

**ARULMIGU PALANIANDAVAR ARTS COLLEGE FOR WOMEN
(AUTONOMOUS)**

Re- Accredited with B⁺⁺ by NAAC in 3rd Cycle

(Run by Hindu Religious and Charitable Board under the Aegis of

Arulmigu Dhandayuthapani Swami Thirukovil, Palani)

(Affiliated to Mother Teresa Women's University, Kodaikanal)

Chinnakalyamputhur, Palani -624 615.



B.Com(CA)

SYLLABUS

(TAMILNADU STATE COUNCIL FOR HIGHER EDUCATION)

FROM THE ACADEMIC YEAR

2023-2024

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COLLEGE VISION

CV1 Women Education

CV2 Women Empowerment

CV3 Self-Reliance

CV4 Model Citizen

PROGRAMME OBJECTIVE:

B.Com., Computer Applications is a 3-year undergraduate course. It is designed to have an understanding in the field of commerce, especially in the discipline that involves the use of software technology application. Under this program, the students would be taught the basics of Commerce like accountancy, law, banking and taxation along with the basics of computer language, computer applications in business, etc.

A student who has completed a B.Com Computer Applications has career opportunities in both the Public and Private sectors where they can work as Business Consultants, Auditors, Business Analysts, App Developers, Computer Programmers.

TANSCHÉ REGULATIONS ON LEARNING OUTCOMES-BASED CURRICULUM FRAMEWORK GUIDELINES BASED REGULATIONS FOR UNDER GRADUATE PROGRAMME	
Programme:	B.COM., COMPUTER APPLICATION
Programme Code:	
Duration:	UG - 3 years
Programme Outcomes:	<p>PO1: Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study</p> <p>PO2: Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups.</p> <p>PO3: Problem solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real life situations.</p>

	<p>PO4: Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.</p> <p>PO5: Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating; Ability to recognize cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation</p> <p>PO6: Cooperation/Team work: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team</p> <p>PO7 Information/digital literacy: Capability to use ICT in a variety of learning situations, demonstrate ability to access, evaluate, and use a variety of relevant information sources; and use appropriate software for analysis of data.</p> <p>PO8: Leadership readiness/qualities: Capability for mapping out the tasks of a team or an organization, and setting direction, formulating an inspiring vision, building a team who can help achieve the vision, motivating and inspiring team members to engage with that vision, and using management skills to guide people to the right destination, in a smooth and efficient way.</p>
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Programme Specific Outcomes:

Programme Specific Outcomes:	<p>PSO1 – Placement: To prepare the students who will demonstrate respectful engagement with others’ ideas, behaviors, beliefs and apply diverse frames of reference to decisions and actions.</p> <p>PSO 2 - Entrepreneur: To create effective entrepreneurs by enhancing their critical thinking, problem solving, decision making and leadership skill that will facilitate startups and high potential organizations</p> <p>PSO3 – Research and Development: Design and implement HR systems and practices grounded in research that comply with employment laws, leading the organization towards growth and development.</p> <p>PSO4 – Contribution to Business World: To produce employable, ethical and innovative professionals to sustain in the dynamic business world.</p> <p>PSO 5 – Contribution to the Society: To contribute to the development of the society by collaborating with stakeholders for mutual benefit</p>
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ELIGIBILITY FOR ADMISSION

- Candidate should have passed the Higher Secondary Examination conducted by the Board of Higher Secondary Examination, Government of TamilNadu or any other Examination accepted by the Syndicate as equivalent there to with Accountancy and Commerce as their main subjects.

DURATION OF THE COURSE

The students will undergo the prescribed course of study for a period of not less than three academic years (Six Semesters).

MEDIUM OF INSTRUCTION :English

ELIGIBILITY FOR U.G DEGREE

- Candidates will be eligible for B.Com (CA) Degree, if they secure the passing minimum of 40 Per cent.(Internal & External)
- To complete the course the students should gain the prescribed credits i.e., 140 Credits.
- Candidates require 75 per cent of attendance to write the semester exam.
- Two internal examinations will be conducted and the average of this two will be considered for consolidation of Internal Marks.
- Individual Project work is compulsory which carries 100 Marks. Individual should select a topic for the project work in the beginning of the V semester and submit the report at the end of that semester. Project report shall be valued and viva-voce examination will be conducted by an External Examiner.

EVALUATION

Evaluation of the candidates shall be made through internal and external assessment.

Total Marks	INTERNAL		EXTERNAL		Overall Passing Minimum for Total Marks (Internal + External)
	Maximum Marks	Passing Minimum for Internal	Maximum Marks	Passing Minimum for External	
100	25	10	75	30	40

THEORY PAPERS

The break-up of Internal assessment shall be as follows.

Test	-15
Seminar	- 5
Assignment	-5

PRACTICAL PAPERS

The break-up of Internal assessment shall be as follows.

Internal Exam (Theory)	-15
Model Practical	-10

The break-up of External assessment shall be as follows.

Record	-15
Algorithm	-10
Program Output	-40
Viva-voce	-10

PROJECT

Internal - 25 Marks :	Topic Selection	- 10 Marks
	Data Processing	- 10 Marks
	Regularity	- 5 Marks

External – 75 Marks:	Report	- 50 Marks
	Presentation	- 10 Marks
	Viva-Voce	- 15 Marks

INTERNSHIP

Internal - 25 Marks :

Industry Selection	-10 Marks
Regularity/Attendance	- 10 Marks
Interaction with Guide	- 5 Marks

External – 75 Marks:

Report	- 50 Marks
Presentation	- 10 Marks
Viva-Voce	- 15 Marks

PRODUCT LAUNCHING

Internal = 25

Product Description	-	10
Advertisement Copy	-	10
Interaction	-	5

Practical = 75

Market Potential	- 15
Innovation & Creativity	- 15
Marketing Skill	- 15
Presentation	- 15
Product Finishing	- 15

SKILLS FOR CAREER DEVELOPMENT - EVALUATION PATTERN

Internal = 25

Reading	-	10
Translation	-	10
Class Participation	-	5

Practical = 75

Self-Introduction	- 10
Listening	- 10
Public Speaking	- 10
Conversation	- 15
Group Discussion	- 15
Role Play	- 15

QUESTION PAPER PATTERN

BLOOM'S TAXONOMY BASED ASSESSMENT PATTERN

CIA: BOTH THEORY & PROBLEM PAPERS

Internal Examination Pattern for Theory Papers & Problem papers:

