affinities</p> <p>4.9 Social Life in Bees and Termites</p>
March'23	<p><b>UNIT V:</b></p> <p><b>Phylum Mollusca:</b></p> <p>5.1 General characters and classification up to species level with suitable examples ,</p> <p>5.2 Pearl formation in Pelecypoda,</p> <p>5.3 Sense organs in Mollusca, Torsion in gastropods.</p> <p><b>Phylum Echinodermata:</b></p> <p>5.4 General characters and classification up to species level with suitable examples,</p> <p>5.5 Water vascular system in starfish,</p> <p>5.6 Larval forms of Echinodermata.</p> <p><b>Phylum Hemichordate:</b></p> <p>5.7 General characters and classification up to species level with suitable examples,</p> <p>5.8 Balanoglossus - Structure and affinities</p>

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I B.Sc. ZOOLOGY ACADEMIC PLAN 2022-23

SEMESTER- II PAPER-II ANIMAL DIVERSITY – BIOLOGY OF CHORDATES

MONTH	TOPIC COVERED
April'23	<b>UNIT I:</b> 1.1 General characters and classification of Chordata upto species level 1.2 Protochordata- Salient features of Cephalochordate, 1.3 Structure of Branchiostoma 1.4 Affinities of Cephalochordate. 1.5 Salient features of Urochordata 1.6 Structure and life history of Herdmania 1.7 Retrogressive metamorphosis – Process and Significance.
may'23	<b>UNIT II:</b> 2.1 Cyclostomata, General characters, Comparison of Petromyzon and Myxine 2.2 Pisces: General characters and classification of Fishes upto species level 2.3 Scoliodon: External features, Digestive system, Respiratory system, Structure and function of Heart, Structure and functions of the Brain. 2.4 Migration in Fishes 2.5 Types of Scales 2.6 Dipnoi.
June'23	<b>UNIT III:</b> 3.1 General characters of Amphibian 3.2 Classification of Amphibian upto species level with examples. 3.3 Rana hexadactyla: External features, Digestive system, Respiratory system, Structure and function of Heart, structure and functions of the Brain 3.4 Reptilia: General characters of Reptilia, Classification of Reptilia upto species level with examples 3.5 Calotes: External features, Digestive system, Respiratory system, Structure and function of Heart, structure and function of Brain 3.6 Identification of Poisonous and non-poisonous snakes and 3.7 Skull in reptiles.
July'23	<b>UNIT IV:</b> 4.1 Aves: General characters and classification of Aves upto species level 4.2 Columba livia: External features, Digestive system, Respiratory system, Structure and function of Heart, structure and function of Brain 4.3 Migration in Birds 4.4 Flight adaptation in birds.
August'23	<b>UNIT V:</b> 5.1 General characters of Mammalian 5.2 Classification of Mammalian upto species level with examples 5.3 Comparison of Prototherians, Metatherians and Eutherians 5.4 Dentition in mammals.

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**II B.Sc. ZOOLOGY ACADEMIC PLAN 2022-23**

**SEMESTER –III PAPER-III**

**(CELL BIOLOGY, GENEICS, MOLECULAR BIOLOGY AND EVOLUTION)**

<b>MONTH</b>	<b>TOPIC COVERED</b>
<b>November'22</b>	<b>UNIT I: Cell Biology:</b> 1.1 Definition, history, prokaryotic and eukaryotic cells, virus, viroids, mycoplasma 1.2 Electron microscopic structure of animal cell. 1.3 Plasma membrane –Models and transport functions of plasma membrane. 1.4 Structure and functions of Golgi complex, Endoplasmic Reticulum and Lysosomes 1.5 Structure and functions of Ribosomes, Mitochondria, Nucleus, Chromosomes
<b>December'22</b>	<b>UNIT II : Genetics-I:</b> 2.1 Mendel's work on transmission of traits 2.2 Gene Interaction – Incomplete Dominance, Codominance, Lethal Genes 2.3 Polygene's (General Characteristics & examples); Multiple Alleles (General Characteristics and Blood group inheritance 2.4 Sex determination (Chromosomal, Genic Balance, Hormonal, Environmental and Haplo- diploidy types of sex determination) 2.5 Sex linked inheritance (X-linked, Y-linked & XY-linked inheritance)
<b>January'23</b>	<b>UNIT III : Genetics - II:</b> 3.1 Mutations & Mutagenesis. 3.2 Chromosomal Disorders (Autosomal and Allosomal) 3.3 Human Genetics – Karyo typing, Pedigree Analysis(basics) 3.4 Basics on Genomics and Proteomics
<b>February'23</b>	<b>UNIT IV : Molecular Biology:</b> 4.1 Central Dogma of Molecular Biology 4.2 Basic concepts of 1. DNA replication – Overview (Semi-conservative mechanism, Semi- discontinuous mode, Origin & Propagation of replication fork) 2. Transcription in prokaryotes – Initiation, Elongation and Termination, Post-transcriptional modifications(basics) 3. Translation – Initiation, Elongation and Termination Gene Expression in prokaryotes (Lac Operon); 4.3 Gene Expression in eukaryotes
<b>March'23</b>	<b>UNIT V :</b> 5.1 Origin of life <b>5.2 Theories of Evolution:</b> Lamarckism, Darwinism, Germ Plasm Theory, Mutation Theory 5.3 Neo Darwinism: Modern Synthetic, Theory of Evolution, Hardy-Weinberg Equilibrium 5.4 Forces of Evolution: Isolating mechanisms, Genetic Drift, Natural Selection, Speciation

  
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II B.Sc. ZOOLOGY ACADEMIC PLAN 2022-23

IV SEMESTER Paper-IV

(ANIMAL PHYSIOLOGY, CELLULAR METABOLISM AND EMBRYOLOGY)

MONTH	TOPIC COVERED
April'23	<p><b>UNIT-I:</b></p> <p><b>Animal Physiology -I:</b></p> <p>Process of digestion and assimilation. Respiration - Pulmonary ventilation, transport of oxygen and CO<sub>2</sub>. (Note: Need not study cellular respiration here). Circulation - Structure and functioning of heart, Cardiac cycle. Excretion - Structure and functions of kidney urine formation, counter current Mechanism</p>
May'23	<p><b>UNIT- II</b></p> <p><b>Animal Physiology -II:</b> Nerve impulse transmission - Resting membrane potential, origin and propagation of action potentials along myelinated and non-myelinated nerve fibers. Muscle contraction - Ultra structure of muscle, molecular and chemical basis of muscle contraction. Endocrine glands - Structure, functions of hormones of pituitary, thyroid, parathyroid, adrenal glands and pancreas. Hormonal control of reproduction in a mammal</p>
June'23	<p><b>UNIT-III</b></p> <p><b>Cellular Metabolism – I(Biomolecules)</b> Carbohydrates - Classification of carbohydrates. Structure of glucose Proteins - Classification of proteins. General properties of amino acids Lipids - Classification of lipids. Enzymes: Classification and Mechanism of Action</p>
July'23	<p><b>UNIT-IV</b></p> <p><b>Cellular Metabolism –II:</b> Carbohydrate Metabolism - Glycolysis, Krebs cycle, Electron Transport Chain, Glycogen metabolism, Gluconeogenesis, Lipid Metabolism – Synthesis of fatty acids, <math>\beta</math>-oxidation of palmitic acid Protein metabolism - Transamination, Deamination and Urea Cycle</p>
August'23	<p><b>UNIT-V</b></p> <p><b>Embryology:</b> Gametogenesis Fertilization, Types of eggs Types of cleavages, Development of Frog upto formation of primary germ layers</p>

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**IV SEMESTER Paper-V (IMMUNOLOGY AND ANIMAL BIO-TECHNOLOGY)**

