DUVVURU RAMANAMMA WOMEN'S COLLEGE, GUDUR

(AUTONOMOUS)

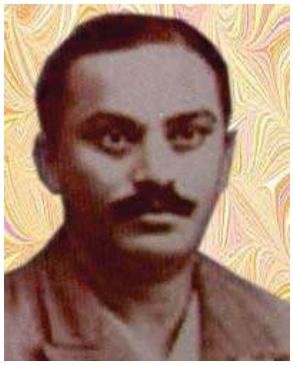
Re-accredited by NAAC with 'A' Grade
Recognized by UGC as
'College with Potential for Excellence'

College Ranking : 8th Rank by CCE

HANDBOOK

2019-2020

Founders



Late Duvvuru Narayana Reddy

Late Duvvuru Ramanamma

Founder President

Late A.Syamasunder Reddy

The four pillars of our College

Sri. A. Ravi Kumar Reddy
President

Smt. Dr.K.Mehermani
Vice - President

Dr.C.R.Reddy
Secretary & Correspondent

Sri. P.Janakirami Reddy
Treasurer

HANDBOOK COMMITTEE

CHAIRPERSON : Dr. V. BHARATHA LAKSHMI
M.Com., Ph.D.
Principal (FAC)

CONVENER :
Dr. P. KAMALA SAYI
M.A.,M.Phil.,Ph.D.

Dr. B. YASHODA
MEMBER

Dr. M. BHAVANI
MEMBER

AEP. HANUMANTHA RAO
MEMBER

INTRODUCTION ABOUT COLLEGE

Gudur is a small town in S.P.S.R. Nellore Dt. A.P. consisting of one lakh population. The bulk of population belongs to Agriculture and Mica labourer community. The majority of the people in the town are below average and a few people are financially sound. DUVVURU RAMANAMMA WOMEN'S COLLEGE (DRW) is a Service Organization sponsored by the Rotary Club of Gudur.

DRW College the pioneer institution for Women's education was established in 1981 to educate women to empower not just with education but with moral values and social skills. It was started with the noble cause to serve the women community especially from rural and backward sector. The Institution was registered under A.P. Societies Act. and is managed by the D.R. Society for Woman and Child welfare. The college was admitted into grant-in-aid during 1990 by the A.P. Govt. and admitted to UGC section 2 (f) and 12 (b) in the year 1993.

The College is initiated to start new courses in U.G. and P.G. year after year. At present the college offers 13 U.G. and 7 P.G. Courses and 7 Diploma courses and 14 Certificate Courses and the present strength of the College is 1300. The college is able to achieve 80 – cent pass percentage in every year.

The College was accredited by NAAC with B++ grade during 2004 with 82.05 score and Re-Accredited by NAAC with “A” grade with 3.14 CGPA in 2010 in second cycle and 'A' Grade with 3.31 CGPA in Third cycle during 2015. The UGC bestowed CPE Status twice to the College, I Phase in 2010 for two years and & II phase in 2013 for 5 years. The college was also selected by the State Govt. as “College of Excellence” (CoE).

The college was granted autonomous status by the UGC during the year 2010 for a period of Six years, i.e.2010 to 2016. The UGC has given further extension of Autonomous status to the college from 2016 to 2024. The MHRD Department under RUSA scheme selected the College and sanctioned 2 crores for Infrastructure development. The UGC also approved this College as Mentor Institution under the scheme of "PARAMARSH" for Mentoring NAAC Accreditation Aspirant Institutions to promote quality assurance in Higher Education. It is one among the 167 Colleges selected by the UGC at National level.

The Andhra Pradesh State Government has taken up a new venture of upgrading Degree Colleges in the State to World Class Institutions. The ILEG and the planning department has been identified as Nodal agencies for the Project. The A.P. Govt. has decided to select one prominent College in each District for upgrading Infrastructure, human resources, curriculum and industry connect. This College has been selected by the A.P. Govt. in Nellore Dt. for this project.

The college aims at the integral and personalized higher education of women. It strives to produce intellectually well-trained, morally upright, socially committed and spiritually inspired women to the society. The primary goal of the institution is to mould young women to become leaders in the various aspects of society to begin with the family. The college has reached its high level of excellence due to the dedicated team work of the Teaching and Non-Teaching Staff, commitment of the Management and the discipline of the students.

The process of Re-accreditation provided us an opportunity to review and analyze the institutional progress after the second and third accreditation during 2010 and 2015 and to assess to what extent we have been able to reach the bench marks set by the peer team and further strengthen

ourselves in our search for quality enhancing measures during the post accredited period. After the second and third accreditation the college tried its best to comply with almost all the recommendations of the peer team in a systematic and planned manner. However some of the recommendations are yet to be in effect due to certain hurdles. The college is nurturing every potentiality in the academic field adopting initiations and new techniques. The college is making sincere efforts to enhance academic and administrative practices by adopting innovative ideas and implementing new teaching learning techniques. The college has made substantial progress in infrastructure facilities with the CPE, Autonomous and other grants. The labs are updated, latest ICT resources for teaching and learning are procured.

The college has crossed many milestones after Re-accreditation and after conferring Autonomous Status and the CPE status by the UGC. Quality sustenance and enhancement initiatives have become a part of institutional culture at every stage. The College is striving for excellence since its inception and it will be a continuous process in future.

VISION

The Vision of the College is:

- To enhance the practical knowledge of the students through qualitative value added carrier oriented education to cope up well in emerging competitive world in all fields.
- To educate women about their rights and equal opportunities in all aspects of life and to raise their level of aspirations and achievements.
- To educate women about their role for the contribution of economic and social development.
- To improve vocational or employment related knowledge and skills.
- To achieve the empowerment of women in financial status on par with their brothers in their families.

MISSION

- To encourage first generation learners and those from marginalized groups and ensure gender equality.
- To offer innovative quality education in emerging fields with flexibility in curriculum and teaching learning process.
- To build up a learner-friendly eco-friendly academic environment.
- To nurture a student centered teaching-learning culture by judicious use of ICT.
- To faster holistic development of character by installing in them spirit of social service and social justice through group activities.
- To promote personality development to inculcate habits of self reliance.

GOALS, OBJECTIVES

- To educate girl students especially from poor families with rural background
- To uplift the women community by helping them socially and financially.
- To provide access to higher education to the girl students, who do not have the benefit of their urban counterparts.
- To increase literate women percentage in the community

CORE VALUES:

1. Integrity and Honesty
2. Academic Excellence
3. Research knowledge enrichment
4. Innovative and Creative thinking
5. Social responsibility
6. Participatory Leadership
7. Ecological sustainability

- Integrity and Honesty:
  The College upholds ethical values and professional commitment to academic freedom, Honesty, personal accountability and transparency.

- Academic Excellence:
  The College strives for academic excellence in Teaching and Learning.

- Research knowledge enrichment:
  The College encourages Faculty and students to acquire Research experience in their concerned fields.

- Innovative and Creative thinking:
  The College creates opportunity for Innovative and Creative thinking through extracurricular activities and Creative corner.

- Social responsibility:
  The College is committed to promote Social responsibility among students by encouraging them to take society outreach programmes.

- Participatory Leadership:
  Participatory Leadership is one of the best practices of the College to encourage Leadership skills among the Staff & Students.

- Ecological sustainability:
  Ecological sustainability is maintained through Eco club activities.

PROGRAMMES OFFERED

UNDER GRADUATION: -

Course	Medium	Aided/ Self Financed
B.A(History, Economics, Politics)	Telugu	Aided
B.Com(General)	Telugu	Aided
B.Com(ComputerApplications)	English	Self Financed
B.Sc(Botany, zoology, Chemistry)	Telugu	Aided
B.Sc(Chemistry, Physics, Zoology)	Telugu	Aided
B.Sc(Mathematics, Physics, Chemistry)	Telugu	Self Financed
B.Sc(Mathematics, Statistics, Com.Science)	English	Self Financed
B.Sc(Bio-Technology, Chemistry, Botany)	English	Self Financed
B.Sc(Mathematics, Physics, Electronics)	English	Self Financed
B.Sc - Computer Honors	English	Self Financed
B.Sc(Food Technology, Chemistry, Botany)	English	Self Financed
B.Sc - Maths Honours	English	Self Financed
B.A (Telugu Honors)	Telugu	Self Financed

Second Language: Telugu / Hindi

ELIGIBILITY:

- ✦ Applicants should have passed the Intermediate Examination or its equivalent.
- ✦ Admission to B.Sc., Mathematics will be restricted only to candidates who have taken Mathematics as one of the optional
- ✦ subjects in Intermediate or at +2 level.

APPLICANT SHOULD PRODUCE:

- ✦ Pass Certificate issued by the Board of Intermediate or its equivalent.
- ✦ Transfer, Conduct and study Certificates from the college last studied.
- ✦ Memorandum of marks of Intermediate Marks and S.S.C.
- ✦ Migration certificate in the case of other state Boards/university students.
- ✦ 6th to Intermediate Study Certificate
- ✦ Cast Certificate (for SC, ST & OBC).
- ✦ Income Certificate
- ✦ Student Aadhar Card
- ✦ Student Bank Pass book
- ✦ Pass Port Size Photo of the Candidate.
- ✦ Mobile Number
- ✦ Student e-mail ID

POST GRADUATION PROGRAMMES

- M.Sc.- Mathematics
- M.Sc.- Chemistry
- M.Sc.- Physics
- M.A Corporate Telugu (UGC Innovative Programe)
- M.Sc.- Human Nutrition and Nutraceautical Chemistry (H.N.N.C.)
- UGC Innovative Programe
- M.C.A.
- M.B.A

ELIGIBILITY:

All the Qualified Candidates of V.S.U. CET are eligible for PG Admission and ICET Qualified Candidates are eligible for MCA & MBA Admission.

ADMISSION PROCEDURE:

Application forms can be had from the Principal, D.R.W. College, Gudur, Nellore Dist. On remittance of Rs.10/-. Candidates who want to apply for more than one group should apply in separate application forms. Filled in application forms with attested copies of Marks, T.C., C.C. and S.C., should be submitted .Incomplete applications will be rejected.

Self financed courses and all P.G. courses Students have to pay one year course fee, if they discontinue under any circumstances in the middle of the course. An undertaking to that effect should be given at the time of admission.

FEE Structure for UG Courses:

Course	Fee Rs.
B.A(History, Economics, Politics)	2460
B.Com(General)	2220
B.Com(ComputerApplications)	15000
B.Sc(Botany, zoology, Chemistry)	2460
B.Sc(Chemistry, Physics, Zoology)	2460
B.Sc (Mathematics, Physics, chemistry)	12000
B.Sc (Mathematics, Statistics, Com.Science)	12000
B.Sc (Bio-Technology, Chemistry, Botany)	12000
B.Sc (Mathematics, Physics, Electronics)	12000
B.Sc - Computer Honors	12000
B.Sc (Food Technology, Chemistry, Botany)	12000
B.Sc - Maths Honours	12000
B.A (Telugu Honors)	12000

FEE Structure for PG Courses:

M.Sc., HNNC	-	Rs. 11500
M.A Corporate Telugu	-	Rs. 17200
M.Sc Organic Chemistry	-	Rs. 26735
M.Sc Mathematics	-	Rs. 21735
M.Sc Physics	-	Rs. 21735
MCA	-	Rs. 27000
MBA	-	Rs. 27000

Financial Support available to the Students

The college provides freeships to the deserving UG and PG students. The managing committee members are very philanthropic and they provide freeship to the students that are not eligible for Govt. scholarships and fee concessions. The Welfare Committee of the college will also provide freeships to the students. The Alumni and the parents also support the students by giving freeships to the deserving students. Freeships are provided to the students through the college staff co-operative credit society. All the diploma and certificate courses are run by the college free of cost.

All the eligible candidates belonging to SC, ST, OBC and EBS categories will have financial assistance from the state Govt. and this will be 90%. Meritorious students will also get National Merit Scholarship and in the Hindi Scholarship by Central Govt. Prathibha scholarship by the State Govt. Physically handicapped students and teacher's children will also get financial assistance from the State Govt.

Rules and Regulations of the College

General Rules of Discipline

1. At the time of admission the student and her parents/ guardian has to sign undertaking stating that they will obey the rules and regulations of the college.
2. The student must register with the college office her address at which she lives. Any change in the home address must be intimated to the office in writing at once.
3. Students should obtain leave of absence before they proceeding to home. Continuous absence without an application for leave is serious breach of college discipline.
4. Scribbling, pasting placards or poster or otherwise disfiguring college walls or black boards are strictly prohibited.
5. Students are warned against tampering the light and fan switches and water taps and fittings.
6. All the students should follow the following dress code:
   - ✦ For UG : Pink salwar , kameez, white dupatta.
   - ✦ For PG : Gray salwar , kameez, white dupatta.
7. Ragging is strictly prohibited in the college.
8. Student should not make any noise while moving from one class room to another class room (with a view to avoid disturbance to the classes, students are advised not to use the corridors except when moving at the beginning of the period from one class room to another)

9. Students are advised not to use the cell phones in the class rooms and day working hours.
10. If any student is absent for one hour in one session it will be treated as absent for half day.
11. Students are not allowed to see any visitors during working hours.
12. Students are advised to check the notice board every day for information and instructions.
13. Any act of indiscipline of misconduct will be viewed seriously and the disciplinary committee may take action against the erring students.
14. Students are expected to be punctual to the theory and practical classes and leave the college premises after the college hours.
15. Students and parents are free to write their suggestions and drop them in the suggestion box or grievance box.

Hostel Admission Procedure :

- ✦ Application forms can be had from the college office after getting the admission into the college.
- ✦ Filled in applications has to be submitted in the office along with the student, parents and local audience photographs.
- ✦ Admission into hostel is based on the distance of the resident place of the student.
- ✦ Establishment charges is charged every year.

Hostel rules and Regulations :

- ✦ Visiting cards will be issued only for parents/guardians. Brothers below 30 years age are not eligible for having visitor's cards.
- ✦ Visiting Hours: Card holders are allowed only on Sundays and other public holidays between 8-00 am and 6-00 p.m.
- ✦ Students will be sent home along with the card holders only and they should accompany them while returning also.
- ✦ The students have to report immediately, the very next day after holidays.
- ✦ Action will be taking against the students those who absent more than a week without prior permission in writing.
- ✦ Students should not bring any valuables to the hostel and every student has to open bank account in the bank in the campus.
- ✦ Each student should submit two pass port size photographs.

- Mess bill has to be paid on or before 10th of every month.
- Mobile phones are not allowed in the hostel for under graduate students.
- No students should remain in the hostel room during college hours without taking the written permission from the Deputy Warden/Matrin.
- The rules and regulations has to be followed by the each and every student. Otherwise disciplinary action will be taken.
- Ragging is strictly prohibited, in the hostel if found such case serious action will be taken against them.
- Students who are sick should stay in the sick room with the permission of the Deputy Warden/Matrin.

Facilities Available:

Health Center:-

A lady doctor monitors the health aspects of the girl students by visiting the institution for one hour every day. The local doctor extends their services on concession rates to the girl students whenever they need. Medical checkup is being done to all the students every year by the College. Full time Nurse is appointed to take care of Residential students during Night times.

Canteen:-

The Campus provides canteen facility that caters to the students requirements till late hours. It provides tea/coffee ,breakfast , lunch and snacks at economical prices. Special care is taken to provide quality and hygienic food to students. Students can also get things prepared of their own choice on payment basis. It also provides stationary and cosmetics.

Andrapragathi Grameena Bank :

Andhra Pragathi Grameena Bank opened an extention counter in 2007 and has been upgraded as branch in 2013 and extending necessary services to the staff and students.

Day Care Centre :

A Day Care centre is maintained in the college campus with all facilities like play area, rockers, bouncers, swings, to cater the needs of young children of working staff. A care taker is appointed to look after the kids.

Generator:

125 KVA Generator is provided to College and 15KVA Generator for Hostel to overcome acute power cut problem. Apart from that Solar PV Power generation system of 6KW with battery backup is supplying power to the ground floor, main areas in the college.

Games & Sports facilities :

One Acre area is available for sports related activities in the college premises. Adequate provisions have been made for organizing sports and cultural events in the campus. Apart from indoor games, Basket Ball, Volley Ball, Ball Badminton,Tenni Koit, Kabadi, Kho - Kho, Shuttle Badminton and Table Tennis courts are available for outdoor Games. Apart from that Six stationed multi Gym and electronic gym are also available for physical fitness to staff and students.

Free seats / fee concessions are given to students who have represented our college at District / state / national level sports and games. Players are provided with dietary supplements such as milk, egg, sports suits etc.

Outstanding students in sports and games are given due recognition and honored on the Sports Day. Special coaching camps are arranged to train the students to develop their skills in various sports and games.

Drinking Water Facility:

RO water system is installed in the college premises. The capacity of the system is 500 liters per hour. Cooler is also attached to the RO system and the storage capacity is 500 liters.

STD Booth:-

STD telephone facility is available to the students in the campus.

Parking Area:

There is sufficient area to park two wheelers and four wheelers. It is sponsored by the Alumni.

Facilities in the Hostel:-

- All the rooms are provided with eight rack shelves, cots, table, and chairs with study pad.
- Purified drinking water with cooler facility
- 24 hours power supply
  Telephone with two coin boxes STD facility
- Spacious dining hall with the seating capacity for 400 students at a time
- Two Televisions with audio & video connection and also local cable connection for recreation and also to know update news around the world
- One health centre
- A reading room
- One room for indoor games
- Hot water facility for sick students
- Parents/visitors hall
- Adequate Toilet facility
- Modernized kitchen with steam boiling vessels for preparation of rice, idly, curries etc
- One Deputy Warden and resident tutors are there to look after the requirements of the inmates
- One matron (superintendent), one assistant matron (assistant superintendent) and two watchmen who take care of the inmates round the clock
- Dhobi facility is provided at hostel
- Extended hours for the general library and computer centre for the benefit of hostellers.

National Service Scheme (NSS) & Rotaract:

The motto of the NSS Scheme is "Not Me but You" If a student participate in the community service activities organized by the NSS not only her personality, knowledge, skill in exercises democratic leadership etc., are enhanced/increased. But also weaker section of the community is promoted.

The college has two well organized N.S.S. units. Two hundred volunteers are enrolled in this scheme every year. The certificates issued by the NSS units in very useful to their further studies and employment. Every year one week special camp is organized in a village identified by the N.S.S.Unit.

Career ps Guidance and placement cell:

To help the students for personal enhancement and development. The cell offers career counselling to the students and also trains the students to face the campus selections by conducting mock interviews. Workshops group discussions and guest lectures by eminent personalities from industries are arranged. The AKC activities will also provide career counselling to the students. Campus selections are arranged by involving reputed companies like, IBM,INFOSIS, WIPRO etc.

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- ✦ Admission into hostel is based on the distance of the resident place of the student.
- ✦ Establishment charges is charged every year.

Library Rules:

- Open access system is followed in the library.
- Each student (U.G and P.G) is eligible to borrow minimum two books and maximum five books from the library.
- The loan period is 15 days from the date of the issue.
- Renewals are allowed on the basis of demand. The borrower should be present along with the book for each renewal.
- Students are requested to leave their belongings such as hand bags, umbrellas, files, text books, printed materials etc. at the property counter of the library.
- No reference should be taken outside the library.
- Marking, underlining etc. is forbidden in all reference books.
- In case of books lost, the borrower is requested to replace the book either by a new copy or pay the price of the book cast if any.
- Silence should be strictly observed in the library.

Examination & Evaluation Procedures

To improve the reliability and validity of education and to bring integration of teaching and testing, the following evaluation system has been devised based on continuous internal assessment and semester end examination with the ratio of 30: 70 percent for both UG and PG courses. The continuous Internal Assessment includes assignment and three internal examinations per semester.

- Internal examinations are compulsory and will be held on scheduled dates with one and half hours duration. Three internal examinations will be conducted out of that the best two will be considered for 20 marks and 10 marks is allotted for assignments.
- The Semester End Examinations with 3 hours duration are evaluated for 70 marks.
- Students should put 75% of attendance in each student to take semester end examinations.
- Students attending state / National camps have to produce the attendance certificate duly signed by the principal to claim for attendance, immediately after the camps.
- Setting of question papers and evaluation will be done by external experts.
- UG answer scripts are evaluated by one external examiner and P.G answer scripts by two external examiners.
- If the difference between two valuations exceeds 20% of the marks, then THIRD valuation will be done for PG students.
- Revaluation facility is provided both for UG and PG students.

- VI th semester Students of UG are given chance to clear any Two backlog papers to complete their course on time by appearing examinations. No supplementary examinations are conducted in any semester.
- Practical examinations are conducted in the even semesters i.e. at the end of II nd , IV th and VI th semesters. for UG students.
- No candidate is allowed for practical examination without 100% attendance.
- Practical examinations are conducted with one external and one internal examiner.
- The minimum pass percentage for practical examination is 35 %.
- To award I / II CLASS for UG examination, a student must have passed all the papers with in the stipulated time. If not she gets THIRD CLASS. However the year and month of passing for the exam is indicated against each subject in the consolidated marks memo.
- CLASS is awarded separately for Par – I , Part – II and Part – III.
- There is no minimum passing marks for internal examinations.
- The minimum marks for pass in a subject is 35% and aggregate is 40 % for UG courses.
- The minimum pass marks in a subject for P.G. course is 40%.
- If a student pass the Semester End Examination but fails to get the aggregate of the Internal assessment and the SEE the student should repeat the Semester End Examinations.
- Failed Students can take the supplementary examination in alternative semesters only along with the Semester End

Examination.

- Supplementary examination on should not be taken more than three times for a subject under the same syllabus. After that the students has to appear for the examinations under the revised syllabus

Malpractice:

If a student is guilty of malpractice, if she is found attempting to copy or in possession of incriminating material. A committee comprising the Principal, the Controller of Examinations, the Head of the department and the invigilator concerned will investigate the case. If found guilty the concerned paper / all subsequent papers of the semester are cancelled and the committee decides further course of action.