Duration : 2 hours

Total Marks:30

Bloom's Category	Section	Marks	Description	Total
Remember, Understand (K ₁ ,K ₂)	A- 6 x 1	6	Objective type	30
Understand , Apply (K ₂ ,K ₃)	B- 2 x 5 (Either or Pattern)	10	250 words	
Apply, Analyse (K ₃ ,K ₄)	C- 2 x 7 (2 out of 3)	14	500 words	

End Semester Examination Pattern for Theory Papers & Problem papers:

Duration : 3 hours

Total Marks:75

Bloom's Category	Section	Marks		Total
Remember, Understand (K ₁ ,K ₂)	A - 15 x1	15	Objective Type	75
Understand ,Apply (K ₂ ,K ₃)	B – 5 x 6 (Either or Pattern)	30	250 words	
Apply, Analyse (K ₃ ,K ₄)	C - 3 out of 5 3 x 10 marks	30	500 words	

SEC and NME Papers

Internal Question Paper Pattern

Duration : 1 Hr

Total Marks : 15 Marks

Section	Type	No. of questions to be answered	Marks
A	Objective	4 questions to be answered (no choice)	4 x 1 = 4
B	Paragraph about 1 page	(1 out of 2) questions	1 x 4 = 4
C	Essay Type – about 3 pages	(1 out of 2)questions	1 x 7 = 7
Total			15

End Semester Examination

Duration : 3 Hrs

Total Marks : 75 Marks

Section	Type	No. of questions to be answered	Marks
A	Objective	15 questions to be answered (no choice)	15 x 1 = 15
B	Paragraph about 1 ½ page	5 out of 7 questions	5 x 6 = 30
C	Paragraph about 3 pages	3 out of 5 questions	3 x 10 = 30
Total			75

EXTRA CREDIT COURSE

1. I Year Human Rights and Duties
2. II Year Disaster Management
3. III Year Online Course in Commerce Discipline /
Human Resources Development

- The Massive Open Online Courses (MOOCs), which are relevant and available on SWAYAM, NPTEL and other such portals will be considered and chosen for study.
- The Credit Courses, available in the MOOCs portal alone will be considered.
- On successful completion of the MOOCs course, the credit will be transferred and added with the credits, scored by the student already.

Question Pattern: Essay Type

VALUE ADDED COURSE

1. I Year Retail Marketing
2. II Year Aptitude Skills
3. III Year Business Analytics using Ms-Excel & Digital Fluency for Business

Question Pattern: Objective type questions - 100 Marks

Examination will be conducted through Online and E-Certificate will be provided

Credit Distribution for UG Programmes

Sem I	Credit	H	Sem II	Credit	H	Sem III	Credit	H	Sem IV	Credit	H	Sem V	Credit	H	Sem VI	Credit	H
Part 1. Language – Tamil	3	6	Part..1. Language – Tamil	3	6	Part..1. Language – Tamil	3	6	Part..1. Language – Tamil	3	6	5.1 Core Course –\CC IX	4	5	6.1 Core Course – CC XIII	4	6
Part.2 English	3	6	Part..2 English	3	6	Part..2 English	3	6	Part..2 English	3	6	5.2 Core Course – CC X	4	5	6.2 Core Course – CC XIV	4	6
1.3 Core Course – CC I	5	5	2..3 Core Course – CC III	5	5	3.3 Core Course – CC V	5	5	4.3 Core Course – CC VII Core Industry Module	5	5	5. 3.Core Course CC - XI	4	5	6.3 Core Course – CC XV	4	6
1.4 Core Course – CC II	5	5	2.4 Core Course – CC IV	5	5	3.4 Core Course – CC VI	5	5	4.4 Core Course – CC VIII	5	5	5. 4.Core Course –/ Project with viva- voce CC -XII	4	5	6.4 Elective - VII Generic/ Discipline Specific	3	5
1.5 Elective I Generic/ Discipline Specific	3	4	2.5 Elective II Generic/ Discipline Specific	3	4	3.5 Elective III Generic/ Discipline Specific	3	4	4.5 Elective IV Generic/ Discipline Specific	3	3	5.5 Elective V Generic/ Discipline Specific	3	4	6.5 Elective VIII Generic/ Discipline Specific	3	5
1.6 Skill Enhancement Course SEC-1	2	2	2.6 Skill Enhancement Course SEC-2	2	2	3.6 Skill Enhancement Course SEC-4, (Entrepreneurial Skill)	1	1	4.6 Skill Enhancement Course SEC-6	2	2	5.6 Elective VI Generic/ Discipline Specific	3	4	6.6 Extension Activity	1	-
1.7 Skill Enhancement –(Foundation Course)	2	2	2.7 Skill Enhancement Course – SEC-3	2	2	3.7 Skill Enhancement Course SEC-5	2	2	4.7 Skill Enhancement Course SEC-7	2	2	5.7 Value Education	2	2	6.7 Professional Competency Skill	2	2
						3.8 E.V.S.	-	1	4.8 E.V.S	2	1	5.8 Summer Internship /Industrial Training	2				
	23	30		23	30		22	30		25	30		26	30		21	30

Total – 140 Credits

Choice Based Credit System (CBCS), Learning Outcomes Based Curriculum Framework (LOCF) Guideline Based Credit and Hours Distribution System for all UG courses including Lab Hours

First Year – Semester-I

Part	List of Courses	Credit	No. of Hours
Part-1	Language – Tamil	3	6
Part-2	English	3	6
Part-3	Core Courses & Elective Courses [in Total]	13	14
Part-4	Skill Enhancement Course SEC-1	2	2
	Foundation Course	2	2
		23	30

Semester-II

Part	List of Courses	Credit	No. of Hours
Part-1	Language – Tamil	3	6
Part-2	English	3	6
Part-3	Core Courses & Elective Courses including laboratory [in Total]	13	14
Part-4	Skill Enhancement Course -SEC-2	2	2
	Skill Enhancement Course -SEC-3 (Discipline / Subject Specific)	2	2
		23	30

Second Year – Semester-III

Part	List of Courses	Credit	No. of Hours
Part-1	Language - Tamil	3	6
Part-2	English	3	6
Part-3	Core Courses & Elective Courses including laboratory [in Total]	13	14
Part-4	Skill Enhancement Course -SEC-4 (Entrepreneurial Based)	1	1
	Skill Enhancement Course -SEC-5 (Discipline / Subject Specific)	2	2
	E.V.S	-	1
		22	30

Semester-IV

Part	List of Courses	Credit	No. of Hours
Part-1	Language - Tamil	3	6
Part-2	English	3	6
Part-3	Core Courses & Elective Courses including laboratory [in Total]	13	13
Part-4	Skill Enhancement Course -SEC-6 (Discipline / Subject Specific)	2	2
	Skill Enhancement Course -SEC-7 (Discipline / Subject Specific)	2	2
	E.V.S	2	1
		25	30