MONTH	TOPIC COVERED
April'23	<p><b>UNIT-I</b>  <b>Immunology – I</b> (Overview of Immune system): Introduction to basic concepts in Immunology, Innate and adaptive immunity, Vaccines and Immunization programme , Cells of immune system,Organs of immune system</p>
May'23	<p><b>UNIT-II</b>  <b>Immunology – II</b> (Antigens, Antibodies, MHC and Hypersensitivity)                      Antigens: Basic properties of antigens, B and T cell epitomes, happens and adjuvant; Factors influencing immunogenicity Antibodies: Structure of antibody, Classes and functions of antibodies Structure and functions of major his to compatibility complexes, Exogenous and Endogenous pathways of antigen presentation and processing Hypersensitivity – Classification and Types</p>
June'23	<p><b>UNIT-III</b>  <b>Techniques:</b> Animal Cell, Tissue and Organ culture media: Natural and Synthetic media, Cell cultures: Establishment of cell culture (primary culture, secondary culture, types of cell lines; Protocols for Primary Cell Culture); Established Cell lines (common examples such as MRC, HeLa, CHO, BHK, Vero); Organ culture; Cryopreservation of cultures Stem cells: Types of stem cells and applications, Hybridoma Technology: Production &amp; applications of Monoclonal antibodies (mAb)</p>
July'23	<p><b>UNIT-IV</b>  <b>Applications of Animal Biotechnology:</b> Genetic Engineering: Basic concept, Vectors, Restriction Endo nucleases and Recombinant DNA technology Gene delivery: Microinjection, electroportion, biolistic method (gene gun), liposome and viral-mediated gene delivery Transgenic Animals: Strategies of Gene transfer; Transgenic - sheep, fish; applications Manipulation of reproduction in animals: Artificial Insemination, Invitro fertilization, super ovulation, Embryo transfer, Embryo cloning</p>
August'23	<p><b>UNIT-V :</b>  <b>PCR: Basics of PCR. DNA Sequencing:</b> Sanger's method of DNA sequencing- traditional and automated sequencing (2hrs) Hybridization techniques: Southern, Northern and Western blotting DNA fingerprinting: Procedure and applications Applications in Industry and Agriculture: Fermentation: Different types of Fermentation and Downstream processing: Agriculture: Monoculture in fishes, polyploidy in fishes</p>

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### III B.Sc. ZOOLOGY ACADEMIC PLAN 2022-23

#### SEMESTER –V PAPER-6A (SUSTAINABLE AQUACULTURE MANAGEMENT)

MONTH	TOPIC COVERED
December'22	<b>UNIT I:</b> 1.1 Present status of Aquaculture – Global and National scenario 1.2 Major cultivable species for aquaculture: freshwater, brackish water and marine. 1.3 Traditional, extensive, modified extensive, semi-intensive and intensive cultures of fish and shrimp. 1.4 Design and construction of fish and shrimp farms
January'23	<b>UNIT II:</b> 2.1 Functional classification of ponds – head pond, hatchery, nursery ponds 2.2 Functional classification of ponds -rearing, production, stocking and quarantine ponds 2.3 Need of fertilizer and manure application in culture ponds 2.4 Physio-chemical conditions of soil and water optimum for culture (Temperature, depth, turbidity, light, water, PH, BOD, CO2 and nutrients)
February'23	<b>UNIT III:</b> 3.1 Induced breeding in fishes 3.2. Culture of Indian major carps: Pre-stocking management (Dewatering, drying, ploughing/desilting; redators, weeds and algal blooms and their control, Liming and fertilization) 3.3. Culture of Indian major carps - Stocking management 3.4. Culture of Indian major carps - post-stocking management
March'23	<b>UNIT IV:</b> 4.1 Commercial importance of shrimp & prawn 4.2 Macrobrachium rosenbergii- biology, seed production. 4.3 Culture of L. vannamei – hatchery technology and culture practices 4.4 Mixed culture of fish and prawns
April'23	<b>UNIT V:</b> 5.1 Viral diseases of Fin Fish & shell fish 5.2 Fungal diseases of Fin & Shell fish 5.3 Bacterial diseases of Finfish & Shell fish 5.4 Prophylaxis in aquaculture

  
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III B.Sc. ZOOLOGY ACADEMIC PLAN 2022-23

SEMESTER -V PAPER-7A (POSTHARVEST TECHNOLOGY OF FISH AND FISHERIES)

MONTH	TOPIC COVERED
December'22	<p><b>UNIT I:</b> Handling and Principles of fish Preservation</p> <p>1.1 Handling of fresh fish, storage and transport of fresh fish, post mortem changes (rigor mortis and spoilage), spoilage in marine fish and freshwater fish.</p> <p>1.2 Principles of preservation – cleaning, lowering of temperature, rising of temperature, denudation, use of salt, use of fish preservatives, exposure to low radiation of gamma rays.</p>
January'23	<p><b>UNIT II:</b> Methods of fish Preservation</p> <p>2.1 Traditional methods - sun drying, salt curing, pickling and smoking.</p> <p>2.2. Advanced methods – chilling or icing, refrigerated sea water, freezing, canning, irradiation and Accelerated Freeze drying (AFD).</p>
February'23	<p><b>UNIT III:</b> Processing and preservation of fish and fish by-products</p> <p>3.1 Fish products – fish minced meat, fish meal, fish oil, fish liquid (ensilage), fish protein concentrate, fish chowder, fish cake, fish sauce, fish salads, fish powder, pet food from trash fish, fish manure.</p> <p>3.2 Fish by-products – fish glue, Using glass, chitosan, pearl essence, shark fins, fish Leather and fish maws.</p>
March'23	<p><b>UNIT IV:</b> Sanitation and Quality control</p> <p>4.1 Sanitation in processing plants - Environmental hygiene and Personal hygiene in processing plants.</p> <p>4.2 Quality Control of fish and fishery products – pre-processing control, control during processing and control after processing.</p>
April'23	<p><b>UNIT V:</b> Quality Assurance, Management and Certification</p> <p>5.1. Seafood Quality Assurance and Systems: Good Manufacturing Practices (GMPs); Good Laboratory Practices (GLPs); Standard Operating Procedures (SOPs); Concept of Hazard Analysis and Critical Control Points (HACCP) in seafood safety.</p> <p>5.2 National and International standards – ISO 9000: 2000 Series of Quality Assurance System, Codex Alimentarius.</p>

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**III B.Sc. ZOOLOGY ACADEMIC PLAN 2022-23**  
**SEMESTER -V PAPER-6B**  
**(LIVE STOCK MANAGEMENT-I (BIOLOGY OF DAIRY ANIMALS))**

MONTH	TOPIC COVERED
December'22	<b>UNIT I:</b> Livestock census; Breeds of Dairy cattle, <i>Buffaloes and Goats</i> . Indigenous, Exotic and Crossbred Cattle breeds
January'23	<b>UNIT II:</b> Anatomy of Udder; Development of udder; Lacto genesis and Galactopoises; Letdown of milk.
February'23	<b>UNIT III:</b> Artificial insemination; Oestrous cycle; Symptoms of heat in cows and buffaloes. Conception, Pregnancy diagnosis in cattle. <u>Multi ovulation</u> and embryo transfer technique. Cloning.
March'23	<b>UNIT IV:</b> Economic traits of Dairy cattle. Methods of selection of dairy animals.
April'23	<b>UNIT V:</b> Systems of Dairy cattle breeding. Inbreeding, out breeding, Cross breeding, Grading up, Breeding systems (Cross breeding of cattle and Grading up of buffaloes).

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III B.Sc. ZOOLOGY ACADEMIC PLAN 2022-23

SEMESTER - V PAPER-7B

(LIVE STOCK MANAGEMENT -II (DAIRY PRODUCTION AND MANAGEMENT)

MONTH	TOPIC COVERED
December'22	<b>UNIT I:</b> Systems of Housing of Dairy cattle- Loose Housing and Conventional Dairy Barns. Drawing of layouts for dairy cattle dwellings; Criteria for selecting site for establishing Dairy farm buildings; Water requirement of dairy animals.
January'23	<b>UNIT II:</b> Management of different classes of Dairy animals- Milk producing animals, pregnant animals dry animals, heifers and calves. Management practices for Dairy farm; Identification, Dehorning, Castration, Deworming, Vaccination, Disinfection, and Milking.
February'23	<b>UNIT III:</b> a. Pasteurization of milk: Definition, objects of pasteurization, objections to pasteurization, Principles of heat exchange. Methods of pasteurization: LTLT, HTST and Uperization. b) Sterilization of milk. Homogenization: Factors influencing homogenization
March'23	<b>UNIT IV:</b> Market milk: Toned milk, double toned milk, Reconstituted milk, Standardized milk and full cream milk- Standards and methods of manufacture.
April'23	<b>UNIT V:</b> Cream: Types of cream, composition, methods of cream separation, gravity and centrifugal methods, types of cream separators, factors affecting fat losses in skim milk and fat percentage in cream.