Evaluation:

Evaluation of the students for both UG and PG is based on continues internal Assessment and the semester end Examination held at the end of each semester. The Question paper setting will be done by the outside lectures/professors. The valuation of the undergraduate Semester End Examination answer scripts will be valued by external examiners. Post graduate SEE answer scripts will be valued by two external examiners. Practical examinations also conducted by the external examiners.

The pass percentage is 40% aggregate the weightage of marks for both UG and PG is CIA-30% and SEE 70%.

The vikrama Simhapuri University confers the degree to the students and successful completion of the course of study.

COURSE OUTCOMES

SEMESTER –I

English

CO-I To protect our ancient knowledge and culture and focus attention on intellectual rights and related issues.

CO-II Enabling Students to gain knowledge about countless contributions of India to the world and moral values.

CO-III Poetry inspires to do things that few people dare to do to explore things.

CO-IV To fill with passionate belief in the beauty and power of nature which gives relaxation in depression.

CO-V To explore the relation and interaction between man and nature.

CO-VI To understand the theme of compassion, which helped students to understand the life of Indian family and the reactions of villagers for surrounding incidents.

CO-VII Prescribed grammar is useful for perfect construction in English. To Know the purpose of parts of speech to denote the functions of a word in a sentence regarding its meaning and grammar.

SEMESTER –II

CO-I Students will know that average man and woman should be guided by false Principles unless and until humans adopt scientific point of view.

CO-II Short essays are delightful, humorous and thought provoking.

CO-III Students will get awareness, yet one should not neglect the impact of the season.

CO-IV Students will have awareness about the theme of discontent, gossip, appearance, reliance, control, anxiety, panic and trust by reading short stories.

CO-V By reading the poem "I am not that woman" Students will have knowledge about empowerment of women. Women deserve respect and they are not commodities. Linking women's value and self worth, Women should appreciate and confidently respect themselves, which is the need of the hour.

CO-VI With the effective Literacy Programs like guided composition, reading comprehension etc., students involve in reading and writing skills, which support and extend their literacy learning and skills.

SEMESTER –III

CO-I Students will get message that "silence is a part of spiritual discipline and votary of truth. In a gentle way, we can shake . the world. Strength does not come from winning. Our struggles develop our strengths. When we go through hardships and decide not to surrender - that is strength".
It is very useful to Students to manage their mental and emotional problems.

CO-II Modernity at large has shattered the faith of a common man in the family life and relations. Unfortunately only rights have been learnt by the students and they seem to have forgotten to learn about their duties. And hence problems seem to have been appearing in the society.
There is a focus on the theme of values of relationship among family members in short stories. With these short stories Students will get awareness about love, care, understanding, needs, requirements and emotional support of family and society.

CO-III Students will get awareness about philosophy of Gurajada by knowing the central theme of One Act play is to expose the evils of child marriage and the prevailing practice of bride price and also suggest widow remarriage, which is a social reform.

CO-IV By learning "PROVEBS" students can express a truth based on common sense or experience. Proverbs touch on just about every aspect of life.

CO-V Students should able to prepare Note- making, Report writing, precise writing etc.

COURSE OUTCOMES

TELUGU

SEMESTER – I

Co1: To know the impact of Ancient literature values and the traditional issues. Understand the status of women strategy in Vedic period.

Co2: **I**nculcate the personality of modern women Understanding the modern concepts of "abyudhaya kavithvam"

Co3: Understanding fiction writing. Realize the values laying the human lives

Co4: To acquire knowledge of ancient and modern grammar in Telugu. To understand Telugu vakyavisheshalu

SEMESTER – II

Co1: To understand the relation between god and nature and realize the value of belief, which leads to success. Ancient significances of marriage system in India

· To know how to solve the problem

Co2: Ecological awareness, which is essential for human lives and natural resources like water, plants etc Awareness about nature behavior

Co3: Brining awareness in storytelling. Encouraging the views of students.

Co4: To study about endangered arts

SEMESTER – III

Co1:

- To know the value of giving nature, that hikes the personality
- To Bringing the awareness on greediness
- Pride should not go ahead

Co2:

- To Bringing a view on original literature
- To Bringing the awareness on festivals and culture
- Morality in human beings

Co3:

- Importance of telugu language
- Importance of personality development, attitude, action, belief and behavior

Co4:

- To study Sanskrit literature like chandassu, alankaraalu.

B.A (HONOURS) OUTCOMES

SEM – I

COURSE – I

Title of The Paper: History of Telugu Language

- The aim of this paper is to furnish a comprehensive account to the origin and development of Telugu language.
- To know the difference between ancient and modern Telugu language.
- To create awareness on the origin and history of Telugu language to the students.
- Students have mastery on history of Telugu language.
- In this unit students learn about Telugu Dialects.

COURSE – II

Title of The Paper: Language Varieties

- To learn the standards and the origin of Telugu language.
- Students know about folk lore and they learn about definition and utilities of folk songs.
- They learn the origin of formal, informal and textual language.
- To introduce ancient history of genre.
- The development of origin of modern poetry.

COURSE – III

Title of The Paper: History of Andhra Culture

- To know history of ancient Andhra Pradesh.
- To make them understand about the dynasties.
- To know about utopian ruling, business, religion, literature and their arts.
- In this unit students learn about society and modernization.
- To bring awareness on the formation of Andhra and Telengana and its culture and politics.

SEM – II

COURSE – I

Title of The Paper: Grammar

- The aim of this unit is to known the root words and preposition.
- To understand the formation of words.
- To make students learn about parts of speech.
- In this unit students know about singular, plural and genders.
- The purpose and structure of the sentence.

COURSE – II

Title of The Paper: Telugu Literature

- The aim of this unit to introduce pothana's life, works, styles and devotion in Bhagavatham.
- To know the lives of about Kshethraiah , Thyagaiah , Annamaiah and Ramadas.
- To know about the historical facts of Dhakshinandra.
- To know about the lives of Madhuravani, Ramabadrambha, Ranganayakamma and Muddupalani
- To know the prose of Vemana Sathakam.

COURSE – III

Title of The Paper: Telugu Literature-Genre

- To introduce the preface of the drama.
- This unit aims at the prose's of drama.
- In This unit students learn about different feelings in rasa.
- To create awareness about Poems, Novel, Short.
- This unit aims at the Biography, Literary Criticism and Pilgrimage.

SEM – III.

COURSE – I

Title of The Pa.per: Folk Literature

- The aim of this unit is to make the students know about the definition, rites and rituals and folk arts.
- In this unit students learn about different types of folk songs.
- In this unit students learn about story type folk songs.
- To enhance the moral values of the students through different type of folk tales.
- .The concept of this unit is to in from the students about the folk works of the western and Indian authors.

COURSE – II

Title of The Pap.er: Folk Performing Arts

- In this unit students learn the divisions and uses of folk lore.
- Students learn about origin, definition qualities and uses of puzzles.
- This unit Introduces folk and performing arts.(music, dance etc)
- The theme of this unit is to explain culture, idol worship and rituals of folk lore.
- This unit introduces different types of folk festivals.

COURSE – III

Title of The Paper: Critisism

- In this unit students learn about fine arts.(drawing and painting etc)
- This unit aims at definition of Kavya and also teaches moral values.
- To make the students Identify Language, Grammar and morality in poetry.
- This unit focuses on origin of different type of poetry.
- In this unit students learn about tragedy, Aristotle and Shakespeare

SEM – IV

COURSE – I

Title of The Paper: History of Telugu Literature

(Ancient To Medieval)

- This unit explains the structure.
- This unit highlights the life history, way of Translations, Qualities of poetry, other works and contemporaries of Nannaya.
- In this unit students learn about the works of palkuriki, Nannechodudu and Mallikarjuna.
- This unit explains period of Srikrishna Devaraya and ashtadiggaja authors.
- This unit explains the poetry of Skhethraiah, Thyagaiah and various authors.

COURSE – II

Title of The Paper: History of Telugu Literature
(Modern To Contemparary)

- This unit explains about the qualities of modern poetry and also types of poetry students learn about Rayaprolu, Devulapalli and different kinds of modern poetries
- This unit aims at the revaluation poets.
- This unit explains Muslim(minorities) poetry and Deltas poetry.
- In this unit students can learn new style of poetry.

COURSE – III

Title of The Paper: Essay Writing'

- Students learn the meaning, qualities of Telugu and English essay writings.
- This unit introduces the styles and qualities of language.
- This unit explains the beginning, ancient and modern creative essay writing.
- This unit explains Argumentative essays.
- In this unit student learn different types of essays.

SEM – V

COURSE – I

Title of The Paper: The Study Of Important Authors

- In this unit students learn Viswanada Sathya Narayana works and his life history.
- This unit explains about Joshua and his literary works.
- This unit gives an account of Rachakonda viswanadha sastry.

COURSE – II

Title of The Paper: Ancient Literature-Important Events

- In this unit explains the poetry of Nannaya.
- This unit explains Sanjaya Rayabharam by Thikkana.
- In this unit students learn about the history of Prahallada by Pothana.
- This unit explains about Varoodhini Pravarulu by Allasani . Peddana.
- This unit presents the event of Asokavanamlo Janaki by Molla.

COURSE – III

Title of The Paper: Grammar - 2

- In this unit students learn basic Grammar.
- Students learn different types of figures of speech.
- In this unit students study different Grammar points.
- This unit student learns about rhymes.

SEM – VI

COURSE .

Title of The .Paper: Journalism

- It helps the student to understand about the definition, qualities, and types of communication.
- Definition of reporting, editing, types, reporting, qualifications .and ethics of reporting etc.
- .The purpose of this unit is to provide a detailed description of news features.
- To explain clearly about the origin and the development of Telugu news papers.

COURSE – II

Title of The Paper: Modern Poetry And Drama

- It gives the information of Bhava kavithvam, and introduces the works of Krishna sasthry and Rayaprolu Subbarao.
- Students learn about progressive poetry of Sree Sree.
- In this unit Students learn about Anubhuthi Kavithvam of thilak and k. Geetha.
- This unit gives information regarding Potluri Narayana and Ravi Sasthry.

SEM – V

COURSE – I

Title of The Paper: The Study Of Important Authors

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- This unit presents the event of Asokavanamlo Janaki by Molla.

COURSE – III

Title of The Paper: Grammar - 2

- In this unit students learn basic Grammar.
- Students learn different types of figures of speech.
- In this unit students study different Grammar points.
- This unit student learns about rhymes.

SEM – VI

COURSE – I

.**Title of The Paper: Journalism**

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- In this unit Students learn about Anubhuthi Kavithvam of thilak and k. Geetha.
  This unit gives information regarding Potluri Narayana and Ravi Sasthry.

COURSE – III

Title of The Paper: Telugu Navala Sahithyam

- This unit high lights the definition , qualities development and divisions of Telugu Navala Sahithyam
- Students know about padava prayanam of palagummi padmaraju.
- It gives detail information about the Novel "Paschathapam ledu" by Buchi Babu.
- Students study about the novel "Sukantham" by Abburi Chayadevi.

M.A Corporate Telugu

Course outcomes

I Sem

General linguistics

CO -I Understand the language origins and basic features of language

CO -II Dissemination of characters, terminology

CO -III To understand the language structure in pre- Nannayya period

Trends of telugu literature

CO -I Basic concepts in history of literature

CO -II Bringing awareness in epic culture

CO -III Brief study in prabanda period

CO -IV Modern literary concepts

Basics of computers

CO -I	Basic concepts in computers for current purposes
CO -II	Brief study in hardware components and software components
CO -III	To study computer languages
CO -IV	Networking concepts

Soft skills and self skills

CO -I	To fulfill corporate needs like presentation, networking, spoken skills
CO -II	To aware language essentials
CO -III	Heading skills to estimate body language
CO -IV	Awareness on team works , explaining how to recognize success by team work
CO -V	Creating idea on personality development

II sem

Machine translation

CO -I	Bring the idea in translation, carried out by a computer
CO -II	Use of Machine translation and giving the idea in relevance of MT
CO -III	Various methods in machine translation.
CO -IV	Introducing different software's developed by various organizations and universities
CO -V	Idea in machine translation efforts in India

Techniques of translation

CO -I	How to utilize the concepts and techniques in translation to connect the world
CO -II	Bringing the idea on source language and target language
CO -III	Different types of translations
CO -IV	History of Telugu translation from Nannaya(early days) to modern poets
CO -V	Analyzing the contents of translation in Mahabaratha

Basics of computing languages

CO -I	Learning languages that are required to do work with computer for translations.
CO -II	Introduction for basic components in computers
CO -III	Bringing knowledge in file system
CO -IV	Learning the techniques in PERL language
CO -V	To study how to write computer programs

Globalization

CO -I	To full fill corporate needs like presentation, networking, spoken skills
CO -II	To aware language essentials
CO -III	Gaining an idea of how countries are coming together as one big global economy, making the trading easier
CO -IV	What is globalization, concepts in globalization
CO -V	Globalization and concepts of internet
CO -VI	Economical affairs in India before globalization and after globalization
CO -VII	Cyber culture, urban culture

III sem

<u>Epics and moral values</u>

CO -I	To aware the values in epics
CO -II	Moral values in epics
CO -III	Concepts in Indian family system
CO -IV	Analyzing the unique character of 'Rama'
CO -V	Concepts in vidura neethi
CO -VI	Study how to acquire good behavior as a student through prahlada character

Natural language processing

CO -I	Students will get an idea about how to do research
CO -II	Aim to gather knowledge
CO -III	How human being understand and use language for appropriate tools and techniques

Human resource management

CO -I	Understanding the concept of introduction to HRM
CO -II	Obtaining knowledge on Human Resource Planning
CO -III	Acquire knowledge on developing Human resources
CO -IV	To understand the concept of motivating human resources
CO -V	Able to understand how to maintain human resources
	Communication and Journalism
CO -I	To understand the skills in writing for news papers, magazines and how to prepare news
CO -II	Study on different types of communication
CO -III	Reporting, methods in reporting
CO -IV	Study on different types of news
CO -V	To aware origin of news, history of telugu news Papers, **Different kinds of Telugu news papers**
CO -I	Famous journals and journalists
CO -II	Comparative study of Journalism and translation

IV sem

Project

CO -I	Research is most effective tool for present education scenario. It plays an important role to discover new facts in required fields.
CO -II	In this semester students take a topic about their desired field
CO -III	Students meet the people for field reports.
CO -IV	For the project work students take help of web resources, library
CO -V	Taking help of lecturer for completion of thesis
CO -VI	For doing project , students learn to compute their thesis by their own.

HINDI

I Semester

CO I : Understand and develop the values which are needed in human Life.

- To improve the language skills through listening, speaking, reading and writing.
- Prose lessons of Great writers develop an in - depth knowledge and values.

CO II: Able to understand the importance of humanity and responsibility through stories.

CO III: Understand different characters of play let and to equity oneself with the improved communicative skill with practice in speaking.

CO IV: To utilize digital literacy tools to develop grammar skills.

CO V: Set acquainted with official terminology in Hindi language.

II Semester

CO I: To know the greatness of India regarding unity in diversity and also to know about the relationship between culture and literature.

CO II: To understand the recognition of a women in the society and to know about the hungry of a born man through short stories.

CO III: To Know about the famous novelist Premchand and also to understand the vision of premchand about the problem of a middle class family through his novel Nirmala.

CO IV: To develop grammatical skills.

- To know the meaning and sentence writing of idioms in Hindi.

CO V: To Produce appropriate vocabulary and correct forms to improve skills in letter writing.

III Semester

CO I : To understand the moral values and life skills taught indirectly through poems.

CO II: To understand the Concept of History of Hindi literature and also able to understand the basis of the classification of Hindi literature.

ۦ To know the importance of Kabirdas and Jayasi through Hindi literature.

CO III : To develop creative thinking by writing the general essays.

CO IV: To understand the translation skills.

CO V: To acquire skills of drafting official letters in Hindi.

HISTORY

SEMESTER-I

Title of the Paper: Ancient Indian history and Culture (From earliest Time To 600 A.D.)

Co1: Students should understand what is history, influence of Geography on History, and Economic and culture development in civilization.

Co2: To get knowledge about the division of society and religious movements.

Co3: Students will acquire the ability to compare the administration of Mauryan Empire with present system

Co4: To know and evaluate new religions, socio, economic and cultural developments in South India.

Co5: Students should understand the Golden age of Guptas.

SEMESTER-II

Title of the Paper: Early Medieval Indian History & Culture (from 600 A.D to 1526 A.D.)

Co1: Students should understand the University Education and able to think about Political, Social, Economic and Cultural developments in South India.

Co2: Students will distinguish among Dravidian languages in South India and Village administration up to present system.

Co3: Students will produce their own historical analysis about Dravidian style of Art and Architecture.

CO4: To analyze the impact of Islam on Indian Society.

Co5: Students will acquire knowledge about Bakthi movement and able to compare the difference between both Bakthi and Sufi movements

SEMESTER-III

Title of the Paper: Late Medieval & Colonial History of India (1526 to 1857A.D.)

CO1: To understand the disintegration of India and Rise of Local Powers.

CO2: To know and evaluate the impact of Mughal on Indian culture, Art and Architecture.

CO3: To Analyze the new administrative policies in India.

Co4: To get knowledge about the problems of Agriculture and cottage industries when compared with present situation.

CO5: To get knowledge about 1857 Revolution.

SEMESTER –IV

.**Title of the Paper: Social Reform Movement & Freedom Struggle (1820 to 1947A.D.)**

Co1: To know the impact of Renaissance on society and struggle against cast.

Co2: Students should understand British colonial under viceroys Rule and the Genesis of Freedom.

CO3: To Analyze the effects of extreme terrorism.

Co4: To Analyze and acquire the principles of Ahimsa and Sathyagraha and their impacts on freedom movement.

Co5: To understand Muslim League & the growth of communalism, and service of S sardar vallaabhai patel

SEMESTER-V

Title of the Paper: Age of Rationalism and Humanism (the World Between 15th & 18th centuries)

Co1: To get know ledge about the feudalism, Geographical Discoveries and its effects on the World.

CO2: To know the impact of Renaissance on the Europe culture.

Co3: To get knowledge about emergence of Nation states, Reformation of a religion and its effect , Origin of parliament and Constitutional development.

Co4: To get knowledge about the effect of colonialism, declaration of Independence and Bill of rights.

Co5: To know about Age of Revolutions.

SEMESTER-V

Title of the paper: History & Culture Of Andhra Desa

(From 12th Century A.D.)

Co1: To know about the importance of Telugu languages, Society culture,. Art and Architecture.

Co2: To learn and evaluate the administration and literature of South India.

Co3: Student should able to know and discuss the impact of Muslim Rule On Andhra Desa.

Co4: To know and evaluate the change in Revenue system introduced by Europeans, peasantry and Tribal Revolts.

Co5: To get knowledge about the changes in society of Andhra Desa due to Modern education and the development in the Culture of Andhra.

ECONOMICS

Course Outcomes : (CO's)

Semester -I

Title of the paper: Microeconomic Analysis –I-

Consumer Behaviour.

CO1: To know the nature, scope, definitions of economics and consumer behavior.

Co2: To Understand the difference between Micro and Macro Economics, Economic analysis methods.

Co3: To know the Demand analysis and types of elasticity of demand.

CO4: To know the concepts, functions, types of Utility analysis.

Co5: To Know the Indifference curves definitions, functions, behaviour, features & consumer surplus.

Semester- II

Title of the Paper: Microeconomic Analysis –II-Production Value an Price Theory.

Co1: To know the concepts, definitions of production & production costs.

Co2: To understand the definitions &types of Markets, price discriminations.

Co3: To know the different types of Markets, Kinked demand curve analysis.

CO4: To understand the Marginal productivity theory of distribution.

CO5: To analyze the theories of Rent, Wages ,Profit, Interest.

Semester - III

Title of the Paper: Macroeconomic Analysis-I-National Income, Employment and Money.

CO1: To know the Meaning, importance of Macro economics.

Co2: To understand National Income definitions and Measurement and to analyze the theories of Two, Three and Four Sector Economy model.

Co3: To get knowledge about Classical Theory of Employment & Say's Law of Market.

Co4: To acquire knowledge on Keynesian Theory of Employment and Consumption and Marginal Efficiency of Capital.

Co5: To analyze the concept of Money – functions , types and theories.

Semester -IV

Title of the paper: Macro Economic Analysis-II- Banking and International Trade.

Co1: To get knowledge about Trade Cycles & Inflation, Phases of Trade Cycles and Types of Inflation and Impact on Economy.

Co2: To know the concept of Bank, definitions & functions of Bank and ana.lyze the current economic problems.

Co3: To understand the importance of Non Banking Financial Institutions and defects of Indian Money Market.

Co4: To be able to describe the Stock markets, Insurance and importance of Life Insurance.

C05: To be able to explain the Macro Economic Policies and International Trade Theories.

Semester-V – Paper V

Title of the paper: Economic Development and Indian Economy.

Co1: To know the concepts of Economic Growth & Economic Development and knowledge about measurement of Economic development & theories of Economic growth.

Co2: To have knowledge about Balanced & Unbalanced growth theories.

Co3: To Understand various aspects of Indian Economy using other Environmental Resources available in modern ICT tools.

Co4: To know the concepts of National Income perspective on different problems. Inequalities, Poverty and Unemployment and approaches to Economic development and growth in India.

Co5: To analyze the concepts of Economic Reforms (LPG) & Inclusive Growth.

Semester – V-Paper-VI

Title of the Paper: Indian and AP Economy.

Co1: Students will familiar about importance of Indian Economic Agriculture and price policies.

Co2: To get knowledge about growth of Indian Industrial Sector, Industrial policies and approaches in India.

CO3: To understand the Importance of Indian Service Sector.

Co4: To analyze economy, agriculture, Industrial and service sectors problems and approaches in AP.

Co5: To be able describe Planning in Indian Economy and Nithi Aayog.

Semester – VI-Paper-VII

Title of the Paper: Public Finance

Co1: To know the Meaning and Scope of Public Finance and . difference between Public & Private Finance and to analyze the Principle of Maximum Social Advantage Theory .

Co2: To get knowledge about Sources of Public Revenue & various approaches of taxation.

Co3: To be able to discuss about classification of Public Expenditure and analyze Laws of Peacock-Wiseman Hypothesis.