Third Year Semester-V

Part	List of Courses	Credit	No. of Hours
Part-3	Core Courses including Project / Elective Based	22	26
Part-4	Value Education	2	2
	Internship / Industrial Visit / Field Visit	2	2
		26	30

Semester-VI

Part	List of Courses	Credit	No. of Hours
Part-3	Core Courses including Project / Elective Based & LAB	18	28
Part-4	Extension Activity	1	-
	Professional Competency Skill	2	2
		21	30

Consolidated Semester wise and Component wise Credit distribution

Parts	Sem I	Sem II	Sem III	Sem IV	Sem V	Sem VI	Total Credits
Part I	3	3	3	3	-	-	12
Part II	3	3	3	3	-	-	12
Part III	13	13	13	13	22	18	92
Part IV	4	4	3	6	4	1	22
Part V	-	-	-	-	-	2	2
Total	23	23	22	25	26	21	140

***Part I, II, and Part III components will be separately taken into account for CGPA calculation and classification for the under graduate programme and the other components. IV, V have to be completed during the duration of the programme as per the norms, to be eligible for obtaining the UG degree.**

METHODS OF ASSESSMENT	
Remembering (K1)	<ul style="list-style-type: none"> • The lowest level of questions require students to recall information from the course content • Knowledge questions usually require students to identify information in the textbook.
Understanding (K2)	<ul style="list-style-type: none"> • Understanding of facts and ideas by comprehend in organizing, comparing, translating, interpolating and interpreting in their own words. • The questions go beyond simple recall and require students to combine data together
Application (K3)	<ul style="list-style-type: none"> • Students have to solve problems by using/applying a concept learned in the classroom. • Students must use their knowledge to determine an exact response.
Analyze (K4)	<ul style="list-style-type: none"> • Analyzing the question is one that asks the students to break down something into its component parts. • Analyzing requires students to identify reasons, causes or motives and reach conclusions or generalizations.
Evaluate (K5)	<ul style="list-style-type: none"> • Evaluation requires an individual to make judgment on something. • Questions to be asked to judge the value of an idea, a character, a work of art, or a solution to a problem. • Students are engaged in decision-making and problem-solving. • Evaluation questions do not have single right answers.
Create (K6)	<ul style="list-style-type: none"> • The questions of this category challenge students to get engaged in creative and original thinking. • Developing original ideas and problem solving skills

Highlights of the Revamped Curriculum:

- Student-centric, meeting the demands of industry & society, incorporating industrial components, hands-on training, skill enhancement modules, industrial project, project with viva-voce, exposure to entrepreneurial skills, training for competitive examinations, sustaining the quality of the core components and incorporating application oriented content wherever required.
- The Core subjects include latest developments in the education and scientific front, advanced programming packages allied with the discipline topics, practical training, devising statistical models and algorithms for providing solutions to industry / real life situations. The curriculum also facilitates peer learning with advanced statistical topics in the final semester, catering to the needs of stakeholders with research aptitude.
- The General Studies and Statistics based problem solving skills are included as mandatory components in the 'Training for Competitive Examinations' course at the final semester, a first of its kind.
- The curriculum is designed so as to strengthen the Industry-Academia interface and provide more job opportunities for the students.
- The Statistical Quality Control course is included to expose the students to real life problems and train the students on designing a mathematical model to provide solutions to the industrial problems.
- The Internship during the second year vacation will help the students gain valuable work experience, that connects classroom knowledge to real world experience and to narrow down and focus on the career path.
- Project with viva-voce component in the fifth semester enables the student, application of conceptual knowledge to practical situations. The state of art technologies in conducting a Explain in a scientific and systematic way and arriving at a precise solution is ensured. Such innovative provisions of the industrial training, project and internships will give students an edge over the counterparts in the job market.
- State-of Art techniques from the streams of multi-disciplinary, cross disciplinary and inter disciplinary nature are incorporated as Elective courses, covering conventional topics to the latest DBMS and Computer software for Analytics.

Value additions in the Revamped Curriculum:

Semester	Newly Introduced Components	Outcome / Benefits
I	Foundation Course To ease the transition of learning from higher secondary to higher education, providing an overview of the pedagogy of learning abstract Statistics and simulating mathematical concepts to real world.	<ul style="list-style-type: none"> • Instil confidence among students • Create interest for the subject
I, II, III, IV	Skill Enhancement papers (Discipline centric / Generic / Entrepreneurial)	<ul style="list-style-type: none"> • Industry ready graduates • Skilled human resource • Students are equipped with essential skills to make them employable. • Training on Computing / Computational skills enable the students gain knowledge and exposure on latest computational aspects • Data analytical skills will enable students gain internships, apprenticeships, field work involving data collection, compilation, analysis etc. • Entrepreneurial skill training will provide an opportunity for independent livelihood • Generates self – employment • Create small scale entrepreneurs • Training to girls leads to women empowerment • Discipline centric skill will improve the Technical knowhow of solving real life problems using ICT tools
III, IV, V & VI	Elective papers- An open choice of topics categorized under Generic and Discipline Centric	<ul style="list-style-type: none"> • Strengthening the domain knowledge • Introducing the stakeholders to the State-of Art techniques from the streams of multi-disciplinary, cross disciplinary and inter disciplinary nature • Students are exposed to Latest topics on Computer Science / IT, that require strong statistical background • Emerging topics in higher education / industry / communication network / health sector etc. are introduced with hands-on-training, facilitates designing of statistical models in the respective sectors

IV	DBMS and Programming skill, Bio statistics, Statistical Quality Control, Official Statistics, Operations Research	<ul style="list-style-type: none"> • Exposure to industry mould students into solution providers • Generates Industry ready graduates • Employment opportunities enhanced
II year Vacation activity	Internship / Industrial Training	<ul style="list-style-type: none"> • Practical training at the Industry/ Banking Sector / Private/ Public sector organizations / Educational institutions, enable the students gain professional experience and also become responsible citizens.
V Semester	Project with Viva – voce	<ul style="list-style-type: none"> • Self-learning is enhanced • Application of the concept to real situation is conceived resulting in tangible outcome
VI Semester	Introduction of Professional Competency component	<ul style="list-style-type: none"> • Curriculum design accommodates all category of learners; ‘Statistics for Advanced Explain’ component will comprise of advanced topics in Statistics and allied fields, for those in the peer group / aspiring researchers; • ‘Training for Competitive Examinations’ –caters to the needs of the aspirants towards most sought - after services of the nation viz, UPSC, ISS, CDS, NDA, Banking Services, CAT, TNPSC group services, etc.
Extra Credits: For Advanced Learners / Honors degree		<ul style="list-style-type: none"> • To cater to the needs of peer learners / research aspirants