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SEMESTER-I PAPER-I (BASIC PRINCIPLES OF AQUACULTURE)

MONTH	TOPIC COVERED
November'22	<b>UNIT- I:</b> <b>INTRODUCTION:</b> 1.1. Concept of Blue Revolution - History and definition of Aquaculture: Scope of Aquaculture at global Level, India and Andhra Pradesh. 1.2. Different Aquaculture systems – Pond, Cage, Pen, Running water, Extensive, Intensive and Semi-Intensive Systems and their significance. 1.3. Monoculture, Polyculture and Monosex culture systems.
December'22	<b>UNIT II: POND ECOSYSTEM</b> 2.1 General Concepts of Ecology, Carrying Capacity and Food Chains. 2.2 Lotic and lentic systems, streams and spring. 2.3 Nutrient Cycles in Culture Ponds – Phosphorus, Carbon and Nitrogen Importance of Plankton and Benthos in culture ponds, nutrient dynamics and algal blooms. 2.4 Concepts of Productivity, estimation and improvement of productivity.
January'23	<b>UNIT III: TYPES OF FISH PONDS</b> 3.1 Classification of ponds based on water resources – spring, rain water, flood water, well water and water course ponds. 3.2 Functional classification of ponds – head pond, hatchery, nursery ponds. 3.3 Functional classification of ponds -rearing, production, stocking and quarantine ponds. 3.4 Fish Hatchery design.
February'23	<b>UNIT IV: POND PREPARATION</b> 4.1 Important factors in the construction of an ideal fish pond – site selection, topography. 4.2 Important factors in the construction of an ideal fish pond- nature of the soil, water resources. 4.3 Lay out and arrangements of ponds in a fish farm. 4.4 Construction of an ideal fish pond – space allocation, structure and components of barrage pond.
March'23	<b>UNIT V: POND MANAGEMENT FACTORS</b> 5.1 Need of fertilizer and manure application in culture ponds. 5.2 Role of nutrients; NPK contents of different fertilizers and manures used in aquaculture; and precautions in their application. 5.3 Physico-chemical conditions of soil and water optimum for culture – temperature, depth, turbidity, light, water and shore currents, PH, DOD, CO <sub>2</sub> and nutrients; measures to increase oxygen and reduce ammonia & hydrogen sulphide in culture ponds; correction of PH. 5.4 Eradication of predators and weed control – advantages and disadvantages of weed, weed plants in culture ponds, aquatic weeds, weed fish, toxins used for weed control and control of predators.

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**I B.Sc. AQUACULTURE TECHNOLOGY ACADEMIC PLAN 2022-2023**  
**SEMESTER-II PAPER-II (BIOLOGY OF FIN FISH & SHELL FISH)**

MONTH	TOPIC COVERED
April'23	<b>UNIT I: General Characters &amp; Classification of Cultivable Fin &amp; Shell Fish:</b> 1.1 General Characters and classification of fishes, crustaceans and molluscs up to the level of Class. 1.2 Fish, Crustaceans and Molluscs of commercial importance. 1.3 Sense organs of fishes, crustaceans and molluscs. 1.4 Buoyancy in fishes- swim bladder and mechanism of gas secretion.
May'23	<b>UNIT II: Food, Feeding and Growth:</b> 2.1 Natural fish food, feeding habits, feeding intensity, stimuli for feeding, utilization of food gut content analysis, structural modifications in relation to feeding habits, forage ratio and food selectivity index. 2.2 Principles of Age and growth determination; growth regulation, Growth rate measurement – scale method, otolith method, skeletal parts as age indicators. 2.3 Genetic, biotic & ecological factors in determining the longevity of fishes, length frequency method, age composition, age-length keys, absolute and specific growth, back calculation of length and growth, annual survival rate, asymptomatic length, fitting of growth curve. 2.4 Length-weight relationship, condition factor/Ponderal index, relative condition factor.
June'23	<b>UNIT III: Reproductive Biology:</b> 3.1 Breeding in fishes, breeding places, breeding habits & places. 3.2 Breeding in natural environment and in artificial ponds, courtship and reproductive cycles. 3.3 Induced breeding in fishes. 3-4. Breeding in shrimp, pearl oyster, pila, and cephalopods.
July'23	<b>UNIT IV: Development:</b> 4.1 Parental care in fishes, ovo-viviparity, oviparity, viviparity, nest building and brooding. 4.2 Embryonic and larval development of fishes. 4.3 Embryonic and larval development of shrimp, crabs and molluscs of commercial importance. 4.4 Environmental factors affecting reproduction and development of cultivable aquatic fin & shell fish.
August'23	<b>UNIT V: Hormones &amp; Growth</b> 5.1 Endocrine system in fishes. 5.2 Neurosecretory cells, androgenic gland, ovary. 5.3 Y-organ, chromatophores, pericardial glands and cuticle. 5.4 Molting, molting stages, metamorphosis in crustacean shell fish.

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**II B.Sc. AQUACULTURE TECHNOLOGY ACADEMIC PLAN 2022-2023**  
**SEMESTER- III PAPER-III (FISH NUTRITION AND FEED TECHNOLOGY)**

MONTH	TOPIC COVERED
November'22	<p><b>UNIT I: Nutritional Requirements of Cultivable Fish:</b></p> <p>1.1 Requirements for energy, proteins, carbohydrates, lipids, fiber, micronutrients for different stages of cultivable fish and prawns.</p> <p>1.2 Essential aminoacids and fatty acids, protein to energy ratio, nutrient interactions and protein sparing effect.</p> <p>1.3 Dietary sources of energy, effect of ration on growth, determination of feeding rate, check tray.</p> <p>1.4 Factors affecting energy partitioning and feeding.</p>
December'22	<p><b>UNIT II: Forms Of Feeds &amp; Feeding Methods:</b></p> <p>2.1 Feed conversion efficiency, feed conversion ratio and protein efficiency ratio.</p> <p>2.2 Wet feeds, moist feeds, dry feeds, mashes, pelleted feeds, floating and sinking pellets, advantages of pelletization.</p> <p>2.3 Manual feeding, demand feeders, automatic feeders, surface spraying, bag feeding and tray feeding.</p> <p>2.4 Frequency of feeding.</p>
January'23	<p><b>UNIT III: Feed Manufacture &amp; Storage:</b></p> <p>3.1 Feed ingredients and their selection, nutrient composition and nutrient availability of feed ingredients.</p> <p>3.2 Feed formulation – extrusion processing and steam pelleting, grinding, mixing and drying, pelletization, and packing.</p> <p>3.3 Water stability of feeds, farm made aqua feeds, micro-coated feeds, micro-encapsulated feeds and micro-bound diets.</p> <p>3.4 .Microbial, insect and rodent damage of feed, chemical spoilage during storage period and proper storage methods.</p>
February'23	<p><b>UNIT IV: Feed Additives &amp; Non-Nutrient Ingredients:</b></p> <p>4.1 Binders, anti-oxidants, probiotics.</p> <p>4.2 Feed attractants and feed stimulants.</p> <p>4.3 Enzymes, hormones, growth promoters and pigments.</p> <p>4.4 Anti-metabolites, aflatoxins and fiber.</p>
March'23	<p><b>UNIT V: Nutritional Deficiency In Cultivable Fish:</b></p> <p>5.1 Protein deficiency, vitamin and mineral deficiency symptoms.</p> <p>5.2 Nutritional pathology and ant-nutrients.</p> <p>5.3 Importance of natural and supplementary feeds.</p> <p>5.4 Importance of balanced diet.</p>

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**SEMESTER- IV PAPER-IV (FRESH WATER & BRACKISHWATER AQUACULTURE)**

MONTH	TOPIC COVERED
April'23	<b>UNIT-I: Introduction to Freshwater Aquaculture</b> 1.1 Status, scope and prospects of fresh water aquaculture in the world, India and AP. 1.2 Different fresh water aquaculture systems.
May'23	<b>UNIT II: Carp Culture:</b> 2.1 Major cultivable Indian carps – Labeo, Catla and Cirrhinus & Minor carps. 2.2 Exotic fish species introduced to India – Tilapia, Pangassius and Clarius sp. 2.3 Composite fish culture system of Indian and exotic carps. 2.4 Impact of exotic fish, Compatibility of Indian and exotic carps and competition among them.
June'23	<b>UNIT III: Culture of Air-Breathing and Cold Water Fish</b> 3.1 Recent developments in the culture of Clarius, Anabas, Murrels. 3.2 Advantages and constraints in the culture of air-breathing and cold water fishes- seed resources, feeding, management and production. 3.3 Special systems of Aquaculture- brief study of culture in running water, re-circulatory systems, cages and pens, sewage-fed fish culture.
July'23	<b>UNIT IV: Culture of Prawn -</b> 4.1 Fresh water prawns of India - commercial value. 4.2 Macrobrachium rosenbergii and M. Malcomsonii – biology, seed production. 4.3 Pond preparation, stocking, management of nursery and grow-out ponds, feeding, and harvesting.
August'23	<b>UNIT V: Culture of Brackishwater Species</b> 5.1 Culture of P.mondon – Hatchery technology and Culture practices including feed and disease management. 5.2 Culture of L. vannamei – hatchery technology and culture practices including feed and disease management. 5.3 Mixed culture of fish and prawns.