CO4: To understand the classification & methods of Public Debt.

Co5: To understand the Budget , deficit Financing and its impact.

POLITICAL SCIENCE

Course Outcomes : (CO's)

Semester -I

Title of the Paper: Basic Concepts of Political Science.

CO1: To know about the nature and scope of Political Science.

Co2: To understand the analyzation of the origin and evaluation of the Modern State.

Co3: To identify the difference between the terms Nation & Nationality.

Co4: To evaluate civil and social rights and their importance in the civil society.

Co5: To compare and understand differences between freedom, equality& justice.

Semester- II

Title of the Paper: Political Institutions –

Concepts, Theories and Institutions.

Co1: To understand the basic features of federal form of government and unitary form of government.

Co2: To understand the basic features of classical and modern democracy.

CO3: To know the nature, role and functions of judicial review.

Co4: To understand structural form of the modern state, basic features of parliamentary and presidential form of government.

Co5: To analysis the purpose of constitutional law and separation of ower.

Semester - III

Title of the Paper: Indian Constitution.

Co1: To know about the ideology of the Indian national movement on cons.tituent assembly.

Co2: To understand preamble and salient features of the Indian constitution.

Co3: To acquire both knowledge and difference between fundamental rights and directive principles.

Co4: To acquire knowledge on unitary and federal features of the Indian constitution.

Co5: To analyse the values of the Indian constitution and the role of higher judiciary in India.

Semester -IV

Title of the paper: Indian Political Process.

Co1: To understand the theory of modernization and analysis of the transition from traditions to modernity and capitalism.

Co2: To know the transition of Indian cast system from hierarchy and to identity the role of assembly.

Co3: To understand and analyze the community and to know the role of the state towards religion.

Co4: To describe the electoral trends of the loksabha from 1952 to 2014 from the one party system to multiparty coalitions and determinants of voting behavior in India.

C05: To explain the evaluation of party system in India, the bases of major political parties like : INC, BJP, CPM, CPI, DMK, BSP, TDP, AIADMK etc.

Semester-V-Paper-V

Title of the paper: Indian Political Thought.

Co1: To know about the traditions of Ancient Indian Political Thought revealed by great thinkers Manu & Kautilya.

Co2: To know the great works of Raja Rammohan Roy on religious and social reforms.

Co3: To understand the drain theory and poverty theory of Dadabai naoroji.

Co4: To know the concepts of the Hindu culture nationalism and communitarian.

Co5: To analyze the concepts of democratic egalitarianism of Gandhi, Jawaharlal Nehru, M.N. Roy and Dr. B. R . Ambethkar

Semester – V-Paper-VI

Title of the Paper: Western Political Thought.

CO1: To identify political ideologies, concepts and ideas.

Co2: To know and understand the early medieval begging of modern thought revaled by S.T. Augustine and Machiavelli.

Co3: To understand the liberal thoughts of T Homas & J.S.Mill. J.J.Rooso.

Co4: To understand democracy thought of jaremy benthom and j.s. mill.

Co5: To understand the political idealism and its critique revealed by Hegel and Karlmarx.

Semester – VI-Paper-VII

Title of the Paper: Principles of Public Administration.

CO1: To identify the structure of Administration.

Co2: To acquire knowledge about the theories and basic principles of different Administration theories.

CO3: To get knowledge about the principles of Organization.

Co4: For getting ability to Compare different organizational structures in public and private administration and assess the emergence of modern administrative state in 20th century.

Co5: To summarize public administration as a potential career field . in government sector.

Semester – VI- Paper-VIII (CL – I)

Title of the Paper: International Relations.

Co1: To identify the structure of basic. concepts of International Relations.

.**Co2:** To know about the study Approaches of International Relations.

Co3: To get knowledge about the 1st and 2nd world wars (1914 – 1945)..

CO4: To understand the origins of 1st cold war and end of 2nd cold war.

Co5: To get knowledge about the role of UNO in the protection of International peace and problems of the 3rd world , struggle for New international economic order.

Semester – VI – Paper – VIII (CL -2)

Title of the Paper : Indian Foreign Policy.

CO1: To understand about " what is foreign policy , continuity and change in Indian foreign policy".

CO2: To know about the Non-Alignment ,the role of India in the UNO in protection of International Peace.

CO3: Knowledge about the India's relation with USA and China, during the period of cold war.

CO4: To compare India - Pakistan relations and India's role in SAARC.

Semester – VI – Paper - VIII (CL -3)

Title of the paper: Contemporary Global Issues.

CO1: To get knowledge about conceptions of Economical, Political, Environmental, and Cultural Globalization.

CO2: To know the Anchors of Global Political Economy-IMF & WTO nature, role and functions.

CO3: Knowledge about the role of Nation, State in the context of Globalization.

CO4: To get knowledge about the Concepts of Contemporary Global Issues -- Ecological Issues and present state of the International Terrorism.

COMMERCE

SEMESTER-I:

DSC 1A-Fundamentals of Accounting:

CO1: Enhanced the Knowledge and capacity to understand the Basics of Accounting

CO2: Improved the Capacity to prepare subsidiary Books, Trial Balance and how to rectify the Errors.

CO3: Trained students to Acquire knowledge to solve the problems faced in Partnership business

CO4: Enhance the Knowledge to understand the Favorable and unfavorable Balance for bank reconciliation statement

CO5: Knowledge given to Use of basic Accounting data from an organization to Prepare Annual Financial statements like Trading, Profit& Loss Account and Balance Sheet.

DSC 2A-Business Organization

CO1: Trained to understand the basics of Business Organization and Knowledge given to see the business matters not only in the few of Economics, but also in Society point of view.

CO2: Comprehensive knowledge given to a student to turn as entrepreneur

CO3: Develop interest to understand different forms of business organization.

CO4: Create interest to know about different Companies like Public &Private in analytical way.

CO5: Knowledge given to Prepare documents to incorporate a Company

DSC 3A-Business Economics

CO1: Enhanced interest to know about Scope of Business Economics in Micro and Macro point of view.

CO2: Created Interest to know about the Demand Analysis

CO3: Enhanced knowledge given to understand Elasticity of Demand
CO4: Enhanced Knowledgegivento understand the Classification of Cost and Revenue
CO5: Practical Knowledge given to Understand about BEP and Implementation to gain more Profits as an entrepreneur

SEMESTER-II:

DSC- 1B Fundamentals of Accounting-II

CO1: Student trained to know the different methods of Depreciation and its effect in calculation of Profit& Loss in Final Accounts
CO2: Enable Students to know about the Provisions and Reserves and gained knowledge to prepare the aforesaid Accounts
CO3: Gained Knowledge about bills and Procedure to Write entries and maintain Accounts in the Books of Drawer and Drawee
CO4: Capacity to maintain Consignment Accounts, Consignment is giving way to expand Business.
CO5: Gained knowledge about joint venture and in Preparation of Joint Venture Accounts which is useful to Promote Project Culture in business.

DSC 2B-Business Environment

CO1: Gained knowledge about business Environment which is under stand to Businessman.
CO2: Advantage taken to acquaint with economic factors influencing, balanced regional development.

CO3: Attained knowledge about five years Planning System which besides the Economic Growth and GNP in India
CO4: Advanced Information relating to Economic Policies and Union Budget known by the Students.
CO5: Process in Political and Legal Environment in Business and Social justice acquainted.

DSC 3B-Business Economics-II

CO1: Achieved Knowledge about Production and Cost, which is essential to become an Entrepreneur.
CO2: Acquainted with Marketing Structures and Policies of Price Determination.
CO3: Benefited with the Knowledge of Marginal Productivity and Utility of Distribution
CO4: Attained Knowledge about National Income and Economic System.
CO5: Gained Comprehension Knowledge about Structural Reforms

SEMESTER – III:

DSC-1C Corporate Accounting

CO1: Gained basic knowledge of accounting for share capital
CO2: Find out issue and redemption of debenture, accounting treatment for convertible and non-convertible debentures and Employee Stock option
CO3: Perceived the need of Valuation of Good will and methods for Valuation of Goodwill
CO4: Being expertise on valuation of shares
CO5: Be aware in presentation and Preparation of company final accounts

DSC-2C Business Statistics

CO1: Gained knowledge of Statistics in Collection of Data, Graphic Presentation of Data using Computers to become Statistician.

CO2: Experienced Practical Knowledge in Implementation of Measures of Central Tendency

CO3: Gained Perception on the utilization of Dispersion and Skewness

CO4: Acquired Comprehensive Knowledge on Measures of Relation and Regression Analysis

CO5: Attained Knowledge on analysis of Time series and Index numbers

DSC-3: BANKING THEORY &PRACTICE

CO1: Perceived Knowledge on Banking, Commercial Banking Vs Central Banking

CO2: Made them a Perfect Banker with Explanation of Banking Systems In India and their policies

CO3: Acquainted with Banking Developments like NABARD, EXIM, SIDBI, Etc…

CO4: Realized the Relationship between Banker and Customer and importance of KYC Norms

CO5: Learned about rights and Powers of Collecting and Paying Banker

SEMESTER – IV:

DSC 1D-Accounting for Service Organizations

CO1: Gained knowledge about the Concept, types of service organizations – Sec (8) and other provisions of companies Act, 2013

CO2: Understood accounts of electricity supply companies and double Accounting system-Revenue, Net Revenue, Capital Accounts, General Balance Sheet

CO3: Acquired with the Knowledge of Bank accounts as per Banking Regulation Act, 1969.
CO4: Earned Knowledge on life insurance companies act 1956 and prepare final accounts of life insurance companies
CO5: Understood about General Insurance companies as per General Insurance Act 1972 and claims for loss of stock

DSC2D-Business Laws
CO1: Acquainted with meaning and essential elements of Valid Contract Act, Indian Contract Act-1872
CO2: Gained Knowledge about theValid offer, acceptance and Consideration
CO3: Understood Capacity of Parties and Contingent Contracts.
CO4: Known about the Sale of Goods Act-1930
CO5: Got the Knowledge about the Cyber Laws and Digital Signatures

DSC3D-Income Tax
CO1: Made the students to learn the basics and concepts of Income, Person, Assesse, Assessment Year
CO2: Understood the Income from Salary, Deductions U/S 80 C
CO3: Learnt the Income from House Property
CO4: Known the Income from Capital Gains and other sources of Income
CO5: Perceived the total Income of an Individual

Foundation Course – Entrepreneurship
CO1: Experienced the basic knowledge of Entrepreneurship

CO2: Explained the Idea Generation and Opportunity Assessment.
CO3: Acquired the Knowledge of project formulation and Appraisal and analysis of financial market
CO4: Understood the Central and State level Institutions supporting to Small Scale Industries
CO5: Known about the Government Policies and taxation Benefits

SEMESTER –V:

DSC3E5.1 Business Leadership
CO1: Learnt topics of Leadership traits, skills and styles &qualities of good leader.
CO2: Understood the decision making and leadership
CO3: Knows the Differences between Leadership and Management and Likert's Management System
CO4: Gained the Successful Leadership and Effective Leadership
CO5: Understood the Special Topics Related to Inspirational Leaders

DSC 1E 5.2 COST ACCOUNTING
CO1: Acquired with the Differences between financial accounting, cost accounting and Management accounting
CO2: Understood the Elements of costs, and Methods of LIFO, FIFO
CO3: Known the Methods of Control of labour Cost and incentive Plans
CO4: Acquired the Knowledge about Methods of Costing
CO5: Known about Costing Techniques i.e Break Even Analysis

DSC 2E 5.3 Goods & Service Tax Fundamentals

CO1: Perceived the Overview of GST Concepts, Tax Reforms and constitutional Amendments
CO2: Known the Principles and models of GST
CO3: Understood various Taxes and duties with Illustrations
CO4: Acquainted with the inter-state GST
CO5: understood time of supply of goods and services Value of Supply and Input Tax Credit

DSC 2E 5.4 Advanced Accounting

CO1: Gained Knowledge on how to Prepare Accounts in Self Balancing System
CO2: Acquainted the single entry system
CO3: Under stood The Concept of Royalty, Minimum Rent ,Short Workings
CO4: Known about the partnership Accounts
CO5: Experienced with liquidation accounts

SEMESTER – VI:

DSC3G6.4 Management Accounting

CO1: Learnt the Management Accounting interface with Financial Accounting and cost Accounting
CO2: Understood the Ratio Analysis, and its Classification
CO3: Acquainted with the Concept F und, Preparation of Funds flow Statement
CO4: gained Knowledge to prepare and utilize the Cash flow Statements
CO5: Attained Knowledge on Break Even Analysis and decision making

6.1 EVENT MANAGEMENT

CO1: Learnt the Meaning of Event management, characteristics of events, Principles of Event Management

CO2: Understood the Event Concepts, Corporate Events and customer Needs

CO3: Known about Trade Fairs and Marketing Mix of events

CO4: Gained Knowledge on outdoor Events

CO5: Attained Knowledge on Celebrity Events

DSC3E5.1 AUDITING

CO1: Understood the Meaning and objectives of Auditing and Auditing Vs Accounting

CO2: Known About the Types of Audits

CO3: Learnt the planning of Audit and Steps to be taken for the Commencement of a new Audit

CO4: Gained Knowledge on Vouching and Investigation.

CO5: Understood About the Company Audit and Auditors Report.

Cluster Elective-5A Banking and Financial Services

CO1: Learnt the topics of financial Services and fund based, Fee based Activities

CO2: Understood the Merchant Banking Services

CO3: Known the difference between Leasing and Hire

CO4: Gained Knowledge on Concept of Credit Rating and credit Rating Agencies

CO5: Understood the other Financial Services, Central Depositary Systems

DSC H 6.6 Marketing of Financial Services

CO1: Known about the differences between Goods and Services
CO2: Understood about the Constructing Services Environment
CO3: Gained Knowledge on Pricing and Promotion Strategies
CO4: Understood about distributing Services
CO5: Acquainted with the Retail Financial Services

DSC 1 G 6.2 Good& Service Tax and Customs Act

CO1: Known about the Registration and Filling Under GST
CO2: Understood Administration Under GST
CO3: Gained Knowledge on Assessment under GST
CO4: Perceived Knowledge on the Levy and exemption of Tax
CO5: Acquainted with the Customs Act, Types and Valuation of Custom Duties

DEPARTMENT OF BOTANY
COURSE OUT COMES

PAPER- I - Microbial Diversity, Algae and Fungi

CO1: Explain the Origin of life theories &Discovery of microorganisms With Special types of bacteria
CO2 Describe the structure, Replication diseases caused & control measures of Viruses
Co3 Understand the Cell structure, Nutrition, reproduction & Economic importance of Bacteria

CO4 Discuss about Thallus organization ,Reproduction & Economic importance of different types of Algae

Co5 Describe the types of non chlorophyllus thallophyte of Fungi including their economic importance

PAPER- I

Practical: Microbial Diversity, Algae And Fungi

Co1 To gain knowledge on equipments used in microbiology culture media preparation for microorganisms growth

Co2 To study the viruses and bacteria using ICT tools for electro microphotographs of TMV Bacteriophage HIV bacillus

Co3 Explain the staining of bacteria and plant diseases' caused by bacteria and viruses

Co4 Slides preparation and study of internal structure of cyaneo bacteria Algae and fungi

Co5 Discuses about plant diseases' caused by fungi morphology anatomy of lichens

PAPER-II Diversity ofArchegoniate and Plant Anatomy

Co1 Discuss about Bryophytes in which Evolution of sporophyte Thallus to leaf structures

Co2 Describe the 1st true land plants with vascular systems of pteridophytes

Co3 Describe the naked seed producing plants like Pinus & Gnetum (Gymnosperms).

Co4 Explain the Tissues & Tissue systems in histological organization

Co5 Discuss the Anomalous secondary growth in different plants & some local timber yielding plants

PAPER-II

Practical: Diversity of Archegoniate and Plant Anatomy

Co1 Identify the Bryophytes, Pteridophytes & Gymnosperms with slide preparation & mounting

Co2 Demonstration & preparation of double staining slides

Co3 Observation of tissues using permanent slides

Co4 To study the wood anatomy in timber yielding plants

Co5 Discuss about anomalous secondary growth in plants

Co6 Effect of light intensity on oxygen evolution in photosynthesis using Wilmot bubbler method

Co7 To study the rate of photosynthesis under different co2 concentrations

PAPER-III - Plant Taxonomy And Embryology

Co1 Explain the general introduction of plant taxonomy ,nomenclature rules with taxonomic resources

Co2 Discuss about types of classification ,Bentham Hookers,Engler prantles &phylogeny origin & evolution of Angiosperms

Co3 To study the detailed information on plant taxonomy of Polypetalous

Co4 Understand the taxonomic families belongs to Gamopetalae

Co5 Explain the reproduction in plants ,development of male & female gametes ,zygote formation ,embryo development & endosperm role in embryo development

PAPER-III

Practical: Plant Taxonomy and Embryology

Co1 Systematic study of locally available plants belongs to different family

Co2 Demonstration of herbarium preparation techniques

Co3 Discuss about pollen grain structure, mounts & pollen viability test in vitro germination

Co4 Observe the permanent slides/photographs of different types of ovules & embryo sac development stages

Co5 Using the slides and photographs of embryo & endosperm structure

PAPER-IV-Plant Physiology and Metabolism

Co1 Explain the importance & properties of water in relation to plant physiological activities

Co2 Discuss about role of mineral nutrients, Nitrogen metabolism &Enzymes activity in plants

Co3 Describe the photosynthetic pathways & Translocation of organic solutes in plants

Co4 Understand the respiration cycles through oxidative phosphorylation &lipid metabolism

Co5 Explain the growth in plants, role of phytohormones, vernalization & photoperiodism.

PAPER-IV

Practical: Plant Physiology And Metabolism

Co1 Demonstration of osmosis by potato osmoscope method

Co2 Determination of osmotic potential of plant cell sap by plasmatic method using tradescantia leaves

Co3 Understand the rate of transpiration using cobalt chloride method and rate of transpiration by Gagnon's photometer

Co4 To study the effect of temperature on membrane permeability by calorimetric method

Co5 Explain the mineral deficiency symptoms using plant photographs

Co6 Observe the separation of chloroplast pigments using paper chromatography technique

PAPER-V - Cell Biology, Genetics & Plant Breeding

Co1 Understand the nature, structure of cell and their organelles', chromosomal organization & special type of chromosomes.

Co2 Discuss about DNA as genetic material, structure of DNA & RNA, cell divisions with significance.

Co3 Explain the Mendel's laws of inheritance an over view of linkage &crossing over

Co4 Explain the process of plant breeding methods to crop improvement

Co5 Discuss about Biotechnological aspects of plant breeding in crop improvement

PAPER-V

Practical: Cell Biology, Genetics & Plant Breeding

Co1 Study of structure of cell organelles through photomicrographs

Co2 Describe the structure of plant cell through temporary mounts

Co3 Discuss about DNA packing by micrographs and various stages of mitosis using cytological preparation of onion root tips

Co4 Knowledge gain on numerical problem solving using Mendel's Laws of Inheritance
Co5 Demonstration of hybridization techniques – Emasculation and bagging
Co6 Explain the calorimetric estimation of DNA by diphenyl amine method
Co7 Observe the slides different stages of meiosis & polytene chromosome

PAPER-VI -Plant Ecology and Phytogeography

Co1 Discuss about Ecological factors &interaction between plants and animals
Co2 Understand the productivity of an ecosystem ,energy transformation in food chain & food webs, recycling of elements in atmosphere
Co3 Understand the population & community ecology through ecological succession
Co4 Explain the phytogeography, distributional regions of India & World
Co5 Describe the biodiversity hot spots & seed bank resources in India, levels, loss &conservation of Biodiversity

PAPER-VI
Practical: -Plant Ecology And Phytogeography
Co1 Explain the instruments used to measure micro climatic variables :Soil thermometer, rain gauze, anemometer, luxmeter, psychrometer
Co2 Determination of soil PH & permeability of different soil samples
Co3 Study of ecological adaptation of hydrophytes & xerophytes

Co4 Estimation of primary productivity in ecosystem, distribution of phytoplankton's & macrophytes in a pond ecosystem

Co5 Estimation of bicarbonates in the given water samples

Co6 Determination of minimal quadrate size for the study of herbaceous vegetation in the college campus by species area curve method

PAPER-VII - Nursery Gardening And Floriculture

Co1 Infrastructure, seasonal activities & management of a good nursery

Co2 Garden Design, home gardening, garden operations, landscaping & computer applications in landscaping, some famous gardens in India

Co3 Propagation of plants through vegetatively and also using horticulture methods

Co4 Knowledge, techniques to production of ornamental plants & Bonsai designing

Co5 Knowledge on Environmental awareness & cultivation methods to improve the production of commercial floriculture to get self employment

PAPER-VII

Practical: Nursery Gardening And Floriculture

Co1 Explain the instruments used for nursery management & vegetative propagation techniques

Co2 Observe the seed propagation methods

Co3 Cultivation of different ornamental plants used in lawn preparation and landscaping design.

Co4 Explain the commercially important flower crops production and prolongation of the vase life, grading, packing & marketing of cut flowers

Co5 Visit to plan commercial nursery & commercial tissue culture laboratory

ZOOLOGY

COURSE OUTCOMES (CO's)

I-YEAR SEMESTER- I
Paper – 1 ANIMAL DIVERSITY-INVERTEBRATES Q.P. Code No: (1114)

On completion of the courses students will be able

CO1: To Understand the evolution, history of Invertebrates, distinguishing Characters of Protozoa and Porifera and provide knowledge with respective examples like Elphidium and Sponges

CO2: To understand the Coelenterates and Helminths with life cycles of Aurelia and Fasciola, Economic importance of Corals and Polymorphism

CO3: To study the characters of Annelida, various Systems of Leech in specific and Significance and economic importance of Vermicompost.

CO4: To understand the systemic and functional morphology of Arthropoda in specific Macrobrachium rosenbergi and Mollusca.

To acquire knowledge about Economic importance of pearl formation, Systematic position of Peripatus

CO5: To acquire knowledge about star fish water vascular System, Invertebrate. Larval forms and systematic position of Hemichordata or Balanoglosses

SEMESTER – II,

PAPER II: Animal Diversity of Vertebrates (2214-A)

CO1: To learn about the origin and characters of Chordata, Prochordata with all Physiological aspects and significance of Retrogressive metamorphosis in Ascidians.