Skills acquired from the Courses	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill
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HOD

DEAN

PRINCIPAL

**ARULMIGU PALANIANDAVAR ARTS COLLEGE FOR WOMEN, PALANI
(AUTONOMOUS)**



**Nationally Reaccredited with B⁺⁺ by NAAC in 3rd Cycle
(Affiliated to Mother Teresa Women's University, Kodaikanal)
Chinnakalyamputhur, Palani -624 615.**

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13.07.2023

**PG & RESEARCH DEPARTMENT OF COMMERCE
B.COM (CA) DEGREE PROGRAMME
TANSCHÉ PRESCRIBED SYLLABUS 2023 – 2024 ONWARDS
BOARD OF STUDIES MEETING / VIRTUAL MODE / 13.07.2023**

1	Chair Person	Dr.N.Sumithra Devi, Head, PG & Research Dept. of Commerce, APACW, Palani.
2	Subject Expert	Dr.A.Prakalathan, Assistant Professor, Department of UG & PG Commerce(CA), NGM College, Pollachi
3	University Nominee	Dr.G.Indhumathi, Assistant Professor of Commerce, Mother Teresa Women's University, Kodaikanal – 624101
4	Alumnae	D.Kaviya Assistant Professor of Commerce A.G.Arts and Science college Avinashipalayam,Tirupur.
5	Industry Representative	S.Gugapriya, Proprietor, Guga Dream Boutique, Pethanaickenpatti, Palani
6	Students Representatives	R.Bhuvana - II M.Com (Reg.No:22PPCOS01) K.Anusha - III B.Com (CA)(Reg.No:21PUCAS07)
7	Members of the Faculty	1. Dr.N.Mahalakshmi,Assistant Professor of Commerce 2. Dr .D.Jayakkodi,Assistant Professor of Commerce 3. Mrs.P.Jayaselvi,Assistant Professor of Commerce 4. Mrs.M.Manimekalai,Assistant Professor of Commerce 5.Ms.K.UmaMaheswari,Assistant Professor of Commerce 6. Mrs.R.Deepa,Assistant Professor of Commerce 7. Mrs.S.Babitha,Assistant Professor of Commerce 8. Dr.B.Sharmila,Assistant Professor of Commerce 9. Dr.K. Umamaheswari,Assistant Professor of Commerce 10. Dr.M.Radha,Assistant Professor of Commerce

B.COM with COMPUTER APPLICATION CREDIT DISTRIBUTION

Part	Course Code	Title of the Course	Credits	Hours	MARKS/GRADE		
					CIA	CE	TOTAL
FIRST YEAR							
FIRST SEMESTER							
Part I		Language – Tamil	3	6	25	75	100
Part II		English	3	6	25	75	100
Part III		Core Paper I –Financial Accounting I	5	5	25	75	100
Part III		Core Paper II - Principles of Management	5	5	25	75	100
Part III		Elective I - Python Programming and Lab	3	4	25	75	100
		Elective I - Programming in C and Lab					
Part IV		SEC – 1: Practical Banking –NME-1	2	2	25	75	100
		FC: Fundamentals of Commerce	2	2	25	75	100
		TOTAL	23	30			700
SECOND SEMESTER							
Part I		Language – Tamil	3	6	25	75	100
Part II		English	3	6	25	75	100
Part III		Core Paper III –Financial Accounting II	5	5	25	75	100
Part III		Core Paper IV-Business Law	5	5	25	75	100
Part III		Elective II - Office Automation and Lab	3	4	25	75	100
		Elective II - Programming in C++ and Lab					
Part IV		SEC – 2: Stock Market Practices-NME-2	2	2	25	75	100
		SEC - 3: Skills for Career Development : Practical	2	2	25	75	100
		TOTAL	23	30			700

		SECOND YEAR					
		THIRD SEMESTER					
Part I		Language – Tamil	3	6	25	75	100
Part II		English	3	6	25	75	100
Part III		Core Paper V- Corporate Accounting I	5	5	25	75	100
Part III		Core Paper VI – Business Mathematics and Statistics	5	5	25	75	100
Part IV		Elective III – Web Technology(PHP) and Lab	3	4	25	75	100
		Elective III – Programming in JAVA and Lab					
Part IV		SEC - 4: Product Launching-Practical	1	1	25	75	100
		SEC - 5: Computerized Accounting Package-1	2	2	25	75	100
		Environmental Studies		1			
		TOTAL	22	30			700
FOURTH SEMESTER					CIA	CE	TOTAL
Part I		Language – Tamil	3	6	25	75	100
Part II		English	3	6	25	75	100
Part III		Core Paper VII– Corporate Accounting II	5	5	25	75	100
Part III		Core Paper VIII- Company Law	5	5	25	75	100
Part III		Elective IV – Relational Database Management System	3	3	25	75	100
		Elective IV – Introduction to Data Science					
Part IV		SEC - 6: Auditing	2	2	25	75	100
		SEC - 7 : Computerized Accounting Package-2	2	2	25	75	100
		Environmental Studies	2	1	25	75	100
		TOTAL	25	30			800

THIRD YEAR							
FIFTH SEMESTER							
Part III		Core Paper IX –Cost Accounting I	4	5	25	75	100
Part III		Core Paper X - Banking Law and Practice	4	5	25	75	100
Part III		Core Paper XI – Income Tax Law and Practice I	4	5	25	75	100
Part III		Core Paper XII – Project (Individual)	4	5	25	75	100
Part III		Elective V - Indirect Taxation/ Financial Management	3	4	25	75	100
		Elective VI – Software Engineering+(UML Lab)Object oriented Analysis and Design+(UML Lab)/	3	4	25	75	100
Part IV		Value Education	2	2	25	75	100
		Summer Internship / Industrial Training	2	-	25	75	100
		TOTAL	26	30			800
SIXTH SEMESTER							
Part III		Core Paper XIII –Cost Accounting - II	4	6	25	75	100
Part III		Core Paper XIV-Management Accounting	4	6	25	75	100
Part III		Core Paper XV- Income Tax Law and Practice II	4	6	25	75	100
Part III		Elective VII - Entrepreneurial Development /-Human Resource Management	3	5	25	75	100
		Elective VIII – R Language/ –Practical Tally	3	5	25	75	100
Part IV		Extension Activity	1	-	25	75	100
Part V		Professional Competency Skill : General awareness for Competitive Examination	2	2	25	75	100
		TOTAL	21	30			700
GRAND TOTAL			140	180			4400