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**SEMESTER- IV PAPER-V (FISH HEALTH MANGEMENT & FISHERIES ECONOMICS)**

MONTH	TOPIC COVERED
April'23	<b>UNIT-I: Diseases of Fin Fish</b> 1.1 Fungal diseases– Saprolegniosis, brachiomyxosis, ichthyophorus diseases – Lagenidium diseases – Fusarium disease, prevention and therapy 1.2 Viral diseases – Emerging viral diseases in fish, haemorrhagic septicemia, spring viremia of carps, infectious hematopoietic necrosis in trout, infectious pancreatic necrosis in salmonids, swim-bladder inflammation in cyprinids, channel cat fish viral disease, prevention and therapy 1.3 Baterial diseases – Emerging bacterial diseases, Aeromonas, Pseudomonas and vibrio infections, columnaris, furunculosis, epizootic ulcerative syndrome, infectious abdominal dropsy, bacterial gill disease, enteric red mouth, bacterial kidney disease, proliferative kidney disease, prevention and therapy
May'23	<b>UNIT II: Diseases of Shell Fish</b> 2.1 Major shrimp viral diseases – Baculovirus penaeii, Monodon Baculovirus, Baculoviral midgut necrosis, Infectious hypodermal and haematopoietic necrosis virus, Hepatopancreatic parvo like virus, Yellow head baculovirus, white spot baculovirus. 2.2 Bacterial diseases of shell fish – aeromonas, pseudomonas and vibrio infections, luminous bacterial disease, and filamentous bacterial disease. Prevention and therapy 2.3 Protozoan diseases- Ichthyophthiriasis, Costiasis, whirling diseases, trypanosomiasis. Prevention and therapy
June'23	<b>UNIT III: Fish Health Management</b> 3.1 Diagnostic tools – immune detection- DNA/RNA techniques, General preventive methods and prophylaxis. Application and development of vaccines. 3.2 Quarantine – Significance, methods and regulations for transplants. 3.3 Good Feed management for healthy organisms, Zero water exchange, Probiotics in health management, Issues of biosecurity.
July'23	<b>UNIT IV: Fisheries Economics-</b> 1.4.1 Methods of economic analysis of business organizations 4.2 Aquaculture economics- application of economics principles to aquaculture operations Various inputs and production function laws of variable proportions 4.3 Cost and earnings of aquaculture systems – carp culture, shrimp farming systems.
August'23	<b>UNIT V: Fisheries Economics- II</b> 5.1 Socio-economic conditions of fishermen in Andhra Pradesh 5.2 Role of Matsyafed and NABARD in uplifting fishermen's conditions, fishermen cooperatives Contribution of fisheries to the national economy 5.3 Economic analysis preparation of project and project appraisal

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**SEMESTER -V PAPER-6A (SOIL AND WATER QUALITY MANAGEMENT)**

MONTH	TOPIC COVERED
December'22	<b>UNIT I:</b> <b>Soil quality</b> 1. Soil types and their distribution. Physical and chemical properties of soil: Soil colour, texture, structure, pore space, bulk density, and water holding capacity; Conductivity, pH, redox potential, soil salinity, calcium carbonate, organic carbon, available nitrogen, available phosphorus, Carbon-Nitrogen ratio, organic matter and soil fertility. 2. Properties of water logged soils, methane and hydrogen sulphide formation. Problem soils: Saline soils, Alkali soils, Acid sulphate soils (ASS), and their reclamation. 3. Pond Seepage and its control. Soil quality criteria/requirements for aquaculture.
January'23	<b>UNIT II:</b> <b>Water quality</b> 1. Water quality parameters: Temperature, transparency, salinity, dissolved oxygen, carbon dioxide, pH, alkalinity, hardness, conductivity, ammonia, nitrites, nitrates, orthophosphates and hydrogen sulphide; phytoplankton, zooplankton and benthos. 2. Role of aquatic microorganisms in carbon, nitrogen, phosphorus and sulphur cycles. 3. Water quality criteria for freshwater and brackish water aquaculture.
February'23	<b>UNIT III:</b> <b>Soil and Water amendments</b> 1. Liming: Liming materials, effects of liming on pond ecosystem, liming rates for ponds, calculation of lime requirements and application of liming materials to ponds. 2. Manures and Fertilizers: Types of manures and fertilizers, primary nutrients, micronutrients, fertilizer grades, quantity and method of application; Bio fertilizers. 3. Pond fertilization: Role of organic and inorganic fertilizers in aquaculture; Problems in ponds with indiscriminate fertilization.
March'23	<b>UNIT IV:</b> <b>Pond water management</b> 1. Daily changes in dissolved oxygen concentration, oxygen depletion in ponds, Aeration, Water exchange, Bio-floc technology. 2. Water treatment, Water filtration devices, Waste water treatment practices, Waste discharge standards, Recirculatory aquaculture system (RAS). 3. Water quality management in freshwater carp culture; brackish water shrimp culture; and hatcheries.
April'23	<b>UNIT V:</b> <b>Pond treatments</b> 1. Pond conditioners and Chemical treatments: Potassium permanganate, Hydrogen peroxide, Calcium hydroxide, Rotenone, Formalin and Malachite green. Methods of applying chemicals. 2. Reduction of pH; Control of turbidity, salinity, hardness and chlorides; Chlorine removal; Removal of toxic gases. 3. Control of algal blooms and aquatic weeds. Bioremediation: Soil and water probiotics for aquaculture ponds.

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**III B.Sc. AQUACULTURE TECHNOLOGY ACADEMIC PLAN 2022-23**  
**SEMESTER -V PAPER-7A (ORNAMENTAL FISH CULTURE)**

MONTH	TOPIC COVERED
December'22	<b>UNIT I:</b> Status of Ornamental fish farming and trade 1. Global status of ornamental fish trade and export potential. 2. Present status and prospects of ornamental fish farming and trade in India. Indian ornamental fish diversity and its status. Major marine ornamental fish resources of India. Method of collection of live fish. 3. Types of aquaria – Home and Public aquaria (freshwater and marine). Oceanarium.
January'23	<b>UNIT II:</b> Ornamental fishes 1. Origin and Benefits of ornamental fish keeping as a hobby. 2. Freshwater ornamental fishes – their taxonomy and biology - varieties of Gold fish Koi, Barbs, Danios (cyprinids); Gourami, Betta (anabantids); Tetras (characins), Live bearers (Guppy, molly, sword tail, platy); Angel fish and other Cichlids, Catfishes, Loaches. 3. Marine ornamental fishes– varieties and their habitats. Other ornamental organisms– anemones, worms, lobsters, shrimps, octopus, starfish.
February'23	<b>UNIT III:</b> Aquarium Management 1. Fabrication, setting up and maintenance of freshwater and marine aquarium - Lighting and aeration - Aquarium plants and their propagation methods - Aquarium accessories and decoratives. Selection of fishes and Species compatibility for aquarium keeping. 2. Water quality management for freshwater and marine aquariums. Water filtration systems – biological, mechanical and chemical. Types of filters. 3. Aquarium fish feeds – Live feeds, Dry and wet feeds. Pigmented feeds for color enhancement, larval feeds and feeding. 4. Common diseases of aquarium fish - diagnosis and treatment. Control of snail and algal growth. Medicines and chemicals used in aquaria.
March'23	<b>UNIT IV:</b> Breeding and Rearing of ornamental fishes 1. Breeding of Live bearers and Egg layers – sex identification, conditioning of parent fish, stimulating spawning, parental care, hatching, and fry rearing. 2. Breeding of marine ornamental fishes (clown and damsel fishes) and larval rearing. 3. Application of genetics and biotechnology for quality strain production.
April'23	<b>UNIT V:</b> Commercial Production of Aquarium fish and Plants 1. Commercial production units of ornamental fish - requirements and design 2. Commercial production of live bearers, goldfishes, gouramies, barbs, angels and tetras. 3. Mass production of aquarium plants. 4. Fish conditioning, packing, transport and quarantine methods. Retail marketing and export of ornamental fish.