CO2: To gain knowledge about cyclostomata and pisces with all physical properties and anatomy including Depnoi fishes.

CO3: Fundamental concepts of amphibians, reptilia with illustrations.

CO4: To understand physiology of Aves, migration and flight adaptations in birds.

CO5: To gain knowledge about physiology of mammalia and dentition in mammals.

II-YEAR SEMESTER- III

Paper III: Cytology, Genetics & Evolution (3314)

On completion of the courses students will be able:

CO1: To understand the basic unit of the organism and differences between prokaryotic and Eukaryotic cells

CO2: To study and understand the whole cell organelles with their structure and function

CO3: To explain the arrangement of Genes and their interaction.

CO4: To understand extra nuclear inheritance, linkage & crossing over

CO5: To Understand the process of evolution with Evidences

II-YEAR SEMESTER- IV

Paper IV: Embryology, Physiology And Ecology (4414-A)

On completion of the courses students will be able:

CO1: Explain the formation and development of egg, sperms, fertilization and growth of each organisms.
CO2: Able to describe the physiology of digestion, respiration excretion and Circulation.
CO3: To understand the nature of endocrine glands and their secretion and process of reproduction, Nurve impulse transmission ,Muscle contraction.
CO4: To understand the abiotic factors, nutrient Cycles within the ecosystem
CO5: To understand the Community interactions, Population Studies, Ecological Succession and zoogeographical realms.

III-YEAR SEMESTER- V

Paper V: Animal Biotechnology (55141)

On completion of the courses students will be able:

CO1: To gain knowledge about DNA technology and its applications-Restriction modification systems, DNA modifying enzymes and Cloning vectors
CO2 : Familiar with concepts and applications with suitable skills in biotechnology like Use of Linkers and Adopters, Gene delivery, PCR, DNA Sequencing, Hybridization techniques Genomic and DNA Libraries
CO3 : To gain good knowledge about animal cell technology, hybridoma technology and stem cells with suitable illustrations.

CO4: To understand the Reproductive Technologies like Artificial Insemination, *In vitro* fertilization , super ovulation, Embryo transfer, Embryo cloning and Transgenic animals and their applications.
CO5: To Under stand the basic concepts of Applied Biotechnology in Industry, in Agriculture and DNA fingerprinting

III-YEAR SEMESTER- V

Paper: VI Animal Husbandry (55142)

On completion of the courses students will be able:

CO1: To gain knowledge about poultry farming, Systems of poultry farming and Management
CO2: To learn about poultry feed management, Methods of feeding and poultry Diseases control and management useful to the students for poultry farming.
CO3: To know about selection, care and handling of hatching eggs, Egg testing, Methods of hatching. Brooding and rearing, Sexing of chicks.
CO4: Complete knowledge of breeds of dairy cattle and buffaloes, Housing of dairy Animals, Cleaning and sanitation of dairy farm, Deworming and Vaccination, Programme, Records to be maintained in a dairy farm to improve practical skill such as dairy farm.
CO5: To know the principles of care and management of dairy animals.

III-YEAR SEMESTER- VI

Elective Paper: Vii Immunology (614el01)

On completion of the courses students will be able:
CO1: To Overview the basic concepts of Immune System, Types of Immunity, Cells and Organs of Immune system.

CO2: To Understand the Basic properties of antigens, B and T cell epitopes, haptens and adjuvants Factors influencing immunogenicity
CO3: To know about the Structure,Classes and functions of antibodies and Monoclonal antibodies
CO4: To Understand the Working of Immune system, major histocompatibility Complexes, cytokines
CO5: To gain knowledge about Immune system in health and disease, types of hypersensitivity and Vaccines

III-YEAR SEMESTER- VI
Cluster Paper VIII,
CLB1- Principles of Aquaculture (614CLB1)

On completion of the courses students will be able:

CO1- To Understand the History, Present status and major Cultivable Species of Aquaculture and its selection for culture.
CO2- To Get knowledge on different types of aquaculture, culture systems. And culture practices
CO3- To gain Knowledge on Design and construction of aquafarms, seed Resources, Nutrition and feeds of carp and prawns
CO4- To Understand the 1Management of carp culture ponds and Culture of Giant freshwater prawn
CO5- To Understand the Culture of shrimp, pearl oysters, seaweeds, Ornamental fishes

III-YEAR SEMESTER- VI
Cluster Paper VIII,
CLB2 - Aquaculture Management (614CLB2)
On completion of the courses students will be able:

CO1- To Know about the Breeding and Hatchery Management of Carp and Prawn
CO2-To understand the water quality management for fish and shrimp culture
CO3- To gain Knowledge on Feed Management in fish and shrimp ponds
CO4- To Get knowledge on Disease Management fish and shrimp ponds
CO5- To Know about the Economics and Marketing of Fish and Fisheries Extension

III-YEAR SEMESTER- VI
Cluster Paper VIII, CLB3 – Post Harvest Technology

CO1: To know about the Handling, storage and transport of fresh fish, rigor mortis and spoilage, Principles of preservation
CO2: To Understand the Traditional and Advanced Methods of fish Preservation
CO3: To learn about Processing and preservation of fish and fish by-products, Seaweeds and its applications in Foods and Therapeutic Drugs.
CO4: To know about the Sanitation in processing plants, Quality Control of fish and fishery products.
CO5: To get knowledge in Seafood Quality Assurance and Systems, Management and Certification of National and International standards

Physics
Course Out Comes
Title of the Paper-(W.M) Mechanics and properties of matter

Semester-I

CO-I Define gradient, divergence and curl and express their respective forms in rectangular co-ordinate systems.
CO-II Describe the principle of motion of a rocket calculate the thrust on a rocket
CO-III Applications of basic concepts of mechanics to rigid bodies Euler's equations and its applications to gyroscope in navigation.
CO-IV Derivation of keplar's laws motion of a satellites idea of global positioning system (GPS)
CO-V Describe Michelson-Morley experiment with relevant theory and discuss importance of its result.

Practical -I
CO-I Viscosity of liquid by the flow method .
CO-II Study of oscillations under bifilar suspension the filament are parallel momentum of inertia of cylindrical rod.
CO-III Use the theoretically knowledge of torsion pendulum and measure rigidity modulus of material of a wire.
CO-IV Determination of momentum of inertia using fly wheel.
CO-V Young's modulus of the material a bar (scale) by non- uniform bending.

Title of the Paper-(W.M) Waves and oscillations
Semester-II
CO-I Combination of two mutually perpendicular simple harmonic vibrations of same frequency and different frequencies.

CO-II Discuss the conditions under which the oscillations are said to be in different damping conditions.
CO-III Analyze periodic wave functions by applying Fourier theorem.
CO-IV Modes of vibration stretched string in different clamping conditions, overtones and harmonics.
CO-V Productions and applications of ultrasonic's.
Practical's -II
CO-I Volume resonator- determination of frequency of a tuning fork.
CO-II Study of a compound pendulum-determination of g and k.
CO-III Measurement of errors – simple pendulum.
CO-IV To determine the velocity of transverse waves along a stretched string using a sonometer.
CO-V Determination of the force constant of a spring by static and dynamic method.

Title of the Paper-(W.M) Wave optics
Semester-III
CO-I Different types of aberrations and their minimization in lenses .
CO-II Principle of super position, coherence, interference phenomena and with applications to Newton rings and Michelson interferometer
CO-III Fraunhoffer diffraction pattern with single, double and N silts. Fresnel half period zones
CO-IV Polarization methods, Nicol prism as polarization & Analyzer –optical Activity
CO-V Different types of lasers and fibers their applications principle of Holography and its applications

Practical-III

CO-I Determination of wave length of light using diffraction grating –normal incidence method

CO-II Dispersive power of a prism. By using sodium vapor lamp

CO-III Determination of wave length of light using diffraction grating- normal incidence method

CO-IV Study of optical rotation-polar meter

CO-V Refractive index of a liquid and glass (Boy's method)

Title of the Paper-(W.M) Thermodynamics and Radiation physics

Semester-IV

CO-I Explain the kinetic theory of gases and various transport phenomena

CO-II Isothermal and adiabatic process reversible and irreversible process efficiency Carnot engine-concepts of entropy

CO-III Thermodynamic potentials obtain Maxwell's equations in Thermodynamics.

CO-IV Describe the Joule Thomson expression the low temperature application of low temperatures

CO-V Measurement of radiation –types of pyrometers.

Practical's -IV

CO-I To study the thermal conductivity of bad conductor lee's method

CO-II Study the thermal conductivity of rubber

CO-III Study of variation of resistance with temperature -Thermister

CO-IV Thermal behavior of electrical bulb

CO- V Specific heat of liquid by applying Newton's law of cooling correction.

Title of the Paper-(N.M) Mechanics and properties of matter

Semester-I

CO-I Define scalars and vectors –vectors addition-scalars and vectors products

CO-II Collisions –Elastic and inelastic collisions, Impact parameter, Scattering Cross section

CO-III Rigid body –moment of inertia in simple cases Elementary ides about gyroscope motion , precession of the equinoxes

CO-IV Central forces and its characteristics keplar's laws

CO-V Bernoulli's equation and its applications. Special theory of relativity and its postulates

Practical -I

CO-I Viscosity of liquid by the flow method.

CO-II Study of oscillations under bifilar suspension the filament are parallel momentum of inertia of cylindrical rod.

CO-III Use the theoretically knowledge of torsion pendulum and measure rigidity modulus of material of a wire.

CO- IV Determination of momentum of inertia using fly wheel.

CO-V Young's modulus of the material a bar (scale) by non- uniform bending.

Title of the Paper-(N.M) Waves and oscillations

Semester-II

CO-I Combination of two mutually perpendicular simple harmonic vibrations of same frequency and different frequencies.

CO-II Damped vibrations and forced vibrations its explanations & examples

CO-III Sonometer verification of laws of transverse vibrations in a stretched string .

CO-IV Classifications of sound and its characteristics.

CO-V Productions and applications of ultrasonic.

Practical -II

CO-I Volume resonator- determination of frequency of a tuning fork.

CO-II Study of a compound pendulum-determination of g and k.

CO-III Measurement of errors – simple pendulum.

CO-IV To determine the velocity of transverse waves along a stretched string using a sonometer.

CO-V Determination of the force constant of a spring by static and dynamic method.

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Semester-III

CO-I Different types of aberrations and their minimization in lenses .

CO-II Principle of super position and with applications to Newton rings and Michelson interferometer

CO-III Fraunhoffer diffraction pattern with single, double and N silts. Fresnel half period zones

CO-IV Polarization methods, Nicol prism as polarization & Analyzer –optical Activity

CO-V Different types of fibers their applications principle of Holography and its applications

Practical -III

CO-I Determination of wave length of light using diffraction grating –normal incidence method

CO-II Dispersive power of a prism. By using sodium vapor lamp
CO-III Determination of wave length of light using diffraction grating- normal incidence method
CO-IV Study of optical rotation-polar meter
CO-V Refractive index of a liquid and glass (Boy's method)

Title of the Paper-(N.M) Thermodynamics and Radiation physics

Semester-IV
CO-I Explain the kinetic theory of gases and Zeroth law of thermodynamics.
CO-II Isothermal and adiabatic process reversible and irreversible process efficiency Carnot engine-concepts of entropy
CO-III Describe the Joule Thomson expression the low temperature
CO-IV Measurement of radiation –types of pyrometers.
CO-V See beck effect variation of thermo- emf with temperature. Peltier effect, demonstration peltier coefficient.

Practical -IV
CO-I To study the thermal conductivity of bad conductor lee's method
CO-II Study the thermal conductivity of rubber
CO-III Study of variation of resistance with temperature -Thermister
CO-IV Thermal behavior of electrical bulb
CO-V Specific heat of liquid by applying Newton's law of cooling correction.

Title of the Paper-(W.M) Electricity, Magnetism& Electronics

Semester-V

CO-I Gauss's law statement and its proof-electric displacement D, electric polarization P – relation between D, E& P.

CO-II Biot-savart law, Explanation and calculation of B due to long straight wire-Hall effect, faradays law –lenz law self and mutual inductance.

CO-III Relation between current and voltage in LR and CR circuits. LCR series and parallel resonance circuit-Maxwell's equations.

CO-IV I-V Characteristics of P-N junction diode, zenar diode, Tunnel diode. CB, CE& CC Configurations.

CO-V State and prove the Boolean algebra, Demorgan's laws and verify the universal gates

Practical -V

CO-I Verification of the logic gates of truth tables.

CO-II To study the zenar diode characteristics.

CO-III To study the P-N diode characteristics

CO-IV Verification of Kirchoff laws .

CO-V LCR circuit series /parallel resonance

Title of the Paper-(W.M)Modern physics

Semester-V

CO-I Idea about atomic structure-vector atom model. Molecular spectroscopy a related to Raman effect.

CO-II Dual nature of matter and waves idea about uncertainty principle.

CO-III Introduction to quantum mechanics. Applications of Schrodinger wave equation to particle in a box.
CO-IV Properties of nuclear and nuclear models theory of α –decay and β- decay.
CO-V Introduction to X-ray diffraction and laue's and powder method basic idea of super conductivity and their applications.

Practical -VI
CO-I Determination of specific charge of electron
CO-II Determination of magnetic moment of bar magnet and horizontal component of earth magnetic field.
CO-III Energy gap of semiconductor using junction diode
CO-IV Energy gap of semiconductor using Thermister
CO-V Determination of planks constant.

Title of the Paper-(N.M)Electricity, Magnetism& Electronics
Semester-V
CO-I Gauss's law statement and its proof Applications of gauss law
CO-II electric displacement D, electric polarization P, permeability& Susceptibility–relation between D, E& P.
CO-III Drift velocity expression, Kirchhoff's laws – statement and explanation and application to Wheatstone bridge
CO-IV Theory and working of a moving coil ballistic galvanometer, application of B.G damping correction
CO-V State and prove the Demorgan's laws and verify the universal gates

Practical -V

CO-I Verification of the logic gates of truth tables.

CO-II To study the zenar diode characteristics.

CO-III To study the P-N diode characteristics

CO-IV Verification of Kirchhoff laws .

CO-V LCR circuit series /parallel resonance

Title of the Paper-(N.M)Modern physics& Medical physics

Semester-V

CO-I Idea about atomic structure- spectroscopy a related to Raman effect, Zeeman effect

CO-II Theory of Compton effect and its experimental verification-Bohr's theory hydrogen atom

CO-III Properties of matter waves Davison and Germer experiment on electron diffraction

CO-IV Half life and mean life periods –derivations , units of radio activity , carbon and uranium dating

CO-V Introduction to X-ray diffraction and Laue's and powder method basic idea of super conductivity and their applications.

Practical-VI

CO-I Determination of specific charge of electron

CO-II Determination of magnetic moment of bar magnet and horizontal component of earth magnetic field.

CO-III Energy gap of semiconductor using junction diode

CO-IV Energy gap of semiconductor using Thermister

CO-V Determination of planks constant.

Title of the Paper- (W.M&N.M) Analog & Digital electronics

Semester-VI

CO-I Applythe knowledge of basics of FET and MOSFET in understanding their characteristics.

CO-II Characteristics of ideal and practical OP-AMP (IC-741) and its parameters

CO-III Applications of OP-AMP and different types of amplifiers.

CO-IV Characteristics of digital ICS –RTL,DTL,TTL etc. And its pin diagram

CO-V Apply the knowledge of JK flip flop RS flip flop, D flip flop.

Practical's –VII

CO-I Characteristics of FET

CO-II Characteristics of MOSFET

CO-III Characteristics of LDR

CO-IV OP-AMP as amplifier / inverting amplifier.

CO-V Characteristics of OP-AMP

Title of the Paper-(W.M) Electronic Instrumentation
Semester-VI

CO-I To learn about the basic concepts on electronic measurements and instruments .

CO-II To study the electronic voltmeter parameters , measurements and their significance.

CO-III The student can learn about the CRO functioning and application .

CO-IV To gain good knowledge on digital multimeter and digital instruments.

CO-V To learn about the good knowledge on single generator and bridge.

Practical –VIII-A-3

CO-I Study the loading effect of a multimeter by measuring voltage across allow and high resistance.
CO-II Study the limitations of a multimeter for measuring high frequency voltage and current.
CO-III To measure the voltage, frequency, time period and phase angle using CRO .
CO-IV To measure the time period and frequency using universal counter/frequency counter
CO-V To measure the rise, fall and delay times using a CRO

Title of the Paper-(W.M) Computational Methods and programming

Semester-VI
CO-I To acquire the knowledge on fundamental concepts of c-programming .
CO-II To develop programs by using control statements in C-language
CO-III To apply the Arrays and functions of C-language.
CO-IV To gain the knowledge of linear and non –linear equations .
CO-V To understand the basic definitions and concepts of interpolations, numerical differentiation and integration.

Practical –VIII-A-2

CO-I Write a program that reads an alphabet from keyboard and display in the reverse order.
CO-II Write a program to read and display multiplication of tables.
CO-III Write a program for converting centigrade to Fahrenheit temperature and Fahrenheit temperature centigrade.
CO-IV Write a program to find the largest element in an array
CO-V Write a program for generation of even and odd numbers up to 100 using while, do-while and for loop.

Title of the Paper- (W.M) Introduction to Microprocessors and Microcontrollers

Semester-VI

CO-I To understand architecture of 8085 Microprocessor .
CO-II To learn various 8085 in instruction set and interrupts.
CO-III To learn Microcontrollers, embedded systems design, development and its product life cycle.
CO-IV To understand architecture of 8085 Microcontrollers, timers& interrupts
CO-V To have clear idea about 8051 I/O programming.

Practical's –VIII-A-1

CO-I Do programming with 8085 Microprocessor .
CO-II Understand concepts of 8085 Microcontroller.

CO-III Program 8085 with different instructions and small programs

CO-IV Understand embedded systems and overview.

CO-V Interface stepper motor with 8051 and write a program to move the motor through a given angle in clock wise or counter clock wise direction.

M.Sc., Physics
OUTCOMES
SEM-I

COURSE CODE: PHY 10201-A

COURSE TITLE: PHY-CLASSICAL MECHANICS **AND THEORY OF RELATIVITY**

CO1: Understand and derive the Lagrangian & Hamiltonian mechanics and its applications.

CO2: Analyze the canonical transformations and understanding the Hamilton- Jacobi theory.

CO3: Apply the knowledge of basics conditions for closed orbits and rigid body dynamics

CO4: Understand and analyze the postulates of special theory of relativity and its applications.

COURSE CODE: PHY 10202-A

COURSE TITLE: PHY-ATOMIC AND MOLECULER PHYSICS

CO1: Knowledge for the hydrogen atom, three quantum numbers, alkali elements, selection rule and coupling schemes of atomic spectra.

CO2: To explain the Zeeman, stark and paschen-back effects.

CO3: Knowledge for the different types of diatomic molecules and its applications of rotational energies.

CO4: Knowledgeforthedifferenttypesofdiatomic molecules and its applications of vibrational spectra.

COURSE CODE: PHY 10203-A
COURSE TITLE: PHY-SOLID STATE PHYSICS

CO1: Explain the origin of chemical bonding in ionic and Vander Waals crystals, elastic properties and quantization of lattice energies and vibrations.
CO2: Explain the matheissens rule and relaxation time approximation of transport phenomena and band theory.
CO3: Explain the types of semiconductors, Hall Effect and determination of life time diffusion length of minority charge carriers.
CO4: To Understanding the concept of zero resistance, differs between the perfect conductors and super conductors and its applications.

COURSE CODE: PHY 10204-A
COURSE TITLE: PHY-ANALOG AND DIGITAL ELECTRONICS

CO1: Apply the knowledge of basics of FET and MOSFET in understanding their characteristics.
CO2: Uses the basics of operational amplifier to understand its practical applications in electronic circuits.
CO3: Implement simple logic operations using combinational logic circuits and understand the working of sequential logic circuits like as RS ff, JK ff and D ff etc.
CO4: Understand and analyze the internal operation of 8086 microprocessor.

COURSE OUTCOMES
SEM-II

COURSE CODE: PHY 20201-A
COURSE TITLE: PHY-STATISTICAL MECHANICS

CO1: To understand the Types of ensembles and comparison of various ensembles.
CO2: Analyze the canonical partition function, Vibrational partition function and their Applications.
CO3: To gain the knowledge of Maxwell-Boltzmann distribution and Two fluid model.
CO4: Explain the Fermi-Dirac distribution and one dimensional random walk.

COURSE CODE: PHY 20202-A
COURSE TITLE: PHY-ELECTROMAGNETIC THEORY, LASERS AND MODERN OPTICS

CO1: To Analyze the Maxwell's equations and Retarded potentials.
CO2: Understand the different types of lasers, Basic principles and their Applications.
CO3: To explain the Basic theory of Holography and Two dimensional Fourier transforms.
CO4: To learn the Total internal reflection and Applications of optical fibers in communication and medicine.

COURSE CODE: PHY 20203-A
COURSE TITLE: PHY- MATHEMATICAL PHYSICS

CO1: To explain the Beta and Gamma functions and Legendre, Bessel and Hermit differential equations and their Recurrence relations.

CO2: To gain the knowledge of Fourier Transforms and Laplace Transforms.
CO3: To understand the Laplace equations and thermal expansion.
CO4: To learn the Cauchy-Riemann equations and Residue theorem.

COURSE CODE: PHY 20204-A
COURSE TITLE: PHY-COMPUTATIONAL METHODS AND C- PROGRAMING

CO1: To explain the creating &editing Document, Worksheet and Presentation.
CO2: To understand the data types Controlling statements and Arrays.
CO3: learn the Bisection, Gauss elimination method and their Algorithms.
CO4: To gain the linear interpolation, Numerical differentiation and fourth order Runga-kutta Method.

COURSE OUTCOMES
SEM-III

COURSE CODE: PHY 30201
COURSE TITLE: PHY-QUANTUM MECHANICS - I

CO1: Learn the postulates of Quantum mechanics and derive the Eigen values and Eigen function of barrier & well and explain the operators, bra –Ket notation and its properties.
CO2: Explain the angular momentum and their Eigen values, Eigen functions & C-G coefficients.