FIRST YEAR – SEMESTER – I**CORE – I: FINANCIAL ACCOUNTING I**

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				5	5	25	75	100
Learning Objectives									
LO1	To understand the basic accounting concepts and standards.								
LO2	To know the basis for calculating business profits.								
LO3	To familiarize with the accounting treatment of depreciation.								
LO4	To learn the methods of calculating profit for single entry system.								
LO5	To gain knowledge on the accounting treatment of insurance claims.								
Prerequisites: Should have studied Accountancy in XII Std									
Unit	Contents								No. of Hours
I	Fundamentals of Financial Accounting Financial Accounting – Meaning, Definition, Objectives, Basic Accounting Concepts and Conventions - Journal, Ledger Accounts– Subsidiary Books — Trial Balance - Classification of Errors – Rectification of Errors – Preparation of Suspense Account – Bank Reconciliation Statement - Need and Preparation								15
II	Final Accounts Final Accounts of Sole Trading Concern- Capital and Revenue Expenditure and Receipts – Preparation of Trading, Profit and Loss Account and Balance Sheet with Adjustments.								15

III	Depreciation and Bills of Exchange Depreciation - Meaning – Objectives – Accounting Treatments - Types - Straight Line Method – Diminishing Balance method . Bills of Exchange – Definition – Specimens – Discounting of Bills – Endorsement of Bill – Collection – Noting – Renewal – Retirement of Bill under rebate (Trade bill only).	15
IV	Accounting from Incomplete Records – Single Entry System Incomplete Records -Meaning and Features - Limitations - Difference between Incomplete Records and Double Entry System - Methods of Calculation of Profit - Statement of Affairs Method – Preparation of final statements by Conversion method.	15
V	Royalty and Insurance Claims Meaning – Minimum Rent – Short Working – Recoupment of Short Working – Lessor and Lessee – Accounting Treatment. Insurance Claims –Calculation of Claim Amount-Average clause (Loss of Stock only)	15
TOTAL		75
THEORY 20% & PROBLEM 80%		
CO	Course Outcomes	
CO1	Remember the concept of rectification of errors and Bank reconciliation statements	
CO2	Apply the knowledge in preparing detailed accounts of sole trading concerns	
CO3	Analyse the various methods of providing depreciation	
CO4	Evaluate the methods of calculation of profit	
CO5	Determine the royalty accounting treatment and claims from insurance companies in case of loss of stock.	
Textbooks		

1.	S. P. Jain and K. L. Narang Financial Accounting- I, Kalyani Publishers, New Delhi.
2.	S.N. Maheshwari, Financial Accounting, Vikas Publications, Noida.
3.	Shukla Grewal and Gupta, “Advanced Accounts”, volume 1, S.Chand and Sons, New Delhi.
4.	Radhaswamy and R.L. Gupta: Advanced Accounting, Sultan Chand, New Delhi.
5.	R.L. Gupta and V.K. Gupta, “Financial Accounting”, Sultan Chand, New Delhi.
Reference Books	
1.	Dr. Arulanandan and Raman: Advanced Accountancy, Himalaya Publications, Mumbai.
2.	Tulsian , Advanced Accounting, Tata McGraw Hills, Noida.
3.	Charumathi and Vinayagam, Financial Accounting, S.Chand and Sons, New Delhi.
4.	Goyal and Tiwari, Financial Accounting, Taxmann Publications, New Delhi.
5.	Robert N Anthony, David Hawkins, Kenneth A. Merchant, Accounting: Text and Cases. McGraw-Hill Education, Noida.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1.	https://www.slideshare.net/mcsharma1/accounting-for-depreciation-1
2.	https://www.slideshare.net/ramusakha/basics-of-financial-accounting
3.	https://www.accountingtools.com/articles/what-is-a-single-entry-system.html

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	3	2	3	2	2	3	2	2	3	3
CO2	3	2	3	3	3	2	2	2	3	2	2	3	3
CO3	3	2	3	3	3	2	2	2	3	2	2	3	3
CO4	3	2	3	3	2	2	2	2	3	2	2	3	3
CO5	3	2	3	3	3	2	2	2	3	2	2	3	3
TOTAL	15	10	15	15	13	11	10	10	15	10	10	15	15
AVERAGE	3	2	3	3	2.6	2.2	2	2	3	2	2	3	3

3 – Strong, 2- Medium, 1- Low

FIRST YEAR – SEMESTER – I**CORE – II: PRINCIPLES OF MANAGEMENT**

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				4	5	25	75	100
Learning Objectives									
LO1	To understand the basic management concepts and functions								
LO2	To know the various techniques of planning and decision making								
LO3	To familiarize with the concepts of organization structure								
LO4	To gain knowledge about the various components of staffing								
LO5	To enable the students in understanding the control techniques of management								
Prerequisites: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction to Management Meaning- Definitions – Nature and Scope - Levels of Management – Importance - Management Vs. Administration – Management: Science or Art –Evolution of Management Thoughts – F. W. Taylor, Henry Fayol, Peter F. Drucker, Elton Mayo - Functions of Management - Trends and Challenges of Management. Managers – Qualification – Duties & Responsibilities.								15
II	Planning Planning – Meaning – Definitions – Nature – Scope and Functions – Importance and Elements of Planning – Types – Planning Process - Tools and Techniques of Planning – Management by Objective (MBO). Decision Making: Meaning – Characteristics – Types - Steps in Decision Making – Forecasting.								15

III	Organizing Meaning - Definitions - Nature and Scope – Characteristics – Importance – Types - Formal and Informal Organization – Organization Chart – Organization Structure: Meaning and Types - Departmentalization– Authority and Responsibility – Centralization and Decentralization – Span of Management.	15
IV	Staffing Introduction - Concept of Staffing- Staffing Process – Recruitment – Sources of Recruitment – Modern Recruitment Methods - Selection Procedure – Test-Interview– Training: Need - Types– Promotion – Management Games – Performance Appraisal - Meaning and Methods – 360 degree Performance Appraisal – Work from Home - Managing Work from Home [WFH].	15
V	Directing Motivation –Meaning - Theories – Communication – Types - Barriers to Communications – Measures to Overcome the Barriers. Leadership – Nature - Types and Theories of Leadership – Styles of Leadership - Qualities of a Good Leader – Successful Women Leaders – Challenges faced by women in workforce - Supervision. Co-ordination and Control Co-ordination – Meaning - Techniques of Co-ordination. Control - Characteristics - Importance – Stages in the Control Process - Requisites of Effective Control and Controlling Techniques – Management by Exception [MBE].	15
	Total	75
Course Outcomes		
CO1	Demonstrate the importance of principles of management.	
CO2	Paraphrase the importance of planning and decision making in an organization.	