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**Annual Academic Plan 2022-2023**

**Department of HISTORY I B.A Semester-I**

Month	Paper-I	Ancient Indian History & Culture (From Indus Valley Civil. to 13 Century A.D)
Oct - 2022	Unit-I	Indus Valley Civilization - Salient Features; Vedic Age - Society, Polity, Economy, Culture during early and later Vedic period.
Nov - 2022	Unit-II	Ancient Indian History & Culture (6th Century BC to 2rd Century AD): Doctrines and Impact of Jainism and Buddhism; Mauryan Administration, Society, Economy & Culture - Ashoka's Dhamma; Kanishka's Contribution to Indian Culture
Dec- 2022	Unit-III	History & Culture of South India (2nd Century BC to 8th Century AD): Sangam Literature; Administration, Society, Economy and Culture under Satavahanas; Cultural contribution of Pallavas.
Jan- 2023	Unit-IV	India from 3rd century AD to 8th century AD: Administration, Society, Economy, Religion, Art, Literature and Science & Technology under Guptas - Samudra Gupta; Cultural contribution of Harsha: Arab Conquest of Sind and its Impact.
Feb - 2023	Unit- V	History and Culture of South India (9th century AD to 13th century AD): Local Self Government of Cholas; Administration, Society, Economy and Culture under Kakatiyas - Rudrama Devi

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**Department of HISTORY II B.A Semester-III**

Month	Paper-III	Modern Indian History & Culture (1764-1947 A. D)
Oct - 2022	Unit-I	Policies of Expansion - Warren Hastings, Cornwallis - Subsidiary Alliance & Doctrine of Lapse - Causes & Results of 1857 Revolt - Lytton, Rippon, Curzon
Nov- 2022	Unit-II	Social, Religious & Self-Respect Movements - Raja Rammohan Roy, Dayananda Saraswathi, Swami Vivekananda, JyotibaPhule, Narayana Guru, Periyar, Dr. B. R. Ambedkar
Dec- 2022	Unit-III	Causes for the growth of Nationalism - Freedom Struggle from 1885 to 1920, Moderate Phase - Militant Phase: Vandemataram Movement - Home Rule Movement
Jan- 2023	Unit-IV	Freedom Struggle from 1920 to 1947: Gandhiji's Role in the National Movement - Revolutionary Movement - Subhas Chandra Bose
Feb- 2023	Unit- V	Muslim League & the Growth of Communalism - Partition of India - Advent of Freedom - Integration of Princely States into Indian Union - Sardar Vallabhai Patel

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**Annual Academic Plan 2022-2023**

**Department of History II B.A Semester-II**

Month	Paper-III	Medieval Indian History & Culture (1206A.D To 1764 A.D)
April-2023	Unit-I	Impact of Turkish Invasions – Balban, AllauddhinKhilji, Md. Bin Tughlaq - Administration, Society, Economy, Religion and Cultural developments under Delhi Sultanate (from 1206 to 1526 AD).
May-2023	Unit-II	Impact of Islam on Indian Society and Culture – Bhakti Movement; Administration, Society, Economy, Religion and Cultural developments under Vijayanagara Rulers
June -2023	Unit-III	Emergence of Mughal Empire – Babur – Sur Interregnum - Expansion & Consolidation of Mughal Empire – Akbar, Jahangir, Shah Jahan, Aurangzeb.
July -2023	Unit-IV	Administration, Economy, Society and Cultural Developments under the Mughals – Disintegration of Mughal Empire - Rise of Marathas under Shivaji.
Aug- 2023	Unit- V	India under Colonial Hegemony: Beginning of European Settlements - Anglo-French Struggle – Conquest of Bengal by EIC.

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**Department of HISTORY II B.A Semester-IV**

Month	Paper-IV	History & Culture of Andhra (from 1512 to 1956 AD)
April 2023	Unit-I	Andhra through 16th & 19th Centuries AD: Evolution of Composite culture- the Quatbshahi of Golkonda- Administration, Society &Economy - Literature & architecture: Advent of European and settlements in Andhra - Occupation of Northern Cricars and Ceded Districts - Early revolts again the British.
May-2023	Unit-II	Andhra Under British rule: Administration - Land revenue settlements -Society - Education - Religion - Impact of Industrial revolution on economy- peasantry & famines - contribution of sir Thomas Munroe & C.P. Brown - impact of 1857 revolts in Andhra.
June -2023	Unit-III	Social Reforms & New literary Movements: Kandukuri Vereeshalingam, Ragupathi Venkatarathnam Naidu, Guruzada AppaRao, Kommarraju Venkata Laxman Rao; New literacy movements: Rayaprolu Subbarao, Viswanath Satyanarayana, Gurram Jashua, Boyi Bhimanna, Sri Sri.
July - 2023	Unit-IV	Freedom Movement in Andhra (1885-1947): Vandemataram Movement- Home Rule Movement in Andhra - Non- Cooperation Movement - AlluriSeetarama Raju & Rampa Revolt (1922-24) - Civil Disobedience Movement – Quit India Movement.
Aug-2023	Unit- V	Movement for separate Andhra State (1953) and AP (1956): Causes – Andhra Maha Sabha – Conflict between Coastal Andhra & Rayalaseema – Sri Bagh Pact – work of various Committees – Martyrdom of PottiSriramulu – Formation of separate Andhra State (1953); Movement for formation of Andhra Pradesh (1956): VisalandhraMahasabha – Role of Communists – States Reorganization Committee – Gentlemen’s Agreement – Formation of Andhra Pradesh

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**Annual Academic Plan 2022-2023**

**Department of HISTORY III B.A Semester-V Paper- VI B**

Month	Paper- VI B Semester – V (Skill Enhancement Course- Elective) Tourism and Hospitality Services	
Dec- 2022	Unit-I	Tourism–Definition–Nature and Scope–History of Tourism–Types of Tourism– Domestic and International Tourism– Causes of rapid growth of tourism– National Institute of Tourism and Hospitality Management
Jan- 2023	Unit-II	Relationship between history and tourism-Major tourist spots in AP– Gandikota, Nagarjuna Konda, Salihundam, Kona Seema
Feb - 2023	Unit-III	Characteristics of Hospitality Industry-Inflexibility, Intangibility, Perishability-Types of Hospitality jobs – Hotel Manager, Hotel Receptionist, Restaurant Manager, Catering Assistant, Executive Chef etc Concepts of Atithi Devo Bhavah-Types of hotels in India
Mar -2023	Unit-IV	Duties, responsibilities & skills of front office staff– duties, responsibilities and skills of housekeeping staff- guest stay process in a hotel-major processes and stages associated with it
April- 2023	Unit- V	Different types of services offered in selected Hotels/Motels/Restaurants Room Service, Catering Services -Different types of managerial issues - Service etiquettes

**Annual Academic Plan 2022-2023**

**Department of HISTORY III B.A Semester-V SEM Paper VII B**

Month	PAPER VII-B Tourism Guidance and Operating Skills	
Dec- 2022	Unit-I	Meaning of tour guide - types of tour guide: heritage guide, nature guide, adventure guide, business guide, special interest guide etc – duties and responsibilities of guides -various roles of tour guide
Jan- 2023	Unit-II	Guiding techniques: leadership skills, social skills, presentation skills, communication skills – Guide’s personality skills: passion, empathy, enthusiasm, punctuality, humour etc Personal Hygiene and grooming– code of conduct.
Feb - 2023	Unit-III	Guest Relationship Management- Handling emergency situations- Medical, Personal, Official, VISA/Passport, Death, Handling Guest with special needs/Different Abilities/Different age groups
Mar - 2023	Unit-IV	Conducting Tours: Pre-Tour Planning, Route Chart, Modes of Transportation, Security - Measures, and Check list etc.-Conducting various types of tours- Relationship with Fellow Guides Coordination with hospitality institutions.
April- 2023	Unit- V	Travel Agency and Tour operations – Difference between Travel Agent and Tour operator – Functions of Tour Operator – Types of Tour Operations and of Tour Operators - A brief study of tour operating agencies like APTDC, Southern Travels etc.

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Annual Academic Plan 2022-2023

Department of HISTORY II B.A Semester-IV Paper - V

Month	Paper-V	History Of Modern World (From 15th Cent. AD to 1945 AD)
April 2023	Unit-I	Transformation from Medieval to Modern Era – Chief Characteristics; Glorious Revolution (1688) Origin of Parliament Bill of Rights – Results
May-2023	Unit-II	American Revolution (1776); French Revolution (1789) – Causes, Course and Results.
June -2023	Unit-III	Unification of Italy; Unification of Germany
July - 2023	Unit-IV	Communist Revolution in Russia; World War I: Causes – Results of the War – Paris Peace Conference; League of Nations
Aug-2023	Unit- V	World War II: Causes, Fascism & Nazism – Results; The United Nations Organization: Structure, Functions and Challenges.