CO3: Understand and analyzed the time dependent & time independent perturbation theory for generate and degenerate levels.
CO4: Analyze the scattering theory, partial wave analysis, born approximation and its validity condition.

COURSE CODE: PHY 30202

COURSE TITLE: PHY-NUCLEAR AND PARTICLE PHYSICS

CO1: To understand & analyze the nuclear forces and models.
CO2: To explain the types of nuclear reactions, nuclear decays and its selection rules.
CO3: Understand the types of nuclear accelerators and rectors.
CO4: Apply the knowledge of basis of elementary particles, types and their properties.

COURSE CODE: PHY 30203
COURSE TITLE: PHY- PHYSICS OF SEMICONDUCTOR DEVICES

CO1: To understand the I-V characteristics of junctions like as P-N & Interfaces like as metal-semiconductor.
CO2: To explain the junction diodes like as majority carrier diodes, microwave devices& optoelectronic devices.
CO3: Apply the knowledge of basis of BJT, FET, and MOSFET & CCD.
CO4: To explain the power rectifiers, thyristors and technology of semiconductor devices.

COURSE CODE: PHY 30204

COURSE TITLE: PHY-CONDENSED MATTER PHYSICS-I

CO1: To understand the imperfection in crystals and classifications.

CO2: To explain the classification, properties and applications of Ferro electrics and Ferromagnetism.

CO3: Understand the crystal growth and characterization.

CO4: To explain the fluorescence and phosphorescence and its applications.

COURSE OUTCOMES

SEM-IV

COURSE CODE: PHY 40201

Course Title: PHY- QUANTUM MECHANICS -II

CO1: To understand the different types of pictures and Poisson and commutation brackets their properties.

CO2: To explain the identical particles and molecules.

CO3: To explain the Klein –Gorden equation, probability, inadequacies of K.G equation.

CO4: Understand and analyze the method of canonical quantization, second quantization and N- representation system.

COURSE CODE: PHY 40202

Course Title: Phy-Analytical Techniques

CO1: To gain the knowledge of diffraction methods for structure analysis.

CO2: To explain the electron spin resonance spectroscopy and analyze the Mossbauer spectrum.

CO3: To understand the theory of NMR and basic concepts of NQR spectra.

CO4: To gain the knowledge of instrumentation and applications of photoelectron spectroscopy and scanning electron microscopy.

COURSE CODE: PHY 40203
COURSE TITLE: PHY-ADVANCES IN PHYSICS

CO1: Understand the emergence of nanotechnology and analyze the physical vapour deposition.
CO2: Analyze the basic structure and applications of MEMS and nanodevices.
CO3: To gain the knowledge of 8051 micro controllers and single-bit instructions.
CO4: To analyze the electromagnetic spectrum and applications of remote sensing.

COURSE CODE: PHY 40204
COURSE TITLE: PHY- CONDENSED MATTER PHYSICS-II

CO1: Analysis of stress and strain tensors and Elastic waves in cubic crystals.
CO2: To explain the properties of phonons and experimental study of dispersion curves.
CO3: To Understand the energy band calculations and construction and characteristics of Fermi surface.
CO4: To Understand the classification of amorphous semiconductors and liquid crystals and polymers their applications.

Chemistry
Course Outcomes (U.G)
Semester-I -Paper-I Inorganic and Organic Chemistry

CO-I To make student understand the modern periodic table which stand the backbone in understanding Chemistry and the periodic properties like Atomic and Ionic size Ionization Energy Electron Affinity Electro negativity and making student understand the P-Blockelements of Group 13&14 Elements in a periodic table.

CO-II They know the Classification ,Nomenclature of Organo metallic compounds.

CO-III Students become eligible to study the subject initially by understanding the basic things for chemical reactions i.e. Substrate and Reagents Types of reagents Electrophilic and Nucleophilic Homolytic and heterolytic fission & Inductive effect etc.

CO-IV Many of the daily used materials are organic compounds and majority of them are hydrocarbons therefore this topic makes the concept regarding their formation.

CO-V They know about the Basic of the alkenes and alkynes and describe the structure of Benzene with respect to the chemical point of view.

Semester-II- Paper-II Physical and General chemistry

CO-I understanding the mathematical ideas the subject can be better enriched.

CO-II The research and the development has evolved to the level high and as a result of that the human life standardhasthusenhanceddaybydaymedicinal, infrastructural home utilities etc facilities like electronic equipments.

CO-III The drugs may use any of the states of the matter like solid, liquid, gaseous state.

CO-IV In majority of the daily routine thing used for its surface utilization and therefore understanding the surface phenomenon.

CO-V The students will gain Knowledge about Different types of Hybridisation.and also the concept of Hydrogen bonding and describe the MOT Theory of Homo and Hetero Atomic molecules. the importance of optical isomerism and understand the terms of Enantiomers, Diastereomers and Meso compounds.

Semester-III- Paper-III Inorganic and Organic Chemistry

CO-I The students will be an Understand the trends in atomic and physical properties of d-block elements .

CO-II The students will gain Knowledge about Conductors. Semiconductors and Insulators used in daily life.

CO-III The students will an Understand the shapes and structures of metal carbonyls.

CO-IV The students will be an Understand the distinguish aliphatic and aromatic halogenated organic compounds and they know the preparation methods for the halogenated organic compounds.The students will Understand the interpret reactivity of aldehydes and ketones.

CO-V The students write different preparation methods for carboxylic acids and their derivatives.and also understand the design reactions of carboxylic acids and their derivatives of active metylene compounds.

Semester-IV- Paper-IV Spectroscopy & Physical Chemistry

CO-I The students will gain an understand the Spectroscopy and how to analyzed the unknown organic compounds by using instrumentation of spectrophotometers of IR spectroscopy Electronic spectroscopy and proton magnetic resonance spectroscopy.

CO-II The fundamentals of electronic structure and bonding in conjugated and aromatic systems by using Electronic spectroscopy

CO-III Students will be provided with an introduction to the fundamentals of electrochemistry and solution properties. And understand how simple ions added to aqueous solution affect the structure of water.

CO-IV The students Understand why a solution conducts electricity and how it can be measured.and the relationship between the cell potential, and also how to measure a standard electrode potential using a standard reference electrode.

CO-V Defines the importance of phase diagrams in the field of material science. And define the importance of basic definitions Phase,Equilibrium,Component,Degree of freedom and phase rule concept.

Semester-V - Paper-V- Inorganic,Physical and Organic Chemistry

CO-I Thestudentsw ill gain an understand how to classify of coordination compounds,Valence bond theory,Hybridisation.

CO-II Describe the electronic selction rules and correlate the intensity and wavelength of Coordination geometry.

CO-III The students will gain an understand the classification and nomenclature &named reactions of nitro hydrocarbons.

CO-IV They know the nomenclature, classification of primary, secondary, tertiary &quaternary amines and its synthesis and applications of nitrogen compounds.

CO-V Students will gain an understanding of the first law of Thermodynamics and how to express its mathematical application and calculate energy.

Paper-VI- Inorganic, Physical and Organic Chemistry

1. The students able to describe bonding models that can be applied to a consideration of the properties of transition metal complex. The students familiar about the inorganic halogen compounds, coordination compounds and transition elements.
2. They know the biological significance of elements. And also gain the knowledge about the structure and functions of Hemoglobin, Chlorophyll.
3. The students understanding of heterocyclic chemistry which includes various methods for ring synthesis and application of those methods for the preparation of specific groups of heterocyclic systems.
4. They find the carbohydrates in our food, and understand the structure of glucose and fructose.

5. The students define what are amino acids, and which elements present in our body and also the synthesis and applications of amino acids.

Semester-VI – Elective Paper-VII- Inorganic,Physical and Organic Chemistry

CO-I The course aims to familiarize students with the principles of analytical chemistry and Basic analytical techniques including volumetric analysis.

CO-II The students should be able to make the solutions of various molar concentrations.

CO-III The students know the how to separate impurities in solvents by solvent extraction.

CO-IV The students know the how to separate a components in mixture in industrials.

CO-V The students also understand the different chromatographic methods in practical purposes.

Cluster Paper-VIII-(A-1): Polymer Chemistry

CO-I The students will gain knowledge about, how to estimate the number- and weight-average molecular masses of polymer samples given the degree of polymerization and mass fraction of chains present.

CO-II The students an understanding of Converting monomer to long chain polymer and understanding of polymerization processes.

CO-III The students identify the repeat units of particular polymers and specify the isomeric structures which can exist for those repeat units

CO-IV They describe the role of rubber-toughening in improving the mechanical properties of polymers.
CO-V The students know the how to manufacture of plastics in Industrial level.

Cluster Paper-VIII-(A-2): Instrumental methods of analysis

CO-I The fundamentals of electronic structure and bonding in conjugated and aromatic systems by using Electronic spectroscopy.
CO-II The students how to detect a signals and they know the advantages of FTIR.
CO-III They know the single and double beam spectrophotometers and Fluorescence.
CO-IV They know the how to handling of Gas and liquid chromatography by using different samples in industrial purpose.
CO-V The students an understanding of separation of ions by using mass, charge ratio.

Cluster Paper-VIII-(A-3): Analysis of Drugs, Foods, Dairy products and Bio chemical analysis

CO-I The students know the information about how drugs perform in daily clinical practice.
CO-II They know the Molecular structure of Paracetmol and Aspirin.
CO-III They Know the different anti histamine drugs like Allegra, zyrte.
CO-IV The students know about analysis of milk, and identify the fat, acidity present in Milk products.
CO-V They know about the how to estimate blood composition in clinical analysis.

M.Sc., Organic Chemistry

COURSE OUTCOMES

SEMESTER -I

COURSE CODE: CHE -10301

- **COURSE TITLE: CHE -101- IN ORGANIC CHEMISTRY**

CO1: Explain the basics of crystal field theory, CFSE and its calculations splitting of d-orbital, structures (trigona, sqarplanr ,pyramidal,pentagonal),its applications and MOT of co-ordinate bond, M.O diagram

CO2: Explain the general characteristics of the Non-Transition elements, special features of individual elements Synthesis, properties & structure of some Non-Transition elements

CO3: learn to Reactivity of metal complexes, inert & labile complexes , kinetics & mechanism of substitution reactions, acid &base hydrolysis reaction

CO4: Understand the preparation, properties ,strictures, VBT,MOT,EAN of the metal carbonyls and metal nitrosyls

COURSE CODE: CHE -10302

- **COURSE TITLE: CHE- 102 - ORGANIC CHEMISTRY**

CO1: Explain the aromatic ,non aromatic ,benzenoid and non benzenoid compounds its follow the Huckle rule, stricture and synthesis of some aromatic compounds

CO2: learn to the aliphatic and aromatic substation reactions classification of substation reactions NGP, Bandings, reactivity of substrate and examples

CO3: Explain the representation of organic molecules and Optical isomerism: Molecular Symmetry and Chirality , classification-configuration of cis and trans, R-S isomers some examples

CO4: learn to the Type of reactions and mechanisms and some examples, thermodynamic and kinetic requirements and controls, potential energy diagrams (ally and arynes, freeradicals)

COURSE CODE: CHE- 10303

- **COURSE TITLE: CHE -103 -PHYSICAL CHEMISTRY**

CO1: Explain the Quantum mechanical results of operator algebra, momentum and energy. the Schrödinger's eqation,particle in a box and some modals, And approximate methods(first order ,non degenerate)

CO2: learn to the chemical dynamics of rate laws, collision theory ,Lindeman-Hinshelwood (RRKM)theory and applied photochemical reactions (H,Br,HCl), Autocatalysis-H,O reactions

CO3: Analyze the thermodynamic derivation of phase rule, solid-liquid, thermal analysis and applications ,Two component system

CO4: Analyzed The Electro Chemistry Debye huckel-onsagar equation, limitations examples activity and activity coefficients EMF method their limitations and reversible electro chemical cells(liquid junction potential), electro catalysis

COURSE CODE: CHE -10304

- **COURSE TITLE: CHE -104 - SPECTROPHOTOMETER GROUP THEORY AND ANALYTICAL METHODS**

CO1: Explain the basic principles of spectroscopy and electromagnetic spectrum, width of spectral lines. And UV &visible spectroscopy (Beers-lamberts law) some examples are Cr &Mg in mixtures.
CO2: To analyze symmetry and group theory, sub groups and classification point symmetry group, symbols(Cn,Cnv,Dnh) etc.
CO3: To analyzed analytical methods and types of errors, significant figures their examples and calibration of weights, glass wear.
CO4: Explain the basic principles of thermal methods and radio analytical methods their examples.

SEM-II

COURSE CODE: CHE 20301

- **COURSE TITLE: CHE 201 IN ORGANIC CHEMISTRY**

CO1: Explain transition metal π-complexes understand organic molecules their preparation, properties ,structures and reactivity.
CO2: To learn electronic spectra of complexes Frank-cond on principle - Russel saunders coupling - spectroscopic term symbols-selection rules - break down of selection rules- orgel Diagrams for d^1 tod ^{9} configurations.

CO3: To explain magnetic properties of transition metal complexes and calculation of magnetic moment from magnetic susceptibility of examples Ti (III), V (III), VO^{2+}, Cr (III), Mn (II), Fe (III), Co(II), Ni (II) and Cu (II).

CO4: To analyzed catalysis reactions, classification, redax reactions other types of catalyzed reactions in their examples.

COURSE CODE: CHE 20302

- **COURSE TITLE: CHE 202 ORGANIC CHEMISTRY**

CO1: Explain the elimination reactions and etherification and their types ,factors, molecular rearrangement some reactions.

CO2: Explain the stereo chemistry of geometriculer isomerism ,classification and conformational analysis and their reactivity of cycles &acyclic molecules examples of some isomerism.

Explain the nomenclature of hetro cycles compounds(Hantzsch-widman) three &four member cycles their synthesis and chemical properties.

CO4: Explain the definition ,general methods of isolation, isoprenerule , classification and synthesis of terpenoids.

COURSE CODE: CHE 20303

- **COURSE TITLE: CHE 203 PHYSICAL CHEMISTRY**

CO1: Explain the Quantum Chemistry Angular momentum- Generalised Angular momentum, Electronic structure of Atoms and molecular orbital theory of heckle rile their applications and examples.

CO2: To learn surface chemistry ,vapour process ,Gibbs adsorption isotherm BET equation and micelles their classification CMC reactions.

CO3: Explain the Classical Thermodynamics, Statistical Thermodynamics, Derivation of Gibbs- Durham's equation, calculation of thermodynamic properties in terms of portion functions – Heat capacity, chemical equilibrium and equilibrium constant in terms of partition functions .

CO4: Explain the Reversibility and irreversibility , Dissolution and deposition, voltage, charge transfer,polarography reactions in electro chemistry.

COURSE CODE: CHE 20304

· **COURSE TITLE: CHE 204 –BIO INORGANIC, BIO ORGANIC BIO PHYSICAL & CHEMOTHERAPY**

CO1: Explain the bio inorganic chemistry ,hydrolytic metalo enzymes ,importance of metal in biology and metal complexes.

CO2:To learn carbohydrates lipids and fatty acids their structures and biological importance of bio organic chemistry.

CO3: To learn bio physical chemistry, polymers, enzymes(DNA & RNA) Structures and functions.
CO4: To Explain chemotherapy, anti malerials and anti biotics, their structures and synthesis structure activity relationship.

SEM-III

COURSE CODE: CHE 30301

- **COURSE TITLE: CHE 301 - ORGANIC CHEMISTRY-I**

CO1: To Learn Addition Reaction C-C,C=C,C=O,C=N reactions and some named reactions, rearrangements, examples
CO2: learn to the reagents in uses in organic synthesis reactions examples (AlCl3,BF3,N-Bs,DDQ-etc)
CO3: Expailn the some organo metallic reagents their uses in organic reactions (Zn,Co,Me,Rh,Pd,Ni)
CO4: Explain the Topicity, Prochirality, Pro stereoisomerism-Substrate Selectivity, Diastereo selectivity, classify cation of Asymmetric Synthesis ,some examples

COURSE CODE: CHE 30302

- **COURSE TITLE: CHE 302 - ORGANIC CHEMISTRY-II**

CO1: To Learn Replacement and Hantzsch-Widman nomenclature of five membered, six membered and fused heterocycles and their synthesis

CO2: learn to the Benzof used Five and Six Membered Heterocyclic Compounds, their synthesis and functions

CO3: Explain The Polymer Reactions, Stereo specific Polymers, Preparation of Polymers based on different types of polymers and synthesis

CO4: Analyzed the oxidation and reduction reaction , difference between the oxidation and reduction ,some examples

COURSE CODE: CHE 30303

COURSE TITLE: CHE 303 –ORGANIC SPECTROSCOPY AND ITS APPLICATIONS

CO1: To define the UV spectroscopy, ORD and Circular dichrosim principle, some examples

CO2: To analyzed the IR spectroscopy, FT-IR spectroscopy, values and applied some carbonyl compounds

CO3: To explain the NMR spectroscopy, C13 NMR spectroscopy and their applications classification of Copings(ABX,AMX,ABC,A2B2 etc),COSY,NOESY,DEPT,HSQC,HMBC.

CO4: To analyzed the Mass spectroscopy values, types. Molecular ion pike,Ei,CI,FD and FAB , examples of mass spectral fragmentation of organic compounds with respect to their structure determination.

COURSE CODE: CHE 30304

- **COURSE TITLE: CHE 304 – GENERAL CHEMISTRY**

CO1: To analyzed the structure,bio synthesis, biological importance, classification of Vitamins And Prostaglandins

CO2: To analyzed the structure,bio synthesis, biological importance, classification of enzymes as a tool for drug development(aspirin).

CO3: Knowldged for drug discovery and principle of drug desining,classification of drug some examples their biological importance.

CO4: Knowldged for different types of chromatography techniques used for modern separation methods.

SEM-IV

COURSE CODE: CHE 40301

- **COURSE TITLE: CHE 401 - ORGANIC SYNTHESIS-I**

CO1: Learn to the organometalic reagent used for organic reactions(B,S,Si,Pa).

CO2: Knowledge for some rearrangements used in organic reactions, classification of rearrangements (C, N, O) and aromatic rearrangements.

CO3: Knowledge for different types of reactions involved in organic synthesis, used for PTC, microwave, enamine, ionic liquid .

CO4: Learn to the molecular orbital symmetry used for organic molecules, electrocyclic reactions, classification ,4n+2 rule .

COURSE CODE: CHE 40302

- **COURSE TITLE: CHE 402 - ORGANIC SYNTHESIS-II**

CO1: :Knowledge for different types of organic reactions Disconnection Approach, Classification of organic reactions-C,C=C,C-X, Two C=X some examples.

CO2: Knowledge for different types of organic reactions, protecting group, one group two group and some examples.

CO3: Learn to the differences types of photo chemical reaction used in examples and cycle, acyclic compounds.

CO4: Learn to the molecular orbital symmetry used for organic molecules cyclo addition reactions some examples and sigma tropic rearrangements.

COURSE CODE: CHE 40303

COURSE TITLE: CHE 403 –CHEMISTRY OF NATURAL PRODUCTS

CO1: Knowlgded for basics skelliton,nomiclature and bio synthesis of steroids and harmons.

CO2: Analyzed for accurancy, osolation, structure elucidation and physic logical action, classification and biosynthesis of alkaloids.
CO3: Knowlgded for synthesis, properties, structure and metabolism of proteins and peptides.
CO4: Learn to accurancy, osolation, structure elucidation and synthesis biological importance of flavanoids & isoflavanoids .

COURSE CODE: CHE 40304

- **COURSE TITLE: CHE 404 – GREEN CHEMISTRY**

CO1: Knowldged for principle,atomeconomy and scope of green chemistry used in organic reactions.
CO2: Knowldged for synthesis of some examples used in multistep synthesis.
CO3: Understand the classification, characterization and applications of nonmaterial's.
CO4:Explain the structure synthesis and conformation of nucleic acid nucleotide.

MATHEMATICS (CO's)
M.P.C., M.S.Cs., M.P.E

SEMESTER- I:
PAPER –I: DIFFERENTIAL EQUATIONS
PAPER CODE: 1110-B
CO1: To study various techniques of solving first order and first degree differential equations.
CO2: To know equations solving methods of first order but not of first degree.

CO3: To study various techniques of higher order linear homogeneous differential equations
CO4: To study various techniques of higher order linear non homogeneous differential equations
CO5: To gain the knowledge of methods of solving higher order differential equations.

SEMESTER- II: PAPER –II: SOLID GEOMETRY

PAPER CODE: 2210-A

CO1: To gain knowledge in 3D- dimension, quadratic geometry.
CO2: Students can easily understand the solving techniques for lines and planes.
CO3: Students gain knowledge of sphere and its properties
CO4: To determine the sphere problems by using various formulations.
CO5: Students know the basic definitions and concepts of cone and cylinder.

SEMESTER- III:

PAPER –III: REAL ANALYSIS

PAPER CODE: 3310-A

CO1: To know the basic concepts of Real numbers and real sequences.
CO2: To understand the infinite series and different types of test for convergence
CO3: To use previous knowledge of continuity
CO4: To know the derivability of a function and mean value theorem.
CO5: To gain knowledge of Riemann integration.

SEMESTER- IV:
PAPER –IV: ABSTRACT ALGEBRA
PAPER CODE: 4410-A

CO1: To know the basic concepts of groups and semi groups.
CO2: To gain the knowledge of subgroups and its operations.
CO3: To study the concepts of cosets and Lagrange's theorem and normal subgroups.
CO4: To gain the Knowledge of homomorphism, Isomorphism and Automorphism of groups.
CO5: To gain the complete knowledge of permutation groups and cyclic groups.

SEMESTER- V:
PAPER - V: RING THEORY&MATRICES
PAPER CODE: 55101

CO1: The students can study the concept of rings and fields, Integral domains.
CO2: To understand the concept of characteristics of rings.
CO3: To learn Homomorphism of rings.
CO4: To understand the matrices and to solve their problems.
CO5: To aware the importance of Matrices and characteristics roots and values.