CO3	Comprehend the concept of various authorizes and responsibilities of an organization.
CO4	Enumerate the various methods of Performance appraisal
CO5	Demonstrate the notion of directing, co-coordination and control in the management.
Textbooks	
1	Gupta.C.B, -Principles of Management-L.M. Prasad, S.Chand& Sons Co. Ltd, New Delhi.
2	DinkarPagare, Principles of Management, Sultan Chand & Sons Publications, New Delhi.
3	P.C.Tripathi& P.N Reddy, Principles of Management. Tata McGraw, Hill, Noida.
4	L.M. Prasad, Principles of Management, S.Chand&Sons Co. Ltd, New Delhi.
5	R.K. Sharma, Shashi K. Gupta, Rahul Sharma, Business Management, Kalyani Publications, New Delhi.
Reference Books	
1	K Sundhar, Principles Of Management, Vijay Nichole Imprints Limited, Chennai
2	Harold Koontz, Heinz Weirich, Essentials of Management, McGraw Hill, Sultan Chand and Sons, New Delhi.
3	Griffffin, Management principles and applications, Cengage learning, India.
4	H.Mintzberg - The Nature of Managerial Work, Harper & Row, New York.
5	Eccles, R. G. & Nohria, N. Beyond the Hype: Rediscovering the Essence of Management. Boston The Harvard Business School Press, India.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	http://www.universityofcalicut.info/sy1/management

2	https://www.managementstudyguide.com/manpower-planning.htm
3	https://www.businessmanagementideas.com/notes/management-notes/coordination/coordination/21392

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	3	3	2	2	2	3	2	3	3	3
CO2	3	2	3	3	2	2	2	2	3	2	2	3	3
CO3	3	2	2	3	2	2	2	1	3	2	2	3	3
CO4	3	2	2	3	2	2	2	2	3	2	2	3	3
CO5	3	2	3	3	2	2	2	1	3	2	2	3	3
TOTAL	15	10	12	15	11	10	10	8	15	10	11	15	15
AVERAGE	3	2	2.4	3	2.2	2	2	1.6	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

FIRST YEAR – SEMESTER - I**ELECTIVE - I: PYTHON PROGRAMMING AND LAB**

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2		2		3	4	25	75	100
Learning Objectives									
LO1	Describe the core syntax and semantics of Python programming language.								
LO2	Discover the need for working with the strings and functions.								
LO3	Illustrate the process of structuring the data using lists, dictionaries, tuples and sets.								
LO4	Understand the usage of packages and Dictionaries								
Prerequisites: Should have studied Commerce in XII Std									
Unit	Contents							No. of Hours	
I	Introduction: Computer algorithms-Computer Hardware-Computer Software-Python programming language - Literals - Variables and Identifiers - Operators - Expressions and Data types, Input / output							12	
II	Control Structures: Boolean Expressions - Selection Control - If Statement- Indentation in Python- Multi-Way Selection - Iterative Control- While Statement- Infinite loops- Definite vs. Indefinite Loops- Boolean Flag. String, List and Dictionary, Manipulations Building blocks of python programs,Understanding and using ranges.							12	
III	Functions: Program Routines- Defining Functions- More on Functions: Calling Value-Returning Functions- Calling Non-Value-Returning Functions- Parameter Passing - Keyword Arguments in Python - Default Arguments in Python- Variable Scope. Recursion: Recursive Functions							12	
IV	Objects and their use: Software Objects - Turtle Graphics – Turtle attributes-Modular Design: Modules - Top-Down Design - Python Modules -							12	

V	Dictionaries and Sets: Dictionary type in Python - Set Data type. Text Files: Opening, reading and writing text files – Exception Handling	12
	Total	60
Course Outcomes		
CO1	Develop and execute simple Python programs	
CO2	Write simple Python programs using conditionals and looping for solving problems	
CO3	Decompose a Python program into functions	
CO4	Represent compound data using Python lists, tuples,	
CO5	Represent Dictionaries in Python and Developing set data type and Text files.	
Textbooks		
1	Charles Dierbach, “Introduction to Computer Science using Python - A computational Problem-solving Focus”, Wiley India Edition, 2015.	
2	Wesley J. Chun, “Core Python Applications Programming”, 3rd Edition , Pearson Education, 2016	
3	Mark Lutz, “Learning Python Powerful Object Oriented Programming”, O’reilly Media 2018, 5th Edition.	
Reference Books		
1	Timothy A. Budd, “Exploring Python”, Tata MCGraw Hill Education Private Limited 2011, 1 st Edition.	
2	John Zelle, “Python Programming: An Introduction to Computer Science”, Second edition, Course Technology Cengage Learning Publications, 2013, ISBN 978- 1590282410	
3	Michel Dawson, “Python Programming for Absolute Beginners” , Third Edition, Course Technology Cengage Learning Publications, 2013, ISBN 978-1435455009	
NOTE: Latest Edition of Textbooks May be Used		
Web Resources		
1	https://onlinecourses.swayam2.ac.in/cec22_cs20/preview	

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	2	3	2	2	2	3	2	3	3	3
CO2	3	2	3	2	2	2	2	2	3	2	2	3	3
CO3	3	2	2	2	2	2	2	1	3	2	2	3	3
CO4	3	2	2	2	2	2	2	2	3	2	2	3	3
CO5	3	2	3	2	2	2	2	1	3	2	2	3	3
TOTAL	15	10	12	10	11	10	10	8	15	10	11	15	15
AVERAGE	3	2	2.4	2	2.2	2	2	1.6	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

Python Programming Lab	
Learning Objectives: (for teachers: what they have to do in the class/lab/field) <ul style="list-style-type: none"> • Acquire programming skills in core Python. • Acquire Object-oriented programming skills in Python. • Develop the skill of designing graphical-user interfaces (GUI) in Python. • Develop the ability to write database applications in Python. • Acquire Python programming skills to move into specific branches 	
Course Outcomes: (for students: To know what they are going to learn) CO1: To understand the problem solving approaches CO2: To learn the basic programming constructs in Python CO3: To practice various computing strategies for Python-based solutions to real world problems CO4: To use Python data structures - lists, tuples, dictionaries.	