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## Annual Academic Plan 2022-2023

### Department of Economics

#### I B.A Semester-I

Month	Paper-I MICRO ECONOMIC ANALYSIS	
Oct - 2022	Unit-I	Definitions of Economics-Scarcity and Choice as fundamental problems of economics –Opportunity Cost - Micro and Macro Analysis - Micro economic analysis – Scope and Importance -Principles of Microeconomics <u><i>Production Possibilities Curve: Allocation of Resources - Optimization, Equilibrium and Marginal analysis -Rationality Principle the concept of Welfare</i></u>
Nov - 2022	Unit-II	Concept of Demand -Factors determining demand - Law of Demand - reasons and exceptions - Elasticity of Demand -Cardinal and Ordinal utility - Indifference Curve analysis: Properties of Indifference curves, Indifference Curve Map -Marginal Rate of Substitution - Budget Line - Changes -Consumer Equilibrium under Indifference Curve Analysis – Consumers’ Surplus and Indifference Curve Analysis.
Dec- 2022	Unit-III	Concept and Objectives of Firm - Production Function: Cobb- Douglas Production Function-Law of Variable Proportions -Laws of Returns to Scale - Economies of large scale - Concepts of Cost - Total, Average and Marginal Costs - Law of Supply - Concept of Revenue : Total, Average and Marginal Revenues - Relation between Average and Marginal Revenues and elasticity of Supply.
Jan- 2023	Unit-IV	Concepts of Market: Criteria for Classification of Markets - Perfect Competition– Conditions, Price and Output determination ; Monopoly : Conditions, Price and Output Determination - Price Discrimination; Monopolistic Competition - Assumptions - Price and output determination - Selling Costs ; Oligopoly -Types- Kinky demand curve and Price rigidity.
Feb - 2023	Unit- V	The concepts of Functional and Personal Distribution of Income - Marginal Productivity Theory of Distribution - Modern Theory of Distribution -Concept of Rent - Ricardian Theory of Rent – Marshall’s concepts of Economic Rent and Quasi Rent; Theories of Wage Determination: Subsistence Theory and Standard of Living Theory - Modern Theory of Wages; Classical Theory of Interest -Loanable Funds Theory of Interest -Liquidity Preference Theory of Interest; Theories of Profit: Risk and Uncertainty, Dynamic and Innovations Theories

## Annual Academic Plan 2022-2023

### Department of Economics

#### II B.A Semester-III

Month	Paper-III	DEVELOPMENT ECONOMICS
Oct -2022	Unit-I	Economic Development as a Branch of Study of Economics – Scope and Importance - Distinction between Economic Growth and Economic Development -Measures of Economic Development and their limitations - Relevance of Herd (Group) Immunity in the context of COVID 19 - three core values of economic development : Sustainability, Self-esteem and Freedom – Economy and Environment : Concepts of sustainable development and inclusive growth.
Nov-2022	Unit-II	Characteristics of Underdeveloped Countries - World Bank and IMF Classification of countries - Modern economic growth – Kuznets’ Six Characteristics - Obstacles to economic development - Vicious Circle of Poverty and cumulative causation - Factors of economic growth: Economic and Non-economic - Capital Formation – Foreign and Domestic capital, Debt and Disinvestment.
Dec-2022	Unit-III	Classical Theory: Adam Smith, Ricardo and Malthus -Marxian Theory - Schumpeter Theory -Rostow’s Stages of Economic Growth - Harrod-Domar two sector model -Solow’s Model and Robinson’s Golden Age
Jan-2023	Unit-IV	Strategies of Economic Development – Big Push - Balanced Growth - Unbalanced Growth - Mahalanobis Model - Agriculture vs Industry -Capital Intensive Technology vs Labour Intensive Technology -Role of Infrastructure in Economic Development,
Feb-2023	Unit- V	Role of State in Economic Development -Role of Markets - Market Failure and Regulation by State -Public sector vs Private sector -Economic Planning – concept, objectives and types -NITI Ayog - Economic Federalism - Financial Institutions and Economic Development -Role of International Institutions-IDBI, ADB, IMF - Foreign Trade - FIIs and FDIs.

## Annual Academic Plan 2022-2023

### Department of Economics

#### III B.A Semester-V Paper- V

Month	Paper- VIC: Insurance Services	
Dec- 2022	Unit-I	Risk Management: Risk and Uncertainty, Risk Classification – Concept, Importance and Types of Insurance– Principles of Insurance – Insurance Regulations in India - Role of IRDAand Insurance Ombudsman –Scope for Insurance Business in India.
Jan- 2023	Unit-II	Life Insurance: Nature and Features - Major Life Insurance Companies in India – Important Life Insurance Products/policies and their Features: Conventional, Unit Linked, Annuities,Group Policies – Medical Examiner.
Feb - 2023	Unit-III	General Insurance: Nature, Features and Types - Major General Insurance Companies in India - Important General Insurance Products/Policies and their Features - Surveyor – Health Insurance: Nature and Features - Health Insurance Companies in India - Major Health InsuranceProducts/policies and their Features: Individual, Family, Group.
Mar -2023	Unit-IV	Insurance Contract and Terms of Insurance Policy - Registration of Insurance Agency with the Company — Procedure to issue a Policy: Application and Acceptance – Policy Lapse and Revival – Premium Payment, Assignment, Nomination and Surrender of Policy – Policy Claim - Important Websites and Apps of Insurance in India
April- 2023	Unit- V	Insurance Customer and Categories – Understanding Customer Mindset and Satisfaction -Addressing the Grievances of the Customer – Ethical Behavior in Insurance – Moral Hazard–Discussion of two different Case Studies related to Life or General or Health Insurance Services.

## Annual Academic Plan 2022-2023

### Department of Economics

#### III B.A Semester-V SEM Paper VIIC

Month	PAPER VII-C Banking and Financial Services	
Dec- 2022	Unit-I	Meaning of Banking – Principles of Banking – Functions of Banking – Structure of Indian Banking System – Regulations of Banking in India – Role of RBI in Banking – Anti-moneyLaundering - Basics of Financial literacy - Problems and Challenges of Banking in India.
Jan- 2023	Unit-II	Bank Deposit Account Types – Account Opening and Closing – Banking Customer types –KYC Norms – Negotiable Instruments: Cheque, Bill of Exchange, Promissory Note, Endorsement - Principles of Lending – Different categories of Loans – Mortgaging –Priority Sector Lending – E-Banking facilities: Debit Card, Credit Card, Net Banking, Mobile Banking, Tele-banking, Micro ATMs, Digital Currency – Core Banking Solutions.
Feb - 2023	Unit-III	Banking Correspondent Model - Activities of Banking Correspondent: Deposit Mobilization. Identification of Borrowers, Collection and Recovery Loan, Other Banking Services – Common Services Centre (CSC) - Provision of Services by CSC – Requirement for Registering CSC and Telecentre - Case Study of Banking Correspondents with any Bank or CSC in Local Area.
Mar -2023	Unit-IV	Non-Banking Financial Institutions (NBFIs): Types and Major Players of NBFIs in India – Important Financial Services offered by NBFIs and their Features – Concept of EMI – Micro Finance: Concept and Operation - Chit Funds: Concept and Operations– Payment Banks - Regulations of NBFIs in India – Problems and Challenges of NBFIs in India.
April- 2023	Unit- V	Types of loans by Finance Service Company (FSC) – Customer of FSC: Types and Needs - Marketing of FSC’s Loans – Procedures and Requirements in FSC’s Loan Sanction - Collection and Recovery of FSC Loans - Case Study of a FSC’s services in Local Area.

## Annual Academic Plan 2022-2023

### Department of Economics

#### I B.A Semester-II

Month	Paper-II MACRO ECONOMIC ANALYSIS	
April-2023	Unit-I	Macroeconomics - Definition, Scope and Importance - Difference between Micro economic and Macro economic Analyses – Circular Flow of Income - National Income: Definitions, Concepts, Measurement of National Income - Difficulties - Importance - Concept of Green Accounting
May-2023	Unit-II	Classical Theory of Employment - Say's Law of Markets - Criticism - Keynesian Theory of Employment - Consumption Function - Keynes' Psychological Law of Consumption - Average and Marginal Propensity to Consume - Factors determining Consumption Function–Brief Review of Relative, Life Cycle and Permanent Income Hypotheses - Investment Function: Marginal Efficiency of Capital -Multiplier and Accelerator - Keynesian Theory of Employment - Applicability to Developing countries
June - 2023	Unit-III	Definitions of Money - Concepts of Money, Liquidity and Finance - Money Illusion - Gresham's Law - RBI classification of Money - Theories of Money: Fisher and Cambridge (Marshall, Pigou, Robertson and Keynes equations) - Banking - Definition and types of Banking - Commercial Banks - Functions - Recent Trends in Banking - Mergers and Acquisitions - Central Bank - Functions - Control of Credit by Central Bank - NBFCs- Factors contributing to their Growth and their Role
July - 2023	Unit-IV	Inflation: Concepts of Inflation, deflation, reflation and stagflation - Phillip's Curve - Measurement of Inflation - CPI and WPI -Types of Inflation - Causes and Consequences of Inflation -Measures to Control Inflation. Trade Cycles: Phases of a Trade Cycle -Causes and Measures to control Trade Cycles.
Aug- 2023	Unit-V	Financial Assets and Financial Instruments - Financial Markets - Functions of Money Market - Functions of Capital Market - Stock Market - Exchanges – Indices:Sensex and Nifty - Concept of Insurance -Types and Importance of Insurance.