SEMESTER- V:
PAPER VI - LINEAR ALGEBRA
PAPER CODE: 55102

CO1: To gain knowledge of basic concepts of vector spaces, subspaces, basis and dimension.
CO2: To study linear transformation and its properties.

CO3: To find Eigen values and Eigen vectors by using cayley Hamilton theorem.
CO4: To gain knowledge of basic definitions and concepts of inner product spaces.
CO5: To gain knowledge of orthogonality and orthonormal.

SEMESTER- VI:

ELECTIVE PAPER - VII: VECTOR CALCULUS
PAPER CODE: 610EL01

CO1: To study the concept of vector differentiations and Gradient of scalar point function.
CO2: To gain knowledge in curl of vector and divergence of vectors and its applications.
CO3: To study the concept of vector identities.
CO4: To gain knowledge of vector integration and volume integral
CO5: To study the concept of Gauss divergence, Greens, Stoke's theorems and its applications.

SEMESTER- VI:
CLUSTER PAPER VIII: LAPLACE TRANSFORMS
PAPER CODE: 610CLA1

CO1: To study the basic definitions and concepts of Laplace transforms..

CO2: To know the first and second shifting theorems, change of scale property, initial and final value theorems. .

CO3: To understand complete Laplace transforms of integrals.
CO4: To study basic definitions and concepts of inverse Laplace transforms.
CO5: To describe about the inverse Laplace transforms of derivative and its applications.

SEMESTER- VI:

CLUSTER PAPER IX: INTEGRAL TRANSFORMS
PAPER CODE: 610CLA2

CO1: To study the application of Laplace transforms for the solutions of differential equations..
CO2: To study the applications of Laplace transforms for the solutions of P.D.E.
CO3: Students will able to know the applications of Laplace transforms of solutions. .
CO4: To describe about the Fourier transforms. .
CO5: To understand complete relation between Fourier and Laplace transforms.

COURSE OUTCOMES FOR UG
B.Sc. MATHEMATICS HONOURS

SEMESTER- I: CORE PAPER –I: CALCULUS
PAPER CODE: 1131

CO1: To Expertise in Hyperbolic functions and Higher order derivatives
CO2: To study the basic definitions of vector differentiations.
CO3: To study the concept of vector differentiation.
CO4: To study the basic concepts of vector integration and integral circulation problems
CO5: To gain knowledge of Gauss divergence, Green's and stroke's theorems and its applications.

SEMESTER- I: CORE PAPER II - ALGEBRA
PAPER CODE: 1132

CO1: To recall the previous knowledge of integers and its relevant theorems.
CO2: To know the method of find G.C.D, L.C.M of two numbers by using the canonical representation
CO3: To gain the knowledge of matrices and their applications.
CO4: To find the solutions of Eigen values and Eigen vectors by using Cayley Hamilton theorem
CO5: To know different methods of linear equations.

SEMESTER- II: PAPER III – REAL ANALYSIS
PAPER CODE: 2231

CO1: To know the basic concepts of Real numbers and real sequences.
CO2: To understand infinite series and different types of test for convergence
CO3: To use the previous knowledge of continuity
CO4: To know the derivability of a function and mean value theorem.
CO5: To gain the knowledge of Riemann integration

SEMESTER- II: CORE PAPER –IV:
DIFFERENTIAL EQUATIONS
PAPER CODE: 2232

CO1: To study various techniques of solving first order and first degree differential equations.
CO2: To know the equations for solving first order but not first degree.
CO3: To study various techniques of higher order linear homogeneous differential equations

CO4: To study various techniques of higher order linear non homogeneous differential equations

CO5: To gain the knowledge of methods of solving higher order differential equations.

SEMESTER- III: CORE PAPER –V: THEORY OF REAL FUNCTIONS
PAPER CODE: 3331

CO1: To exhibit the knowledge of limits and continuity, derivative.

CO2: To gain the complete knowledge of mean value theorems and its applications.

CO3: To know the concept of functions of several variables.

CO4: To know various techniques of several variables.

CO5: To study the maximum and minimum problems for only one variable.

SEMESTER- III:
CORE PAPER –VI: GROUP THEORY - I
PAPER CODE: 3332

CO1: To know the basic concepts of groups and semi groups.

CO2: To gain the knowledge of subgroups and its operations.

CO3: To study the concepts of cosets and Lagrange's theorem and normal subgroups.

CO4: To gain the Knowledge of homomorphism, Isomorphism and Automorphism of groups.

CO5: To gain the complete knowledge of permutation groups and cyclic groups.

SEMESTER- III: CORE PAPER –VII: PDE AND SYSTEMS OF CODE
PAPER CODE: 3333

CO1: To know the basic concepts of ordinary partial differential equations.

CO2: To know the various techniques of P.D.E reducible to equations with constant coefficients.

CO3: To gain the knowledge of P.D.E reduction to canonical form.

CO4: To understand the solving methods of Cauchy initial value problem for first order P.D.E

CO5: To study the concepts of mathematical physics and its methods.

SEMESTER- IV:
CORE PAPER –VIII: NUMERICAL METHODS
PAPER CODE: 4431

CO1: To study the concept of errors in numerical computations and solutions of algebraic transcendental equations.

CO2: Students can understand iterative methods and its applications.

CO3: To gain the knowledge of interpolation with equal and unequal intervals and its applications.

CO4: To study the concepts of ordinary differential equations and different types of methods

CO5: To understand different types of numerical integrations rules and its applications.

SEMESTER- IV:
CORE PAPER –IX: RIEMANN INTEGRATIONS AND SERIES OF FUNCTIONS
PAPER CODE: 4432

CO1: To know the basic definitions and concepts of Riemann Integration.

CO2: To know the basic definitions and concepts of uniform convergence and series of functions.

CO3: To gain the knowledge of proper and improper integrals of first kind.

CO4: To gain the knowledge of proper and improper integrals of second kind

CO5: To gain the knowledge of power series and relevant problems and applications.

SEMESTER- IV:
CORE PAPER –X: RING THEORY AND LINEAR ALGEBRA -I
PAPER CODE: 4433

CO1: To know the basic definitions of rings and basic properties.

CO2: To gain the knowledge of integral domains, subrings and ideals.

CO3: To know the knowledge of ring of homomorphism.

CO4: To gain the knowledge of basic concepts of vector spaces, subspaces, basis and dimension.

CO5: To study the linear transformation and its properties.

SEMESTER- V:
CORE PAPER –XI: MULTIVARIATE CALCULUS
PAPER CODE: 5531

CO1: To study the basic concepts of partial derivatives.
CO2: To know the multivariable partial derivatives and solving methods.
CO3: To gain the knowledge of double integral and its concepts.
CO4: To know the concepts of triple integral in cylindrical and spherical coordinates
CO5: To study the basic concepts of several variables of special functions.

SEMESTER- V:
CORE PAPER –XII: GROUP THEORY - II
PAPER CODE: 5532

CO1: To know the basic concepts and definition of automorphism groups.
CO2: To know the basic definition and concepts of G-sets and its applications.
CO3: To gain the knowledge of conjugacy of group activity
CO4: To understand the direct product and its properties.
CO5: To gain the complete knowledge of sylow theorems on groups.

SEMESTER- VI:

CORE PAPER –XIII:

METRIC SPACE AND COMPLEX ANALYSIS
PAPER CODE: 6631

CO1: To study basic definitions and concepts of metric space.
CO2: To understand derivatives, differentiation of analytical functions.
CO3: To study the Mobius transformation and its properties.
CO4: To gain knowledge of complex integrals and contours theorem.
CO5: To understand various theorems on power series.

SEMESTER- VI: CORE PAPER –XIV: RING THEORY AND LINEAR ALGEBRA -II
PAPER CODE: 6632

CO1: To know the basic definitions and concept of polynomial rings.
CO2: To solve the various techniques of rank and system of linear equations.
CO3: To find the Eigen values and Eigen vectors by using cayley Hamilton theorem.
CO4: To gain the knowledge of basic definitions and concepts of inner product spaces.
CO5: To gain the knowledge of orthogonality and orthonormal

DISCIPLINE SPECIFIC ELECTIVE PAPERS FOR MATHEMATICS HONOURS

SEMESTER- V:
DSE PAPER – I: NUMBER THEORY
PAPER CODE: 5533
CO1: To gain the knowledge of Arithmetical functions.
CO2: To understand the basic knowledge of multiplicative function.

CO3: To gain the knowledge of theory of congruence's
CO4: To understand the Lagrange's theorem and application of Lagrange's theorem
CO5: To study the Quadratic residues and Quadratic non – residues

SEMESTER- V:
DSE PAPER II: PROBABILITY AND STATISTICS
PAPER CODE: 5534
CO1: To gain knowledge of Mathematical expansions of random variable.
CO2: To know basic definitions and concept of generating functions.
CO3: To gain knowledge of distribution functions for discrete type.
CO4: To know various types of distributions for discrete type.
CO5: To gain knowledge of uniform, exponential, normal distributions for continuous type.

SEMESTER- VI:
DSE PAPER –III: LINEAR PROGRAMMING
PAPER CODE: 6633
CO1: To study the basic definitions and concepts of LPP and methods.
CO2: To gain knowledge of types of Transportation problems and its applications
CO3: To study basic definitions and concepts of solving assignment problems.
CO4: To understand the Game theory and its applications.
CO5: To know the network scheduling PERT and CPM techniques.

SEMESTER- VI:
DSE PAPER –IV: DIFFERENTIAL GEOMETRY
PAPER CODE: 6634
CO1: To gain knowledge of basic concepts of theory of space curves.
CO2: To understand the local intrinsic properties of a surface.
CO3: To gain knowledge of the Geodesic equations and Canonical equations
CO4: To study basic definitions of first and second fundamental forms of a surface.
CO5: To study developable surface and minimal surface.

GENERIC ELECTIVE PAPERS FOR MATHEMATICS HONOURS

SEMESTER- II:
GE PAPER – II: ECONOMETRIC STATISTICS
PAPER CODE: 2233
CO1: To study the scope of statistics and basic concepts of statistics.
CO2: To study the diagrammatic representation of data
CO3: To study the concept of measure of central tendency
CO4: To study the concept of measure of dispersions
CO5: To study the scope of Econometrics and concept of linear models.

SEMESTER- III:
GE PAPER – III: INFORMATION SECURITY
PAPER CODE: 3334
CO1: To study the basic concepts on overview of security.

CO2: To observe the security threats and common threats.
CO3: The student can learn about the new concept of Cryptography
CO4: To gain the good knowledge on net work system and security.
CO5: To learn about good knowledge on administrating security, information and law.

SEMESTER- IV:
GE Paper IV COMBINATORIAL MATHEMATICS
PAPER CODE: 4434
CO1: To study the basic definitions and concepts of counting principles, permutations and combination. .
CO2: To know the various techniques of generating functions.
CO3: To understand the scope and recurrence relations by generating functions.
CO4: To develop a Perceptions about principles of inclusion and exclusion. .
CO5: To know the basic definitions and concepts of graph theory and trees.

DEPARTMENT OF MATHEMATICS
COURSE OUTCOMES FOR UG 2018-2019
B.Sc. COMPUTER SCIENCE HONOURS

SEMESTER- I:
GE PAPER – I: ELEMENTARY MATHEMATICS
PAPER CODE: 1123-A
CO1: To study definitions and basic concepts of matrix algebra

CO2: To know the knowledge of determine the adjoint, inverse and rank of matrix
CO3: To understand solving methods of linear systems in various techniques.
CO4: To gain knowledge of numerical concepts and the solution of algebraic transcendental equations.
CO5: To know about the study of finite difference and interpolation.

SEMESTER- II:
GE PAPER – II: DIFFERENTIAL EQUATIONS
PAPER CODE: 2223-A

CO1: To study definitions and basic concepts of D.E and orthogonality trajectories.
CO2: To know various techniques of integrating factor.
CO3: To study various techniques of higher order linear homogeneous differential equations
CO4: To study various techniques of higher order linear non homogeneous differential equations
CO5: To gain knowledge about methods of solving higher order differential equations

SEMESTER- III:
GE PAPER – III: VECTOR CALCULUS
PAPER CODE: 3324-A

CO1: To study the concept of vector differentiations and understand the Gradient of scalar point function.
CO2: To gain knowledge in curl of vector and divergence of vectors and its applications.
CO3: To study the concept of vector identities.

CO4: To gain knowledge of vector integration and volume integral

CO5: To study the concept of Gauss divergence, Greens, Stoke's theorems and its applications.

SEMESTER- IV:
GE PAPER – IV:
FUNDAMENTALS OF MATHEMATICAL STATISTICS PAPER CODE: 4424-A

CO1: To understand basic concepts, scope and limitations of Mathematical statistics.

CO2: To study the measure of central tendency.

CO3: To study the measure of dispersion.

CO4: To gain knowledge of measure of skewness and kurtosis

CO5: To understand the concepts of measure of correlation coefficient and regression.

SEMESTER- II:
CORE PAPER – IV: DESCRETE STRUCTURES
PAPER CODE: 2222-A

CO1: To study basic definitions and concepts of set theory.

CO2: To gain knowledge of concepts of Mathematical logics.

CO3: To understand the concepts of normal form and solving techniques.

CO4: To study the theory of inference for the statement calculus.

CO5: To gain knowledge of basic definitions and concepts of graph theory.

DEPARTMENT OF MATHEMATICS
COURSE OUTCOMES FOR UG 2018-2019
B.Sc. FOOD TECHNOLOGY and MANAGEMENT

SEMESTER- I:
GE PAPER- I: APPLIED MATHEMATICS - I
PAPER CODE: 1151

CO1: To study basic definitions and concepts of sets and relations..

CO2: To study basic definitions and concepts of matrix.

CO3: To gain knowledge of solving techniques of inverse and rank of a matrix..

CO4: To determine appropriate derivative methods and differential methods of solving mathematical problems.

CO5: To understand various techniques in differential equations.

SEMESTER- II:
GE PAPER – II: APPLIED MATHEMATICS - II
PAPER CODE: 2254

CO1: To study the measures of angle, ratio of trigonometric functions..

CO2: To gain knowledge of increasing and decreasing functions and also know the applications of maxima and minima of functions.

CO3: To determine various techniques of quadratic equations.

CO4: To gain knowledge of sign of quadratic equations.

CO5: To understand various techniques of some different functions.

DEPARTMENT OF MATHEMATICS
COURSE OUTCOMES FOR UG 2018-2019
FOUNDATION COURSE

SEMESTER- IV: FOUNDATION COURSE- 8: ANALYTICAL SKILLS
PAPER CODE: 4401-1-A

CO1: To learn about different types of data analysis.
CO2: To analyze questions pertaining to sequences and series analogical system..
CO3: To gain knowledge of arithmetic ability and numerical skills.
CO4: To know the concept of quantitative aptitude and its techniques.
CO5: To know the concept of business computations techniques.

M.Sc. MATHEMATICS (COs)

SEMESTER- I:
PAPER I - ALGEBRA PAPER CODE: 10101
CO1: To understand the basic concepts of G-sets and finite Abelian groups
CO2: To understand the basic concepts of ideals and homomorphism.
CO3: To gain the knowledge of Integrals domain and its applications
CO4: To study the basic concepts of Modules and its applications.

SEMESTER- I: PAPER II - REAL ANALYSIS
PAPER CODE: 10102

CO1: To understand the basic concepts of the Topological space.

C02: Students identify the difference between the Riemann integral and Riemann Stieltjes integral.

CO3: To analyze the arithmetic sequences and series to solve the problems.

CO4: knowledgeable students will able to solve the proper and improper integrals

SEMESTER- I: PAPER III – ORDINARY DIFFERENTIAL EQUATIONS
PAPER CODE: 10103

CO1: To gain the problem solving Knowledge of Oscillating theory and boundary value problems.

CO2: To study order equations of power series and ordinary points.

CO3: To know some special functions of Mathematical physics

CO4: To understand the existence, uniqueness solutions of Picard's theorem.

SEMESTER- I:
PAPER IV - NUMERICAL METHODS AND C - PROGRAMMING
PAPER CODE: 10104

CO1: To study the concepts of interpolation with cubic spline.

CO2: To know various techniques of numerical solutions of ordinary differential equations.
CO3: To study the basic concepts, definitions and over view of C
CO4: To understand the strings, functions, structure and pointers of C-Programming.

SEMESTER- I: PAPER V – COMPLEX ANALYSIS PAPER CODE: 10105

CO1: To understand the basic introduction to the complex numbers and also Analytic functions
CO2: To understand the Mobius transformation and also how to solve different types of Mobius transformation problems.
CO3: To study the Cauchy integral theorem and their problems in Complex integral
CO4: To understand the solution for different types of power series problems

SEMESTER-II: PAPER VI - DISCRETE MATHEMATICS PAPER CODE: 20101

CO1: To understand how to solve the problems by using the mathematical logics for the statements
CO2: To study the various methods of predicate calculus.
CO3: To understand both lattices and Boolean algebra.
CO4: The students will be able to apply principles and concepts of graph theory in practical situations.

SEMESTER-II: PAPER- VII - MEASURE AND INTEGRATION PAPER CODE: 20102

CO1: Students can understand the basic concepts of sets and relations.

CO2: The students understand the difference between the measure and outer measure in the measure theory

CO3: Students can identify the Lévesque integral is extended to the Riemann Integral

CO4: To learn the differentiation and integration.

SEMESTER-II: PAPER- VIII – PARTIAL DIFFERENTIAL EQUATIONS
PAPER CODE: 20103

CO1: To understand the orthogonal trajectories and the pfaffian differential equations.

CO2: Students can learn first order partial differential equations

CO3: To understand the canonical forms of the second order partial differential equations

CO4: To understand the Laplace equations and also understand the boundary value problems.

SEMESTER- II: PAPER IX - TOPOLOGY
PAPER CODE: 20104

CO1: To know the basic concepts of set theory and its logics.

CO2: To gain knowledge of Topology, Basis and types of Topologies

CO3: To understand the concepts of connectedness, compactness.

CO4: To get the basic knowledge of countability and separation of axioms.

SEMESTER-I I: PAPER X – ADVANCED COMPLEX ANALYSIS
PAPER CODE: 20105

CO1: To gain knowledge of Laurent series and to solve the singular point problems.
CO2: To study residue theorems and its applications.
CO3: To know the concepts of Harmonic functions and conformal mapping.
CO4: To understand the infinite product and partial fractions expansions.

SEMESTER- III: PAPER XI – COMMUTATIVE ALGEBRA PAPER CODE: 30101

CO1: To know the basic concepts of ideals, modules and homomorphism.
CO2: To understand the concept of finite condition series.
CO3: To study the basic definitions of Noetherian rings and Hilbert basis theorem
CO4: To understand the Lasker – Noetherian decomposition theorem and applications of zero divisors, Nil potent elements.

SEMESTER -III: PAPER XII – FUNCTIONAL ANALYSIS PAPER CODE: 30102

CO1: To understand basic concepts of Vector sp ace and Normed linear space.
CO2: To get Knowledge of Natural imbedding theorems and open mapping theorem.
CO3: To understand the basic concepts of Hilbert spaces.
CO4: To study self adjoint operators and finite dimensional spectral theory.

SEMESTER -III:
PAPER XIII - DIFFERENTIAL GEOMETRY
PAPER CODE: 30103

CO1: To Explain about the basic concepts of space curves and different types of planes

CO2: Students can understand the parametric equation of a surface and local intrinsic properties of a surface.

CO3: Students can identify the solution of local intrinsic and non intrinsic properties of a surface

CO4: To Explain about the Geodesic equations and canonical geodesic equations.

SEMESTER-III:
PAPER- XIV: NUMBER THEORY
PAPER CODE: 30104

CO1: To Study the properties of positive numbers and different types of Arithmetical functions

CO2: To Explain the Average of Arithmetical functions.

CO3: To understand the foundations of theory of congruence's.

CO4: To Explain the Quadratic residues and Quadratic non – residues and different functions of Quadratic reciprocity laws.

SEMESTER-III:
PAPER- XIV: CLASSICAL MECHANICS
PAPER CODE: 30105

CO1: To analyze the concept of Mathematical physics, D'Alembert's principle and Lagrange's equations

CO2: To understand the variation principle and Lagrange's equations, non - halonomic system

CO3: To gain knowledge of Hamilton equations of motion by using the Lagrange's equations
CO4: To know the solutions for canonical transformations problems, Poisson's brackets and Jacobi theory.

SEMESTER-IV: PAPER XV - GALOIS THEORY PAPER CODE: 40101

CO1: Students can understand the basic concepts of polynomials and ring polynomials and their properties and the extension field.
CO2: To study the difference between normal and separable extensions.
CO3: To learn Galois Theory
CO4: Students can identify the applications of Galois Theory to the classical problems.

SEMESTER-IV: PAPER XVII - OPERATIONS RESEARCH PAPER CODE: 40102

CO1: To Understand different typesofproblemsin Linear programming..
CO2: Students will know how to run many companies to get more property by using "Scientific inventory management".
CO3: To solve problems by using the dynamic programming.
CO4: To learn basics and characteristics of Game theory.

SEMESTER- IV:

Paper XVIII GRAPH THEORY Paper Code: 40103

CO1: To know basic definitions and concept of Graphs and sub graphs.

CO2: To gain knowledge of trees and its applications
CO3: To understand connectivity graphs and its applications.
CO4: To understand the Euler tour Hamiltonian cycles and its applications

SEMESTER-IV:
Paper XIX BANACH ALGEBRA Paper Code: 40104
CO1: To identify the liner space and Ideals and understand the spectral radius formula
CO2: To study the Gelfand mapping and Gelfand neumark theorems,
CO3: To understand the compact Hausdorff space and its knowledge to apply on theorems
CO4: To study the basic concepts of Boolean algebra, Boolean rings and Picard's theorem.

SEMESTER- IV: PAPER XX – MATHEMATICAL STATISTICS
PAPER CODE: 40105
CO1: To know the basic concept and definitions of the probability set function.
CO2: To gain knowledge of distribution of functions and sampling theory
CO3: To study various distributions.
CO4: To gain knowledge of point estimations, confidence intervals and relevant theorems.