List of Programs
<ol style="list-style-type: none"> 1. Program to convert the given temperature from Fahrenheit to Celsius and vice versa depending upon user's choice. 2. Write a Python program to construct the following pattern, using a nested loop <pre> * ** *** **** ***** **** *** ** *</pre> 3. Program to calculate total marks, percentage and grade of a student. Marks obtained in each of the five subjects are to be input by user. Assign grades according to the following criteria: Grade A: Percentage ≥ 80 Grade B: Percentage ≥ 70 and < 80 Grade C: Percentage ≥ 60 and < 70 Grade D: Percentage ≥ 40 and < 60 Grade E: Percentage < 40 4. Program, to find the area of rectangle, square, circle and triangle by accepting suitable input parameters from user. 5. Write a Python script that prints prime numbers less than 20. 6. Program to find factorial of the given number using recursive function.

7. Write a Python program to count the number of even and odd numbers from array of N numbers.
8. Write a Python class to reverse a string word by word.
9. Read a file content and copy only the contents at odd lines into a new file.
10. Create a Turtle graphics window with specific size.

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC –CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

Learning Resources:

- **Recommended Texts**

1. Charles Dierbach, “Introduction to Computer Science using Python - A computational Problem-solving Focus”, Wiley India Edition, 2015.
2. Wesley J. Chun, “Core Python Applications Programming”, 3rd Edition , Pearson Education, 2016

- **Reference Books**

1. Mark Lutz, “Learning Python Powerful Object Oriented Programming”, O’reilly Media 2018, 5th Edition.
2. Timothy A. Budd, “Exploring Python”, Tata MCGraw Hill Education Private Limited 2011, 1 st Edition.
3. John Zelle, “Python Programming: An Introduction to Computer Science”, Second edition, Course Technology Cengage Learning Publications, 2013, ISBN 978- 1590282410
4. Michel Dawson, “Python Programming for Absolute Beginners” , Third Edition, Course Technology Cengage Learning Publications, 2013, ISBN 978-1435455009

FIRST YEAR – SEMESTER – I

ELECTIVE - I: PROGRAMMING IN C AND LAB

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2		2		3	4	25	75	100
Learning Objectives									
LO1	Describe the core syntax and semantics of C programming language.								
LO2	Discover the need for working with the strings and functions.								
LO3	Illustrate the process of structuring the data using matrix, struct .								
Prerequisites: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction to C Language: C Language Introduction-Features of C Language-Benefits of C over other languages-Compilation of C Program-First Program in C Pre-processor in C Pre-processor directives								12
II	Variables, Data Types & Operators: Variables and Keywords in C-Scope rules in C-Data Types in C-Operators & Its Types-Typecasting in C								12
III	Control Flow Statements: Decision Making Statements-Switch Statement in C-C Loops & Control Structure Practice problems-Continue Statement , Break Statement Array & String Handling in C:Arrays in C-Strings in C								12
IV	Multidimensional Arrays in C-String functions in C-Practice problems Functions in C:Function Prototype-Parameter Passing Techniques in C-Storage Classes in C-Recursion Concept - Functions in C Practice problems								12
V	Pointers, Structures, and Unions: Pointers in C-Structures-Union - Enumeration (or enum) in C- Pointer vs Array in C – C application programs (Sorting, Matrix manipulations, student's mark list preparation)								12
	Total								60
Course Outcomes									
CO1	Apply the concept of Control Structures to solve any given problem.								
CO2	Apply the concept of single and multi-dimensional arrays to solve problems related to searching, sorting and matrix operations.								

CO3	Apply the concept of Strings for writing programs related to character array.
CO4	Write programs using concept of user defined and recursive functions.
CO5	Apply concept of structures to write programs.
Textbooks	
1	E. Balaguruswamy, “Programming in ANSI C”, 8th Edition, 2019, McGraw Hill Education, ISBN:978-93-5316-513-0.
2	Pradip Dey, Manas Ghosh, “Programming in C”, 2nd Edition, 2018, Oxford University Press, ISBN: 978-01-9949-147-6.
3	Kernighan B.W and Dennis M. Ritchie, “The C Programming Language”, 2nd Edition, 2015, Pearson Education India, ISBN: 978-93-3254-944-9.
Reference Books	
1	Yashavant P. Kanetkar, “Let Us C”, 16th Edition, 2019, BPB Publications, ISBN: 978- 93-8728-449-4.
2	Jacqueline A Jones and Keith Harrow, “Problem Solving with C”, Pearson Education. ISBN: 978-93-325-3800-9.
3	Dr. Guruprasad Nagraj, “C Programming for Problem Solving”, Himalaya Publishing House. ISBN-978-93-5299-361-1.
NOTE: Latest Edition of Textbooks May be Used	

Web Resources	
1	http://elearning.vtu.ac.in/econtent/courses/video/BS/14CPL16.html
2	https://nptel.ac.in/courses/106/105/106105171/

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	2	3	2	2	2	3	2	3	3	3
CO2	3	2	3	2	2	2	2	2	3	2	2	3	3
CO3	3	2	2	2	2	2	2	1	3	2	2	3	3
CO4	3	2	2	2	2	2	2	2	3	2	2	3	3
CO5	3	2	3	2	2	2	2	1	3	2	2	3	3
TOTAL	15	10	12	10	11	10	10	8	15	10	11	15	15
AVERAGE	3	2	2.4	2	2.2	2	2	1.6	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

FIRST YEAR – SEMESTER – I

C Programming Lab	
Learning Objectives: (for teachers: what they have to do in the class/lab/field) <ul style="list-style-type: none">• Understand problem statements and identify appropriate solutions.• Demonstrate the use of IDE and C Compiler.• Develop programs using C Programming Language.	
Course Outcomes: (for students: To know what they are going to learn) CO1: Apply the concept of Control Structures to solve any given problem. CO2: Apply the concept of single and multi-dimensional arrays to solve problems related to searching, sorting and matrix operations. CO3: Apply the concept of Strings for writing programs related to character array. CO4: Write programs using concept of user defined and recursive functions. CO5: Apply concept of structures to write programs.	

List of Programs

1. Write a C program to find roots of a Quadratic equation.
2. Write a C program to find the total no. of digits and the sum of individual digits of a positive integer.
3. Write a C program to generate the Fibonacci sequence of first N numbers.
4. Write a C program to sum the series $S=1 - x + (x^2/2!) - (x^3/3!) + \dots - (x^n/n!)$
5. Write a C program to arrange the elements of an integer array using Bubble Sort algorithm.
6. Write a C program to input two matrices and perform matrix multiplication on them
7. Write a C program to check whether the given string is palindrome or not without using Library functions.
8. Write a C program to count the number of lines, words and characters in a given text.
9. Write a C program to generate Prime numbers in a given range using user defined function.
10. Write a C program to find factorial of a given number using recursive function.
11. Write a C program to maintain a record of n student details using an array of structures with four fields - Roll number, Name, Marks and Grade. Calculate the Grade according to the following conditions.