## Annual Academic Plan 2022-2023

### Department of Economics

#### I B.A Semester-IV

Month	<b>Paper-IV ECONOMIC DEVELOPMENT-INDIA AND ANDHRA PRADESH</b>	
April - 2023	Unit-I	Basic characteristics of Indian Economy as a developing economy – Economic development since independence - Objectives and achievements of planning – Planning Commission/NITI Ayog and their approaches to economic development - India’s Rank in Global Human Development Index
May - 2023	Unit-II	Trends in National income - Demographic trends - Poverty and Inequalities – Occupational Structure and Unemployment - Various Schemes of employment generation and eradication of poverty – Issues in Rural Development and Urban Development –Intra-state and Inter- state Labour Migration and unorganized sector Problems of Migrant Labour
June - 2023	Unit-III	Indian Agriculture – Agricultural Strategy and Agricultural Policy – Agrarian Crisis and land reforms – Agricultural credit – Minimum Support Prices - Malnutrition and Food Security - Indian Industry - Recent Industrial Policy – Make-in India – Start-up and Stand-up programmes – SEZs and Industrial Corridors - Economic Reforms and their impact - Economic initiatives by government of India during COVID - Atmanirbhar Bharat package.
July - 2023	Unit-IV	Fiscal policy- Indian Tax System and Recent changes – GST and its impact on Commerce and Industry – Centre, States financial relations- Recommendations of Recent Finance Commission – Public Expenditure and Public Debt – Concepts of Budget.
Aug- 2023	Unit- V	The basic characteristics of Andhra Pradesh economy after bifurcation in 2014 – Impact of bifurcation on the endowment of natural resources and state revenue – new challenges to industry and commerce - the new initiatives to develop infrastructure – Power and Transport –Health and Education- Information Technology and e-governance – Urbanization and smart cities – Skill development and employment –Recent Social welfare programmes

## Annual Academic Plan 2022-2023

### Department of Economics

#### II B.A Semester-IV Paper - V

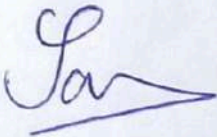
Month	Paper-V STATISTICALMETHODSFORECONOMICS	
April 2023	Unit-I	Introduction to Statistics – Definition, scope, importance and limitations of Statistics – Primary and Secondary data- Census and Sampling techniques and their merits and demerits.
May-2023	Unit-II	Collection of data - Schedule and questionnaire – Frequency distribution –Tabulation – diagram and graphic presentation of data – Histogram, Frequency Polygon, Cumulative Frequency Curves-Bar Diagrams and Pie Diagram.
June -2023	Unit-III	Measures of Central Tendency and Dispersion -Typesofaverages-ArithmeticMean,GeometricMean,HarmonicMean–Median–Mode–Dispersion - Range, Quartile Deviation, Mean Deviation, Standard Deviation- Coefficient of Variation.
July - 2023	Unit-IV	Correlation and Regression-Meaning, Definition and uses of Correlation-TypesofCorrelation-KarlPearson’sCorrelationcoefficient-Spearman’s Rank Correlation -Regression Equations-utility of regression analysis–Demand forecasting.
Aug-2023	Unit- V	Time Series and Index Numbers: Definition and components of Time Series – Measurement of Time Series – Moving Average and the Least Squares Method – Index Numbers - Concepts of Price and Quantity Relatives – Laspeyer’s, Paasche’s and Fisher’s Ideal Index Numbers–Uses and Limitations of Index Numbers.

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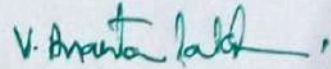
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I B.A Semester-VI

Month	Long term Semester Internship
April- July	Students will go for long term Semester Internship



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Department of TOURISM III B.A Semester-V Paper- VI C

Month	Paper- 6C Tourism Destination Marketing	
Dec- 2022	Unit-I	Destination development: Introduction, types of destinations Characteristics, destination selection process 5 As in Destination management Destination Mapping - Destinations Analysis. -Tourism Vs Attractions
Jan- 2023	Unit-II	Destination Planning & Development: Importance of Destination Planning, Destination Planning Process Destination Planning Guidelines – National, State, & Regional Tourism Planning Economic, Social, Cultural, and Environmental considerations in Tourism planning Destination Development
Feb - 2023	Unit-III	Destination Marketing– Introduction of Destination Marketing, Marketing environment Destination Marketing Mix: Product, Price, Place, and Promotion Product Strategies, Managing existing Tourism Products, New Product development in Tourism. Pricing Strategies–Tourists Perception on Pricing –Dixey's irritation index.
Mar -2023	Unit-IV	Destination Distribution and Image of Destination – Destination Distribution: Strategies, Channels Developing a Destination Promotional strategies Destination Image: Image Formation Process-Image strategies Tourism Destination Cycle – Destination competitiveness.
April- 2023	Unit-V	Destination Publicity: Advertising - Sales Promotion, sales promotion techniques Publicity: Role of AP Tourism & Ministry of Tourism, GOI, for the promotion of destinations Tourism Marketing Communication: Importance, techniques, Barriers, the process of communication – Trends in the Communication.

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**Department of TOURISM III B.A Semester-V SEM Paper VII-C**

Month	PAPER VII-C Itinerary Preparation and Tour Packaging	
Dec- 2022	Unit-I	Itinerary Planning & Development: Meaning, Importance, Concept of Itinerary Planning Resources and Steps for Itinerary Planning -Types of Itinerary Do's and Don'ts of Itinerary Preparation components of Itinerary, Relevance & scope.
Jan- 2023	Unit-II	Developing & Innovating Package Tour: Formulation and Designing Process of Tour: Free Independent Tours (FITs) Group-Special Interest Tours (SITs), Tour Packaging: Importance of Tour Packaging – Classifications of Tour Packages, Components of Package tour- Pre designed & Tailor-made packages
Feb - 2023	Unit-III	The concept of Costing: Types of Costs, Components of Tour Cost - Preparation of Cost Sheet Tour Pricing - estimation of Tour Price – Pricing Strategies Negotiations & contract with the suppliers Tour Packages of Thomas Cook, SOTC, Cox & Kings and TCI.
Mar -2023	Unit-IV	Operation of Package Tour: Confirmation of Tour, Issue of Tour Vouchers Reconfirmation with Airlines, Hotel & Ground Service Providers Distributing Customized Itinerary to Tour Leader, Tour Escort, Tour Guide, Transportation, Standard Procedures for Pickup and Drop Crisis Management in tour, Preparation of Feedback or Guest Comment Sheet.
April- 2023	Unit-V	Travel Documentation: Familiarization with TIM (Travel Information Manual) Passport & VISA-Meaning, Types, Procedures, Validity Necessary Information to fill the Passport and VISA Form for Issuance Health Certificates, Currency, Travel Insurance Types of payment methods: credit card, debit card, UPI, e-wallet, net- banking, mobile banking etc

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Annual Academic Plan 2022-2023

Department of Political Science I B.A Semester-I

Month	Paper-I Introduction to political science	
Oct -2022	Unit-I	Definition, Nature, Scope and Importance of political science – Relation with allied disciplines. Approaches to the study of political science: Traditional Approaches – philosophical, Historic modern Approaches Behavioral and system approach.
Nov -2022	Unit-II	Definition of the state, Elements of the state, Theories of Origin of the state. Concept of modern state and welfare state.
Dec-2022	Unit-III	Law, Liberty, Equality-Power, Authority and Legitimacy
Jan-2023	Unit-IV	Meaning, Nature and Classification of Rights-Theories of Rights.
Feb -2023	Unit- V	Political Ideologies 1.Liberalism, Individualism, Anarchism.2.Socialism, Marxism and Multiculturalism.