COURSE OUTCOMES
COMPUTER SCIENCE

BSC (mathematics, statistics, computer science)
I SEMESTER:

1116-B: Computer Fundamentals & Photoshop

CO1: To understand the basic concept of computers and its devices

CO2: To learn the concepts computer memory and processors and working with number system

CO3: To know the knowledge on algorithms and programming languages

CO4: To gain the basic knowledge on computer networks and internet

CO5: To work with adobe Photoshop Tools

II SEMESTER:

2216-B :PROGRAMMING IN C

CO1: To gain the knowledge on Algorithms and Programming Languages

CO2: To grab the in detail concepts of decision control, Looping statements and Functions

CO3: To make the student familiar with the concepts of arrays and Strings

CO4 : To understand the basic concepts of Pointers, Structures, Unions and Enumerated data types.

CO5: To know the fundamental concepts of Files and Error Handling during File operations.

III SEMESTER

3316-A:OBJECT ORIENTED PROGRAMMING USING JAVA

CO1: To understand the basic concepts iof object programming and java evolution

CO2: To gain the knowledge on operators, Expresion and decision control statements

CO3: To familiar with classes ,objects and methods in object oriented programming

CO4: To learn about interfaces, packages and Multithreaded programming

CO5: To understand the concept of Exception Handling and Applet Programming and Error Handling during File operations.

IV SEMESTER:

4416: DATA STRUCTURES

CO1: To gain the knowledge on Data Structure Operations

CO2: To acquire the basic knowledge of stacks and queues

CO3: To explain the overall theme of Trees and Different types of Trees

CO4: To make the student familiar with Graphs and its Algorithms

CO5: To make the student do the programming by sing of searching and sorting Algorithms

V SEMESTER:

55162: DATABASE MANAGEMENT SYSTEM

CO1: To Understand the basic concepts of data and Information, and also to gain the knowledge on the classification of database systems

CO2: To know the drawbacks of file based system and how to apply the integrity rules on data

CO3: To acquire the knowledge on Entity-Relationship model and Normal Forms

CO4: To gain the knowledge of SQL commands and how to manipulate data in the database with these commands.

CO5: To understand the concepts of PL/SQL, Triggers and cursors.

55161: SOFTWARE ENGINEERING

CO1: To acquire the concept on evolving role in software

CO2: To understand the different types of process models

CO3: To learn about the requirement engineering process and analysis models

CO4: To gain the knowledge on software design

CO5: To know the different types of software testing and the concept of software quality

VI SEMESTER:

6161: WEB TECHNOLOGIES

CO1: To explain the basic concepts of History of Internet, www and www Tools

CO2: To make the student well know with email Creation and Protocols

CO3: To make the students work with HTML Tags in the creation of web pages

CO4: To gain the knowledge on Forms and Hyper Links in Horizontal Rule Tags

CO5: To grab the knowledge on advance HTML & Cascading style sheets

616CLA2:COMPUTER NETWORKS

CO1: To get the basic knowledge on Networks, Topologies and different types of reference model

CO2: To gain the knowledge on data link layer and data link protocols

CO3: To explain the concept of network layer and its protocols

CO4: To understand the concept of Transport Layer and Security

CO5: To know basic knowledge on DNS, Protocol of Application Layer, WWW

616CLA1: CLOUD COMPUTING

CO1: To know the basic knowledge of cloud computing and its essential characteristics.

CO2: To explain the concepts of cloud scenarios and benefits of cloud computing

CO3: To gain the knowledge of cloud architecture and delivery models

CO4: To understand the concept Cloud deployment models and its advantages

CO5: To gain the knowledge of virtualization and its types in cloud computing

BCOM (COMPUTER APPLICATIONS):
I SEMESTER:
1108-4C-B: COMPUTER FUNDAMENTALS & PHOTOSHOP

CO1: To understand the fundamental concepts of computers and I/O devices

CO2: To acquire skill in number system and computer codes

CO3: To familiar the student with computer software and Alorithms and programming languages

CO4: To know the basic concepts of computer networks and internet

CO5: To develop various applications by using adobe Photoshop

II SEMESTER:

2208-4C-B:PROGAMMING IN C

CO1: To gain the knowledge on Algorithms and Programming Languages

CO2: To understand the in detail concepts of decision control, Looping statements and Functions

CO3: To make the student familiar with the concepts of arrays and Strings

CO4: To know the basic concepts of Pointers, Structures, Unions and Enumerated data types.

CO5: To grab the fundamental concepts of Files and Error Handling during File operations.

III SEMESTER:

3308-4-C-A:OFFICE AUTOMATION TOOLS

CO1: To work with basic concepts of MS-Excel

CO2: To manipulate the sheets with formatting options in Excel

CO3: To design different charts in Ms-Excel

CO4: To create simple database and forms in MS-Access

CO5: To access the data by using Query in Ms-Access

IV SEMESTER:

4408-4C:OBJECT ORIENTED PROGRAMMING WITH C++

CO1: To gain the basic knowledge on OOP and difference between OOP and Procedure oriented programming language.

CO2: To understand the basic knowledge of c and c++ and sample programs

CO3: To acquire the knowledge of functions and arrays of C++

CO4: To gain the basic knowledge on Objects ,Classes, Constructors and Destructors

CO5: TomakethestudentfamiliarwithOperator overloading and inheritance

V SEMESTER:

55086-C: PROGRAMMING IN JAVA

CO1: To know the fundamental concepts of OOPS

CO2: To create the programming by using of Arithmetic operators, Data Types and Literals

CO3: To make the student good at Control structures and Looping Statement

CO4: To gain the knowledge on classes, objects, Methods and Arrays

CO5: To grab the knowledge on Interfaces and exception Handling and Thread concepts

55085-C: WEB TECHNOLOGY

CO1: To understand the basic concept of internet

CO2: To gain the knowledge on email accounts and email protocols

CO3: To design the web pages by using HTML tags

CO4: To explain the tables ,hyperlinks and frames and forms in HTML

CO5: To know the knowledge of advance HTML by using cascading style sheets

VI SEMESTER:

608CEL01: OPERATING SYSTEMS

CO1: To get the knowledge of Operating Systems and its evolution

CO2: To Understand the knowledge of kernels, System calls and scheduling algorithms

CO3: To make the student familiar with File System Interfaces

CO4: To know the basic concepts of Deadlocks ,Detection and Recovery

CO5: To grab the concepts of Memory management and virtual memory

608CCLA2: E-COMMERCE APPLICATION

CO1: To learn the basic concepts on E-commerce , Online shopping and E-Business

CO2: To gain the basic concepts of Supply Chain Management

CO3: To know the basic knowledge on Electronic Payment System

CO4: To create the sample programs using simple java script

CO5: To understand the knowledge on Control statements and Repetition Statements

608CCLA1:DATABASE MANAGEMENT SYSTEM

CO1: To know the overview of database management system and DBMS Architechture

CO2: To acquire the fundamental information of File based System and Relational Database models

CO3: To understand the Entity Relationship Model in DBMS and Normalization

CO4: To make the student proficient in doing databases by using of structured query language

CO5: To create the sample programs by using of PL/SQL

BCOM (GENERAL):

SEMESTER I:

1108-4-A: Fundamentals of Information Technology

CO1: To know the basic concepts of computers and input devices

CO2: To acquire on the knowledge on modern communication such as FAX,Video conferencing and teleconferencing etc

CO3: To gain the knowledge on operating syatem and its functions

CO4: To make the student familiar with enaling technologies of World Wide Web

CO5: To understand the concept of Multi Media, Internet and E-commerce

II SEMESTER

2208-4-A: MS-OFFICE

CO1: To gain the overall knowledge of MS-WORD

CO2: To grab the overall concepts of MS-EXCEL

CO3: To understand the total knowledge on MS-ACCESS

CO4: To know the in detail concepts of MS-POWERPOINT

CO5: To make the student create the letter heads and business cards in MS PUBLISHER

III SEMESTER:

3308-4-A: PROGRAMMING IN C

CO1: To gain the basic knowledge of c-Programming

CO2: To develop programs by using the concept of Decision Control and Looping Statements

CO3: To make the student familiar with functions in c

CO4: To get the ability to do programs by using Arrays and Strings

CO5: To absorb the knowledge on the concepts of Structures and Union in c-Language

IV SEMESTER:

4408-4: PROGRAMMING IN C++

CO1: To acquire the fundamental knowledge of C++, Creating sample programs, keywords, Tokens

CO2: To gain the full knowledge of Operators, Functions and Data types in C++

CO3: To make the student proficient in doing programming by using of branching & looping statements in c++

CO4: To acquire the in detail knowledge on Functions and arrays

CO5: To gain the basic knowledge on Objects and Classes.

V SEMESTER:

55085: DATABASE MANAGEMENT SYSTEMS

CO1: To design Database Systems Data Sharing
CO2: To understand concept of ER model
CO3: To explain Normalization techniques
CO4: To study the File Organization, Distributed Database Systems

55086: ELECTRONIC COMMERCE

CO1: To get overview on E-Commerce
CO2: To grab the knowledge on E-Commerce and WWW with Architecture frame work Technology behind the web
CO3: To learn about consumer oriented E-commerce Application
CO4: To acquire the knowledge on Web Based marketing

BSC (HONOURS) COMPUTERS

SEMESTER-I

1121-A:Programming Fundamentals using C/C++

CO1: To understand the basic knowledge on c and c++ and how to compile and execute the sample programs
CO2: To gain the knowledge on conditional control statements, functions And arrays
CO3: To develop programs by using the concept of structure and pointers

CO4: To differentiate the static and dynamic memory allocations and also the file processor directives

CO5: To know the knowledge on the principles of object oriented programming

1122-A:COMPUTER SYSTEM ARCHITECTURE

CO1: To understand basic concepts LOGIC GATES, FLIPFLOPS, REGISTERS and COUNTERS in computer organization

CO2: To gain the knowledge on Number System

CO3: To acquire the knowledge on Bus System, Instruction Cycle and Timing and control

CO4: To learn about various concept of central processing such as Addressing Modes, Instruction Codes etc.

CO5: To study on Memory Organization and Input Output Organization

II SEMESTER

2221-A: PROGRAMMING IN JAVA:

CO1: To get the basic knowledge on Java, DataTypes, Java Methods

CO2: To understand the concepts of Arrays, Strings and I/O files

CO3: To know the overview concept of Object Oriented Programming

CO4: To make the student familiar with managing errors and Exceptions and Multi Threaded Programming

CO5: To acquire the knowledge of applets and Event Handling

III-SEMESTER

3321-A:OPERATING SYSTEMS

CO1: To understand the basic concepts of operating System, personal computers and work- station

CO2: To gain the knowledge on kernels and system calls

CO3: To practice the scheduling algorithms of Pre-emptive and Non Pre-emptive

CO4: To learn about the memory management, paging and virtual memory

CO5: To understand the concept of File and I/O Management

3323-A: DATA STRUCTURES

CO1: To gain the basic knowledge on Arrays and linked list

CO2: To acquire on the knowledge on stacks and queue

CO3: To get the knowledge on Recursion concepts and basic concepts of Trees

CO4: To make the student good at searching and sorting techniques

CO5: To gain the basic knowledge on Hashing and Hash Function

3322-A: COMPUTER NETWORKS

CO1: To understand the basic concepts of networks and different types of Reference models

CO2: To understand the concept of encoding and decoding techniques and switching techniques

CO3: To acquire the knowledge on error detection and correction techniques

CO4: To know the concept of different types of multiple access protocols

CO5: To learn about different types of protocols and transport layer functions

IV SEMESTER:

4422-A: DESIGN AND ANALYSIS OF ALGORITHM

CO1: To get the basic design and analysis techniques of Algorithms and Asymptotic notations

CO2: To know the basic knowledge on Divide & Conquer, Dynamic Programming and Greedy Algorithms

CO3: To acquire the knowledge on Elementary and Advanced Sorting Techniques

CO4: To get the knowledge on Lower Bounding Techniques & advanced analysis Technique

CO5: T gain the knowledge on Graph Algorithms and String Processing

4421-A: SOFTWARE ENGINEERING

CO1: To acquire the concept on evolving role in software, Process models & CMMI

CO2: To understand the software requirement analysis

CO3: To learn about the Software project Management and Risk Management

CO4: To gain the knowledge on Quality management and design Engineering

CO5: To know the different types of software testing, Testing strategies and Tactics

4423-A: DATABASE MANAGEMENT SYSTEM

CO1: To know the characteristics and models of DBMS

CO2: To design the application by using ER and Relational model

CO3: To design the database by using EER and applying normal forms in the database

CO4: To know about the transaction processing in DBMS

CO5: To extract the knowledge in File structure and indexing in DBMS

V SEMESTER

5521:INTERNET TECHNOLOGIES

CO1: To Understand the fundamental concepts of JavaScript

CO2: To acquire the knowledge on JDBC fundamentals, creating and executing SQL statements

CO3: To gain the knowledge on Java server pages, Servlets

CO4: To implement programs on Implicit JSP Objects and Error handling and debugging

CO5: To work with JavaBeans

5522:THEORY OF COMPUTATION

CO1: To gain the basic knowledge on operations Automata Theory, string and Kleene Star

CO2: To grab the concepts on Finite Automata Theory

CO3: To Understand Regular Expressions

CO4: To acquire the knowledge on Context free languages and its properties

CO5: To learn about Turing Machines and Models of computation

5523:DATA MINING

CO1: To understand the basic concepts of data mining concepts and also gain the knowledge on issues in data mining

CO2: To know the pre-processing steps of data mining

CO3: To learn about data characterization and comparison in data and how to derive the association rules

CO4: To analyze the the issues regarding classification and predictions

CO5: To understand the concept of cluster analysis and type of models in cluster analysis

5524:INFORMATION SECURITY

CO1: To know about basic knowledge about security problems in computing

CO2: To gain basic things on substitution cipher and transposition cipher, algorithms

CO3: To understand the basic concepts of program security and file protection mechanisms

CO4: To understand the concept of database security and security in networks

CO5: To grab the knowledge on administrating security, legal privacy and ethical issues in Computer security

VI SEMESTER:

6622: ARTIFICIAL INTELLIGENCE

CO1: To know the basic concepts of Artificial Intelligence and Turing Test and Relational to Agent Approaches

CO2: To analyze various problem solving and searching Techniques

CO3: To Capture the knowledge in the programming language of PROLOG

CO4: To deal with uncertainty and inconsistence by using Truth Maintenance system

CO5: To understand the Natural languages such as Parsing Techniques and Context free and Transformational Grammars

6623: CLOUD COMPUTING

CO1: To know the basic knowledge of cloud computing and its essential characteristics.

CO2: To explain the concepts of cloud scenarios and benefits of cloud computing

CO3: To gain the knowledge of cloud architecture and delivery models

CO4: To understand the concept Cloud deployment models and its advantages

CO5: To gain the knowledge of virtualization and its types in cloud computing

6621: COMPUTER GRAPHICS

CO1: To have the basic concepts of computer graphics

CO2: To capture the knowledge on output primitives like point and lines, circle and ellipse algorithms

CO3: To acquire the knowledge on 2-D geometric Transformations and 2-D Viewing

CO4: To get the basic knowledge on 3-D geometric Transformations and 3-D Viewing

CO5: To develop the applications by using Color models and Applying Animations

BSC (HONOURS) MATHEMATICS:

I SEMESTER:

1121-A: OBJECT ORIENTED PROGRAMMING IN C++

CO1: To provide the knowledge relating to the OOP Paradigm.

CO2: To provide the knowledge relating to the OOP Paradigm

CO3: To provide the knowledge relating to the OOP Paradigm

CO4: To develop programming by using Cin, Cout concepts on C++.

CO5: To make the student proficient in c++ with the concepts of OOP

III SEMESTER:

COMPUTER GRAPHICS

CO1: To understand the Concepts Of Video Display Devices, Refresh Cathode Ray Tubes, Raster Scan and Random Scan Displays

CO2: To have knowledge on Raster Scan system

CO3: To acquire the knowledge on Interactive input/output devices:

CO4: To know about Points, lines and curves, line-drawing algorithms, circle and ellipse, polygon generation

CO5: To grab the concepts of Two-dimensional viewing

IV SEMESTER:

OPERATING SYSTEM: LINUX

CO1: To know the basic knowledge on basic OS Functions and LINUX

CO2: To get the basic knowledge on System Process and File System

CO3: To make the student good at User Management and GUI Tools

CO4: To acquire the good knowledge in Resource Management in Linux

CO5: To have the basic concepts on IPC, Memory Management and System calls

MASTER OF COMPUTER APPLICATIONS (MCA)

SEMESTER-III

30801A: SOFTWARE ENGINEERING

CO1: To study the body of software engineering and process models

CO2: To acquire the knowledge and the concepts of Umbrella activities, Measurement & Metrics in Software Engineering

CO3: TO be able to design the software by using the quality guideline and attributes and also analyzing the architecture

CO4: To know about the testing strategies like white Box, Black Box etc

30802A: DATABASE MANAGEMENT SYSTEM

CO1: To understand the basic concepts of data base and also to design the database by using ER-Model

CO2: To gain the knowledge on relational model and also manipulate the data by relational algebra and calculus

CO3: To access the data by using SQL Queries cursors and Triggers

CO4: To learn about database base application development with JDBC and also the development of Internet Applications

30803: Data Communications and Computer Networks

CO1: To understand the fundamental concepts of Network models and physical layer concepts

CO2: To classify the media access control protocols and various Ethernet protocols

CO3: To demonstrate various Network layer protocols such as unicast and multicast protocols

CO4: To outline the mechanisms involved in transport layer and virtual private network

30804A: ADVANCED JAVA PROGRAMMING

CO1: To Understand the basic concepts of J2EE with different implementations

CO2: To know the J2EE database concepts, JDBC Objects and embedded SQL

CO3: To acquire the knowledge on XML, SERVLETS and JSP

CO4: To gain the knowledge of java beans, CORBA and RMI

30805A: COMPUTER GRAPHICS

CO1: To have the basic concepts of computer graphics and to capture the knowledge on output primitives like point and lines, circle and ellipse algorithms

CO3: To acquire the knowledge on 2-D geometric Transformations and 2-D Viewing

CO4: To get the basic knowledge on 3-D geometric Transformations and 3-D Viewing

CO5: To develop the applications by using Color models and Applying Animations

SEMESTER-IV

40801A: Design and Analysis of Algorithms

CO1: To understand the basic concepts of analysis of algorithms and disjoint sets

CO2: To classify the different algorithm techniques of greedy method

CO3: To Develop algorithms for various computing problems

CO4: To demonstrate the branch and bound techniques for problem solving

40802A: SYSTEMS PROGRAMMING

CO1: To understand the basic concept of system programming and assemblers

CO2: To gain the knowledge on Loaders and Linker concepts

CO3: To explain the concepts of micro processors

CO4: To grab knowledge of compilers and their functions

40803: WEB PROGRAMMING

CO1: To gain the basic knowledge of Internet and XHTML

CO2: To develop programs by using the concept of Decision Control and Looping Statements using Javascript.

CO3: To make the student familiar with DHTML and implement the programs

CO4: To get the ability to do programs by using XML

40804: USER INTERFACE DESIGN

CO1: To know the basic concepts of Human factors of interactive software and Expert reviews, usability testing surveys and containing assessments

CO2: To acquire on the knowledge on Software tools and Command and natural languages

CO3: To gain the knowledge on Interaction Devices

CO4: To make the student familiar with Multiple Window strategies and Hyper Media and the World wide web

40804A: Data Mining & Data Warehousing

CO1: To know the fundamental concepts of Data mining and OLAP technology

CO2: To demonstrate the use of multidimensional model in data warehousing

CO3: To generate the association rules and differentiate the classification prediction algorithms

CO4: To gain the knowledge on various clustering algorithms and their applications

44444: Information & Communication Technology-I

CO1: To know the fundamental concepts of C- language

CO2: To develop the programs applying conditional and branching statements of C-programming

CO3: To acquire the knowledge on functions, storage classes and pointers of C-programming

CO4: To work with Arrays and files to develop programs.

SEMESTER-V

50801: COMPUTER GRAPHICS

CO1: To have the basic concepts of computer graphics and to capture the knowledge on output primitives like point and lines, circle and ellipse algorithms

CO2: To acquire the knowledge on 2-D geometric Transformations and 2-D Viewing

CO3: To get the basic knowledge on 3-D geometric Transformations and 3-D Viewing

CO4: To develop the applications by using Color models and Applying Animations

50802: Object Oriented Systems Development

CO1: To get overview on OOAD concepts and various UML diagrams

CO2: To grab the knowledge on OO analysis and unified modeling language and patterns

CO3: To learn about access layer and view layer in OOAD

CO4: To acquire the knowledge on testing strategies and debugging concepts

50803: SYSTEMS PROGRAMMING

CO1: To understand the basic knowledge on System software and assemblers

CO2: To gain the knowledge on loading and linkers and Macro processors

CO3: To gain the basic knowledge on compilers and system software

CO4: To know the in detail information about operating systems and device drivers

CO5: To know the knowledge on character driver 1&2 and Block drivers 1&2

50804 : DECISION SUPPORT SYSTEMS

CO1: To understand basic concepts of decision support systems & information quality and models

CO2: To gain the knowledge on DSS architecture, Hardware and operating system platforms

CO3: To acquire the knowledge on Models in decision support systems & mathematical models and optimization.

CO4: To learn about various concept of Group decision support systems – export systems.

CO5: To study on data warehousing and executive information system fundamentals

50805 : MULTIMEDIA SYSTEMS

CO1: To gain the basic knowledge on Media and Data Streams, Sound/ Audio

CO2: To acquire on the knowledge on Video and Animation & Some Basic Compression Techniques

CO3: To get the knowledge on Optical Storage Media Basic Technology & Computer Technology

CO4: To make the student good at Multimedia operating Systems & Additional Operating System Issues

CO5: To gain the basic knowledge on Multimedia Communication Systems & Database Systems

STATISTICS

Semester –I Paper title: Descriptive statistics and probability Paper I Paper code: 1115- A

Co1: To understand the scope of statistics, basic concepts of statistics and how to construct the graphical and diagrammatic representation of data, measures of central tendency.
Co2: To understand measures of dispersion and importance of skewness and kurtosis.
Co3: To gain the knowledge of probability and it's applications in real world.
Co4: To Study the conditional probability and how to apply theorems by solving problems.
Co5: To study the random variables, Bi- Varite random variables and its applications.

Semester -II
Paper title: Mathematical Exceptions and probability distribution paper –II paper code: 2215- A

Co1: To gain the knowledge of mathematical Expectations and concept of generating functions.
Co2: To study the Binomial and Poissons distributions.
Co3: To easily understand negative Binomial and Hyper geometric distributions and their interrelationship.
Co4: To gain practical knowledge of continuous distribution like Exponential and Gamma.
Co5: To study the normal distribution and its importance, its applications and also limiting cases of binomial, Poisson tends to normal distributions

Semester -III
Paper title: Statistical Methods
Paper –III paper code: 3315- A

Co1: To Study how to construct principle of least square to fit different types of curves.
Co2: To know the basic definitions, methods of measures of correlation coefficient.
Co3: To learn concept of regression analysis and difference between correlation and regression.
Co4: To understand classification attributes easily.
Co5: To learn basic concepts of Exact sampling distribution.

Semester -IV
Paper title: Statistical Inference
Paper –IV paper code: 4415- A

Co1: To understand how to analyze data and estimate the parameters.
Co2: To study how to draw conclusions about populations by Examining a sample of population as used in medicine & healthcare.
Co3: To learn small and large sample test in different situations.
Co4: To understand non- parametric test and its applications.

Semester -V
Paper title: Sampling Techniques and Design of Experiments Paper –V Paper Code 55151

Co1: To understand how to prepare a Questionnaire and conduct a survey.
Co2: To understand how to apply sampling techniques methods.
Co3: To able to learn how to test the difference between two or more means.

Co4: To understand to Missing plot Technique.
Co5: To understand reduce Experimental error when compared with RBD.

Paper title: Statistical Quality control and Reliability
Paper –VI Paper code: 55152

Co1: Students willable to maintain a quality by understanding Industry and Construction of control charts for variables .
Co2: To Understand construction of attributes charts.
Co3: To Study how to accept a sample of product in a market and which type of Risks face by producers and consumers.
Co4: To study the concept of Reliability and its applications.
Co5: To understand system of Reliability.

Semester -VI
Paper title: Applied Statistics
Paper –VII Paper code : 615EL01

Co1: To Study how to estimate the future trend values in business purpose.
Co2: To understand how to asses the purchasing power of money, for adjusting National Income etc.
Co3: To Gain the Knowledge of Official Statistics.
Co4: To Gain the knowledge of calculation of Birth and death rates in real world
Co5: To understand construction of life table in real life.

BIOTECHNOLOGY

SEMESTER – I

Paper – I Microbiology and Cell Biology

CO1 To know about the historical development and about great contributors of Microbiology.
CO2 Apart from that to learn about several types of microscopes like Compound, Phase contrast, Fluorescent and Electron microscopes.
CO3 To know about different types of staining techniques, Bacterial structure, Viral replications, importance of microbial nutrition.
CO4 To attain complete knowledge on microbial growth and its control and also about cell biology.

SEMESTER – II

Paper – II Macromolecules, Enzymology and Bioenergetics

CO1 To attain knowledge on the chemical structure and composition of DNA and RNA, types of DNA, DNA sequencing methods. To learn the concept of prokaryotic and eukaryotic genes, c-value and the detailed structure of chromosome.
CO2 To study about all amino acid structures, its physicochemical prosperities, primary, secondary, tertiary and quaternary structures of proteins.
CO3 To know about carbohydrates and their classification, lipids and their structural properities.To gain knowledge on enzymes, its mechanisms and assay of enzymes and also to study Bioenergetics.

SEMESTER – III

PAPER – III Biophysical Techniques

CO1 To descry the information about UV and Visible Spectrophotometer- it's principle instrumentation and applications.

CO2 To ascertain details about different types of chromatographic techniques their principles and applications.

CO3 To perceive the knowledge about electrophoresis and their types and also applications.

CO4 To know about Isotopic tracer techniques, centrifugation - its types principles and applications

SEMESTER – IV

PAPER – IV IMMUNOLOGY

CO1 To acquire awareness on Immune system – types and its main pathways of complement system.

CO2 To learn about antibody structure, classes its diversity, antigens, antigenicity and complement system.

CO3 To improve knowledge on different types of immunity and Major Histocompatable Complex.

CO4 To perceive knowledge on hypersensitivity, it's types ; vaccination , principles and it's types, and also to know about different types of immunological techniques.

SEMESTER – V

PAPER – V MOLECULAR BIOLOGY

CO1 To learn about prokaryotic and eukaryotic genome structures and it's details, Watson and Crick model, enzymology of DNA replication, proof of semi conservative replication, rolling circle replication of

DNA and also to know differences between pro and eukaryotic DNA replication to understand the transcription mechanism in pro and eukaryotes and enzymes involved in the transcription.

CO2 To acquire knowledge on genetic code pro and Eukaryotic protein synthesis wobble hypothesis, post translational modification and also to learn about gene expression and its regulation.

SEMESTER – V

Paper – VI Recombinant DNA Technology

CO1 To learn about different types of restriction endonucleases enzymes used in molecular cloning and cloning vehicles to attain knowledge on ligation of DNA linkers usage , screening methods and also construction of c DNA libraries to study about PCR and different types of blotting techniques.

CO2 To know about methods of gene transfer with reference from Agrobacterium tumifacieans and also the applications of rDNA technology in agriculture, medicine and DNA fingerprinting in plant transformation.

SEMESTER –VI

Paper – VI Plant and Animal Biotechnology

CO1 To pursue the knowledge on histological perspectives of plant tissue culture, basic requirements for tissue culture laboratory, aseptic techniques and also about different types of cultures.

CO2 To learn about applications of plant tissue culture, cryopreservation.

CO3 To attain knowledge on animal cell and tissue culture, MTT based assay, characteristics of cells in culture and cell lines, maintains of cell lines subculture and cryopreservation to acquire the knowledge of rDNA products like recombinant vaccines, transgenic animals, stem cells, gene therapy and also about Intellectual Propriety Rights.

Programme Specific outcomes

B.A.(History, Economics, Political Science)

PSO 1: To Understand the basic concepts of historical movements, development of cultural civilization. Students are studying past history enables the student to Comprehend the present age in a broader perspective. Understand the literary terms and movements across various cultures and periods of literary History.

PSO 2: To analyze the economic importance of various sectors like Agriculture, Industry and Service sector of different administration levels. To understand the basic concepts of Income inequalities, poverty, unemployment, Importance of National and International trade, present relevant policies. To understand the population Equal sustainable utilization of Environment and Economical Recourses.

PSO 3: To Understand develop and demonstrate academic proficiency in the subfields of political theory , Contemporary Global Issues , Indian Government and politics, International Relations , Human rights and public administration. The students will develop critical thinking and have orientation towards research skills in political science .

PSO 4: To promote values such as sustainable development, Optimum utilization of resources, patriotism, respecting the ideals of freedom struggle and responsible citizenship, political participation and socialization. To provide life skills required for gainful employment by using domain knowledge such as Economic Service, Historians/History writing and bureaucrats at various levels.

B.Sc. (BBC) (Biotechnology, Botany, Chemistry)

PSO 1: understand the basic concepts of Biotechnology, Botany and Chemistry

PS0 2: To utilize all the techniques of applied life science Biotechnology in the fields of Pharmaceutical, Animal tissue culture, Plant tissue culture, Immunological ,Genetic engineering and Bioinformatical laboratories .Knowledge about the productions of Biofertilizers and Waste Management techniques useful for Environmental management. Understanding about Recombinant DNA technology useful for production of transgenic plants and Animals. Trained students to various biotechnological tools empowered to do Biological Research.

PSO 3: To understand the application of biological sciences in Horticulture, Genetic engineering and Biotechnology. To analyze the taxonomic range of various life forms as per their external characters and internal chemical constitutions. To understand the principles of origin of life and its evolutionary trends, Microbial diversity, chemical theory related to origin of life. To gain knowledge upon Environmental factors effects on plant growth regulations

phytogeographical distributions of plants and conservation methods of Biodiversity.

PSO 4: To develop interest among students in various branches of chemistry .Students able to analyze spectroscopy, Chromatography in various industries like pharmaceutical, chemical, agriculture textiles, Petroleum cosmetics, polymers and chemical technology and advance techniques in Nano chemistry

B.COM (Computer Applications)

PSO1: It provides job opportunities in the software industries

PSO2: It also provides job opportunities in the field of stock markets, banking field, ecommerce based jobs, probationary officers and loans collection officers in various banks

PSO3: They also eligible for teaching posts in schools and colleges and also eligible to write Net or Set Exam

PSO4: It gives reputed job opportunity to a student of B.com (CA) in the Computer field

B.COM (GENERAL)

PSO1: It provides progressive learning of different tax issues and computerized Accounting Patterns

PSO2: Students able to explain the advanced values and role of Commerce in the society

PSO3: Students gain knowledge on different career skills to catch an Employment in a business field.

PSO4: It Provides Knowledge to learn number of value based and job oriented Course relating to Commerce and finance background modified with day to day need based demand .

PSO 5: It Provides Knowledge about Commerce and Finance

BSC (H)

PSO 1: The computer science graduates study the analysis, design, developments of software and hardware used to solve real world problems in a variety of scientific, business and social aspects.

PSO 2: The student can be able to apply various mathematical methodologies to solve modern real world problems by using appropriate and suitable algorithms.

PSO 3: To make the student for creating high quality computing skills and computing drives innovation in the science and other areas.

PSO 4: The student can be able to use computer knowledge in various domains to discover the new ideas in research and make the evolutionary changes in computing.

B.sc B.Z.C. (Botany, Zoology, Chemistry)

PSO1: Understand the basic concepts of Botany, zoology and chemistry.

PSO2: Understand the application of biological sciences in Horticulture, genetic Engineering and Biotechnology. To Analysis the Taxonomic Range of Various Life Forms As Per Their External Characters And Internal Chemical Constitutions .To Understand the Principles of Origin of Life and Its Evolutionary Trends, Microbial Diversity, Chemical Theory Related to origin of Life. To Gain Knowledge on Environmental Factors Effects on Plant Growth Regulation and phytogeographycal Distributions of plants and conservations methods of biodiversity.

PSO3: Perform procedures as per laboratory Standards in the area of cell biology, genetics,

Physiology, ecology, Embryology and Aquaculture. Understand anatomy of Invertebrates & vertebrates. Understand the Various animal species based on phylum. Acquire basic Knowledge and skills in certain applied branches to enable them for Self employment. Students gain Knowledge and skills in the fundamentals of animal science; understand the complex interactions among various Living organisms.

PSO4: To develop interest among students in various branches of Chemistry students able to analyze Spectroscopy, chromatography, in various industries like Pharmaceutical , chemical,Agriculture textiles Petrolium cosmetics, polymers and chemical technology and advanced Techniques in nano Chemistry.

B.SC. C.P.Z (Chemistry, physics, zoology)

PSO1: Understand the basic concept of chemistry, physics and zoology.

PSO2: To develop interest among students in various branches of chemistry. Students able to analyze Spectroscopy, chromatography in various industries like pharmaceutical, chemical, agriculture textiles, Petroleum, cosmetics ,polymers and chemical technology and advanced techniques in Nano chemistry.

PSO3: Able to understand various physics –based application in daily life and get motivated to pursue higher studies research, attempt competitive examinations leading to career opportunities in Industries. Students will gain knowledge of principles and applications of physics in various fields.

PSO4: Perform procedures as per laboratory standards in the area of cell biology ,genetics, physiology ,ecology,

embryology and Aquaculture .understand anatomy of invertebrates & vertebrates understand the various animal species based on phylum. Acquire basic knowledge and skills in certain applied branches to enable them for self employment Students gain
knowledge and skills in the fundamentals of animals sciences , understands the complex interactions among various loving organisms
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B.Sc. (Food technology and Management)

PSO1: To analyze nutrients of Food, Food quality. To study Food processing, Food preservation and Food packaging

PS02: To understand about chemical structure of Food, Types of Food additives and microbiological contamination of Food. To understand about Fermentation, Fermented food and Sensory evaluation.

PS03: To practice the techniques of Baking Science and Food preservation for Self employment

PSO4: To study the utilization of different wastes from Food processing Industries.

PSO5: Students able to get knowledge on packaging machinery, principles of marketing, basics of supply chain management and also develops production and operation skills.

PSO6: To determine the appropriateness of different methods of solving mathematical problems and can solve practical problems in a range of areas of mathematics.

PSO7: To analyze the economic importance of various sectors like Agriculture, Industry and service sector of different administration levels .To understand the basics

concepts of income inequalities, Poverty, Unemployment, Importance of National and International Trade, present relevant policies. To understand the population Equal sustainable utilization of Environment and Economical Recourses.

B.Sc. M.C.S. (Mathematics, Computer Science, Statistics)

PSO1: Student develops problem solving skills and methods and develops logical tools and modules used to solve various real life problems and after pursuing B.Sc with maths students must able to show mathematical contentions, conclusions with clarity and accuracy.

PSO2: Apply and analyze data using concepts of probability, statistical models, sampling theory, experimental designs, statistical quality control, reliability, optimization techniques, Indian official statistics and vital statistics with modern applied statistical tools and techniques both in learning and research.

PSO3: Ability to design and develop software applications to address real time problems using programming languages, Databases, operating systems, and computer network concepts.

B.Sc. M.P.C (Mathematics, Physics, Chemistry)

PSO1: Student develops problem solving skills and methods and develops logical tools and modules used to solve various real life problems and after pursuing B.Sc with maths students most able to show mathematical contentions, conclusions with clarity and accuracy.

PSO2: Able to understand various physics –based application in daily life and get motivated to

pursue higher studies research, attempt competitive examinations leading to career opportunities in industries. Students will gain knowledge of principles and applications of physics in various fields.

PSO3: To develop interest among students in various branches of chemistry. To impart essential theoretical knowledge on nature of matter at atomic molecular levels, their bonding coordination structure and physical chemical properties which are essential in the process of drug designing and to learn about natural product isolation.

B.Sc. M.P.E. (Mathematics, Physics, Electronics)

PSO1: Student develops problem solving skills, methods, develops logical tools and modules used to solve various real life problems and after pursuing B.Sc, with maths students must able to show mathematical contentions, conclusions with clarity and accuracy.

PSO2: Able to understand various physics based applications in daily life and get motivated to pursue higher studies research, attempt competitive examination leading to carrier opportunities in industries, students will gain knowledge of principles and applications of physics in various fields.

PSO3: Analyze the skills to develop the technology by using various electronic components to explore the communication system, micro processor and micro controller and understand the design tools of internet.

B.Sc MATHS (HONOURS)

PSO1: After pursuing B.Sc Maths (Honors) students must able to show mathematical contentions,

conclusions with clarity and accuracy. Able to analyze and interpret outputs and generate new ideas based on the outputs.

PSO2: To determine the appropriateness of different methods of solving mathematical problems and solve practical problems in a range of areas of mathematics. Able to apply the knowledge of mathematical science to solve real life problems.

PSO3: Able to recognize and learn the importance of life-long learning. This course builds up a comprehension of analytical skills and purposeful abilities and competences in mathematics.

PSO4: Students will able to study theoretical concepts of Mathematics, Computer science and statistical in a quantitative way. Developing the ability to pursue advanced studies related to Applied Mathematics, Pure Mathematics and Computer Applications is a major outcome of the B.Sc. Mathematics Honours Course.

M.C.A.

PSO1: Ability to design a system, component or process to meet desire with in realistic constraints such as economic, environmental, societal and environmental considerations.

PSO2: Obtaining the knowledge of mathematics, scientific, fundamentals to the solution of complex problems for reaching sustained conclusions.

PSO3: Applying appropriate techniques, resources and the modern IT tools such as modeling and prediction to complex activities with an understanding of limitations.

PSO4: Communicate effectively on complex engineering activities with the engineering community

and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PSO5: Ability to function effectively as an individual and as a member in diverse team and in multidisciplinary setting.

PSO6: Understanding the scientific and computerized principles and applying these in the development and managing the projects in multidisciplinary fields.

M.Sc. Mathematics

PSO1: Students will have knowledge and understanding of core areas of pure mathematics.

PSO2: Students will be able to learn theoretical concepts of mathematical, physical and statistical in a quantitative way.

PSO3: To Understand the applications of mathematical analysis, geometry, algebra, discrete mathematics, Mechanics and operations research.

PSO4: To motivate and communicate complex ideas accurately using a range of formats.

PSO5: To identify and benefit from opportunities for personal and carrier development.

M.Sc. CHEMISTRY

PSO: 1 Enable students to understand the nature of matter at atomic and molecular levels.

PSO: 2 To Understand their bonding, Co-ordination, structures and the physical, chemical properties which is essential in drug designing processes.

PSO:3 Isolation and occurrences of natural products,

spectroscopy, chromatography Analysis in various industries like pharmaceutical, chemical, Agricultural, textiles, petroleum, cosmetics, polymers and chemical technology.

M.Sc (Physics)

PSO1: The programme inculcates interest among students about various applications of physics in daily life.

PSO 2: The program also aims at equipping future teachers and research scholars in physics.

PSO3: Understanding the basic concepts of physics particularly concepts in Classical mechanics, Quantum mechanics, Statistical mechanics, Atomic and molecular physics, analog and digital electronics.

PSO 4: Learn to carryout experiments in basic as well as certain advanced areas of physics such as condensed matter physics, Nanotechnology, Nuclear and particle physics.

M.B.A

PSO 1: Able to communicate effectively and function efficiently in different specializations of management and develops entrepreneurial skills to provide innovative solutions for the needs of mankind.

PSO 2: Young Managers gets the ability to flourish employability skills with a sense of responsibility where they are employed.

Program Outcomes

B.A.

PO1: Students develop an understanding of Concepts, theoretical frameworks, perspectives and methods of inquiry.

PO2: Students are trained to think rationally and critically.
PO 3: Students learn to appreciate diversity and develop cultural sensitivity.
PO4: Recognition of self as an individual with strengths and weaknesses.
PO5: Students imbibe human values and become responsible citizens.
PO6: Eligible candidates for admissions to post-graduate programs/Research/further studies.
PO7: To instill them to understand their professional and ethical responsibilities so that they displays high standard of professional behavior both independently and as a team member through the use of ethical practices.

B.Com.

PO1: The program will enable students to develop business acumen, managerial skills and abilities, and be capable of maintaining business accounts.
PO2: This program could provide well trained professionals for the Industries, Banking Sectors, Insurance Companies, Financing companies, Transport Agencies, Warehousing etc., to meet the well trained manpower requirements.
PO3: Students will be able to communicate effectively both in terms of business as well as social interaction.
PO4: The program will encourage entrepreneurship spirit among students and encourage them to participate effectively in social, commercial and civic issues ultimately leading to national development.

PO5: The program will develop the ability to think critically and independently translating into a well developed personal value system.

PO6 : The graduates will get hands on experience in various aspects acquiring skills for Marketing Manager, Selling Manager, Over all Administration abilities of the Company.

PO7: To instill them to understand their professional and ethical responsibilities so that they displays high standard of professional behavior both independently and as a team member through the use of ethical practices.

B.Sc.

PO1: They gain the knowledge of systematic observations, model making, theoretical predications thereby understanding various phenomenon in nature.

PO 2: To think critically and to use appropriate concepts in problem solving.

PO3: To enhance their skills to be innovative.

PO4: To develop a qualitative and quantitative approach.

PO5: To provide hands on experience on sophisticated instruments and programming skills.

PO6: To design and construct instruments and make them research orientation.

PO7: To make them sensitive to their surrounding and social issues, through field work and projects.

PO8: Ability to meet challenges and equip them to be competent.

PO9: To instill them to understand their professional and ethical responsibilities so that they

Programme Outcomes for Postgraduate

On successful completion of the program the student will be able -

PO1: To be creators of new knowledge leading to innovation, entrepreneur and employable in various sectors such as Private, Government and Research organizations.

PO2: To evolve/ adopt new technologies in their own discipline.

PO3: To engage in lifelong learning process by exploring knowledge independently

PO4: To design and conduct experiments/ demonstrate/ create models to analyze and interpret data.

PO5: To have the ability of effectively communicating the findings of Biological Sciences / Computing Sciences / Languages and Culture / Management Studies/Physical Sciences/ and to incorporate with existing knowledge.

PO6: Create awareness to become an enlightened citizen with commitment to deliver one's responsibilities within the scope of bestowed rights and privileges.

M.B.A

On successful completion of the program the student will be able to:

PO1: Demonstrate the knowledge of management science to solve complex corporate problems using limited resources

PO2: Research literature and identify and analyze management research problems.

PO3: Identify business opportunities, design and implement innovations in work space.

PO4: Apply reasoning informed by the contextual knowledge to assess societal, Health, safety, legal, and cultural issues and the consequent responsibilities relevant to management practice.

PO5: Apply ethical principles and make ethical choices.

PO6: Function effectively as an individual, and as a member or leader in diverse teams, and in multi-disciplinary settings.

PO7: Communicate effectively with all stakeholders of his role as a manager.

PO 8: Engage in independent and life-long learning.

M.C.A

PO1: Ability to apply IT tools, techniques & skills necessary for developing Computer Applications in the industry.

PO2: Ability to exhibit knowledge in understanding and analyzing requirements to design software.

PO3: Ability to function as an effective Team member in the software development process.

PO4: Ability to apply knowledge of Software Engineering & Testing ,Networking, Data Structures, Database Management, Programming Languages and Mathematics in various domains.

PO 5: Ability to contribute towards research in various disciplines.

PO6: Ability to provide solutions in context of societal, environment and need for sustainable development with ethical and professional responsibility

PO7: Engage in independent and life-long learning.

PO8: Apply ethical principles and make ethical choices.

COMPUTER LAB

LABORATORIES

LIBRARY

PLAY GROUND

RESEARCH CENTRE

MULTI GYM & ELCTRONIC GYM

HOSTEL BUILDING

COLLEGE BUILDING