Annual Academic Plan 2022-2023

Department of Political Science II B.A Semester-III

Month	Paper-III INDIAN GOVERNMENT AND POLITICS	
Oct -2022	Unit-I	Social and Ideological base of the Indian Constitution - Constitutional Development in India during British rule, Constituent Assembly.
Nov-2022	Unit-II	Individual and State.-Fundamental rights, Directive Principles of State policy and fundamental duties. The Doctrine of Basic Structure of the Constitution.
Dec-2022	Unit-III	Union Executive - President of India – Mode of Election, Powers and Functions. Parliament composition, Powers and functions, Legislative committees, Prime Minister and council of Ministers- Powers and functions, role in coalition politics.
Jan-2023	Unit-IV	State Executive – Governor – Mode of Appointment, Powers and functions. Legislature – Composition, Powers and functions, Chief Minister and Council of Ministers powers and functions.
Feb-2023	Unit- V	The Indian Judiciary. – Supreme Court-Composition and Appointments, Powers and functions or Jurisdiction of the supreme court, Judicial Review, Judicial Activism. High Court – Composition, Powers and functions

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Department of Political Science III B.A Semester-V Paper- VI

Month	Paper- VI B: E - GOVERNANCE	
Dec-2022	Unit-I	Brief Introduction to Governance – E – Governance Meaning , Definition , Nature, Scope , Objectives and Significance – Domains of E- Governance – Good Governance – Global trends in the growth of E- Governance.
Jan-2023	Unit-II	E- Governance in India – National E – Governance plan – National Information Centre- Strategies for E- Governance Implementation: Computing, Cloud Governance, Data system ,Human resources. Major E- Governance projects – Gyandoot, E- choupal, E- Bhoomi, E- Seva, CARD, E- Pnchayat.
Feb -2023	Unit-III	Role of ICT in Administration. E- Governance – Online filling of complaints, application registration, issuance of certificates,issuance of land records, online payments of fees dues etc.
Mar -2023	Unit-IV	E- Governance under Information technology Act – legal status for digital transactions – public private partnership and expansion of E – Governance.
April-2023	Unit- V	E- Governance- Transparency and Accountability at gross root level Issues and challenges. Digital divide, capacity building, cyber security in cyber crimes.

Annual Academic Plan 2022-2023

Department of Political Science III B.A Semester-V SEM Paper- VII B

Month	PAPER VII-B LOCAL ADMINISTRATION	
Dec-2022	Unit-I	Local Government – meaning, importance, Nature. Thoughts of M.K Gandhi, Jawaharlal Nehru and Dr. B.R.Ambedkhar. Important committees- Blwant Raj Mehta, Ashok Mehta and L.M Singhvi
Jan-2023	Unit-II	Decentralization of powers from the state to local institutions 73 <sup>rd</sup> and 74 <sup>th</sup> Constitutional Amendment.
Feb -2023	Unit-III	Revenue raising avenues for local governments – Grants Role of local governments in implementation of welfare and developmental programmes.
Mar -2023	Unit-IV	Challenges for local Administration, financial, administrative and political constraints – public relations in administration.
April-2023	Unit- V	Preparation of Reports – Minutes and Documentation – Types of Reports.

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## Annual Academic Plan 2022-2023

## Department of Political Science I B.A Semester-II

Month	Paper-II BASIC ORGANS OF THE GOVERNMENT	
April-2023	Unit-I	<b>CONSTITUTION</b> Meaning, Definition, Origin and Evolution of Constitution-Classification of the Constitutions-Written and Unwritten; Rigid and Flexible.
May-2023	Unit-II	<b>ORGANS OF THE GOVERNMENT</b> 1. Theory of Separation of Powers-B.D.Montesquieu. 2. Legislature-Unicameral and Bicameral-Power and Functions, Executive- Types, Powers and Functions. Judiciary-Powers and Functions.
June - 2023	Unit-III	<b>FORMS OF GOVERNMENTS</b> 1. Unitary and Federal forms of Governments-Merits and Demerits. 2. Parliamentary and Presidential forms of Governments- Merits and Demerits.
July - 2023	Unit-IV	<b>DEMOCRACY</b> 1. Meaning, Definition, Significance, Theories and Principles of Democracy. 2.Types of Democracy: Direct and Indirect Democracy-Methods, Merits and Demerits- Essential Conditions for Success of Democracy
Aug- 2023	Unit-V	<b>POLITICAL PARTIES, PRESSURE GROUPS AND PUBLIC</b> 1. Meaning, Definition and Classification of Political Parties: National and Regional- Functions of Political Parties. 2. Pressure Groups (Interest Groups)- Meaning, Definition, Types, Functions and Significance of Public Opinion.

## Annual Academic Plan 2022-2023

## Department of Political Science II B.A Semester-IV

Month	Paper-IV INDIAN POLITICAL PROCESS	
April 2023	Unit-I	<b>FEDERAL PROCESSES:</b> 1. Features of Indian Federal System- Centre-State Relations-Legislative, Administrative and Financial. 2. Emerging Trends in Centre-State Relations-Restructuring Centre- State Relations- Recommendations of Sarkaria Commission, M.M.Punchi Commission.
May- 2023	Unit-II	<b>ELECTORAL PROCESSES:</b> 1. The Election Commission of India, Powers and Functions. 2. Issues of Electoral Reforms, Voting Behavior-Determinants and Problems of Defections.
June - 2023	Unit-III	<b>GROSSROOT DEMOCRACY-DECENTRALISATION:</b> 1. Panchayat Raj system-Local and Urban Governments-Structure, Powers and Functions. 2. Democratic Decentralization-Rural Development and Poverty alleviation with reference to 73 <sup>rd</sup> and 74 <sup>th</sup> Constitutional Amendment Acts, Challenges and Prospects.
July - 2023	Unit-IV	<b>SOCIAL DYNAMICS AND EMERGING CHALLENGES TO INDIAN POLITICAL SYSTEM:</b> 1. Role of Caste, Religion, Language and Regionalism in India. 2. Politics of Reservation, Criminalization of Politics and Internal threats to Security.
Aug- 2023	Unit- V	<b>REGULATORY AND GOVERNANCE INSTITUTIONS:</b> 1. NITI Ayog, Finance Commission, Comptroller and Auditor General of India. 2. Central Vigilance Commission, Central Information Commission, Lokpal and Lokayukta

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**Annual Academic Plan 2022-2023**

**Department of Political Science II B.A Semester-IV Paper - V**

Month	Paper-V WESTERN POLITICAL THOUGHT	
April 2023	Unit-I	<b>ANCIENT GREEK POLITICAL THOUGHT:</b> 1. Plato-Rule of Philosopher Kings-Theory of Justice-Ideal State and Education 2. Aristotle-Theory of State-Classification of Governments-Citizenship, Slavery and Theory of Revolutions.
May-2023	Unit-II	<b>MEDIEVAL AND MODERN POLITICAL THOUGHT:</b> 1. St. Augustine-Theory of Two Cities. 2. Niccolo Machiavelli-State and Statecraft
June -2023	Unit-III	<b>CONTRACTUAL POLITICAL THOUGHT:</b> 1. Thomas Hobbes- Social Contract and Absolute Sovereignty. 2. John Locke- Human Nature, State of Nature, Social Contract, Natural Rights and Limited Government. 3. Jean Jacques Rousseau- Human Nature, State of Nature, Social Contract, General Will and Popular Sovereignty.
July - 2023	Unit-IV	<b>UTILITARIAN POLITICAL THOUGHT:</b> 1. Jermy Bentham-Theory of Utility, Law and Reforms. 2. J.S.Mill-Theory of Liberty and Representative Government.
Aug-2023	Unit- V	<b>MARXIST POLITICAL THOUGHT:</b> 1. Karl Marx-Dialectical Materialism, Theory of Surplus Value and Class Struggle. 2. Antonio Gramsci-Hegemony and Civil Society.

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*Dept. of Political Science.*

*V. Ananta Rao*

**A.S.D.GOV.T.DEGREE COLLEGE (W)**  
**AUTONOMOUS**  
**KAKINADA**



**A.S.D. Government Degree College for Women**

**An Autonomous Institution**

**Jagannaickpur, Kakinada, Andhra Pradesh-533002**  
**Affiliated to Adikavi Nannaya University, Rajamahendravaram**



## **INTERNAL QUALITY ASSURANCE CELL**

### **2.3.3 Preparation and adherence of Academic Calender and Teaching Plans by the Institution**



**2022-23**

### **Minutes of Meeting Proceeding of the Principal Academic Calender Teaching Plans**