Marks Grade
≥80 A

>=60 B

>=50 C

>=40 D

<40 E

Print the details of the student, given the student Roll number as input.

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC –CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill
Text Books: E. Balaguruswamy, “Programming in ANSI C”, 8th Edition, 2019, McGraw Hill Education, ISBN:978-93-5316-513-0. Reference Books: 1. Pradip Dey, Manas Ghosh, “Programming in C”, 2nd Edition, 2018, Oxford University Press, ISBN: 978-01-9949-147-6. 2. Kernighan B.W and Dennis M. Ritchie, “The C Programming Language”, 2nd Edition, 2015, Pearson Education India, ISBN: 978-93-3254-944-9. 3. Yashavant P. Kanetkar, “Let Us C”, 16th Edition, 2019, BPB Publications, ISBN: 978- 93-8728-449-4. 4. Jacqueline A Jones and Keith Harrow, “Problem Solving with C”, Pearson Education. ISBN: 978-93-325-3800-9. 5. Dr. Guruprasad Nagraj, “C Programming for Problem Solving”, Himalaya Publishing House. ISBN-978-93-5299-361-1. Weblinks and Video Lectures (e-Resources): 1. http://elearning.vtu.ac.in/econtent/courses/video/BS/14CPL16.html 2. https://nptel.ac.in/courses/106/105/106105171/	

FIRST YEAR – SEMESTER – I

SEC – I: PRACTICAL BANKING NME - I

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	1		1		2	2	25	75	100
Learning Objectives									
LO	The course enlightens the students with the practical aspects on banking.								
Unit	Contents								No. of Hours
I	Banking Introduction: Banking – Meaning – Definition – Structure of banking system in India-Functions of Bank - Banker and Customer – Special types of customers – Minor, Married Women – Relationship between Banker and Customer.								6
II	Deposits: Deposit – Current Deposit Account - Fixed Deposit Account – Savings Deposit Account – Recurring Deposit Account – Loans and Advances – Types of Loans and Advances.								6
III	Letters to the Bank: Stop Payment for a Cheque – Dishonouring a Cheque – Request for an Overdraft – Request for Agency Services.								6
IV	Procedures - Forms: Procedures for opening a bank account - KYC Form – Fill up of application for opening account - Fill up of pay in slip and Withdrawal slip.								6
V	Filling up of Forms: Fill up of cheque leaf - DD challan – NFFT - RTGS.								6
TOTAL								30	
CO	Course Outcomes								
CO1	Understanding the relationship between banker and customer.								
CO2	Distinguishing the various types of deposits and loans offered by the banks.								

CO3	Drafting letters to the bank relating to stop payment, dishonor of a cheque, requisition for an overdraft and agency services.
CO4	Fill up application for opening account, Pay in slip and withdrawal slip.
CO5	Fill up of forms relating to fund transfer.
Textbooks	
1.	E.Gordon&K.Natarajan, Banking Theory Law & Practice, Himalaya Publishing House, Mumbai, 2021, 29 th edition
Reference Books	
1.	K.P.M.Sundharam&P.N.Varshney, Banking Theory Law & Practice, Sultan Chand & Sons, New Delhi 2014, 20th edition
2.	S.Gurusamy, Banking Theory Law & Practice, Vijaya Nicole Imprints, 2017, 4th edition
3.	R.Parameswaran&S.Natarajan, Indian Bankingm, S.Chand, New Delhi, 2013
4.	A.Rama&A.Arunadevi, Banking Technology, New Century Book House (P) Ltd, Chennai, 2012, 3rd edition
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1.	https://nptel.ac.in/courses/110105143
2.	https://www.youtube.com/watch?v=iXk3Z7iK9Fs
3.	https://www.youtube.com/watch?v=hotkHSggsng
4.	https://www.youtube.com/watch?v=kizw_qKlcgE
5.	https://www.youtube.com/watch?v=59PC3B7HpDI

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	2	2	2	2	2	2	3	3	3	3	3
CO2	3	3	3	3	3	3	3	3	3	3	3	3	3
CO3	3	3	3	3	3	2	3	2	3	3	3	3	3
CO4	3	3	3	3	3	2	3	2	3	3	3	3	3
CO5	3	3	3	3	3	2	3	2	3	3	3	3	3
TOTAL	15	15	14	14	14	11	14	11	15	15	15	15	15
AVERAGE	3	3	2.8	2.8	2.8	2.2	2.8	2.2	3	3	3	3	3

3 – Strong, 2- Medium, 1- Low

SEC - II: FUNDAMENTALS OF COMMERCE

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2				2	2	25	75	100
Learning Objectives									
LO	This Course aims to enriching the knowledge of the students about concept of business, trade, E-Commerce and their classification and also about recent development in Marketing.								
Prerequisites: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Nature, Scope and Purpose of Commerce Commerce- Nature – Scope- Need for Commerce – Branches of Commerce – Business Concepts - Characteristics – Objectives – Classifications of Business – Industry: Primary, Secondary, Tertiary – Business Risks – Corporate Social Responsibility (CSR).								6
II	Nature of Trade and Marketing Services Trade: Types – Internal, External, Wholesale, Retail and Auxiliaries to Trade – Transportation, Ware housing – Communication – Advertising.								6
III	Forms of Business Organization Sole Proprietorship – Partnership – Hindu Undivided Family Business – Co-Operative Societies – Company – Private and Public Company – Meaning – Features, Merits and Limitations –Source of Business Finance.								6
IV	Introduction to E-Commerce Definition of E-Commerce – Objects of E-Commerce – Advantages and Disadvantages of E-Commerce – Application of E-Commerce Technologies – Classification of E-Commerce: B2B, B2C, C2C, C2B and B2E.								6
V	Recent Development in Marketing Rural Marketing: Importance – Marketing Mix for Rural Marketing – Problems of Rural Marketing- Online Marketing – Importance – Kinds – Advantages and Disadvantages Green Marketing – Meaning and Importance of Green Marketing								6
	Total								30
Course Outcomes									
CO1	Acquiring knowledge about nature, objectives and classification of business and understanding the concept of CSR								

CO2	Knowing about various kinds of Trade and the Role of Communication and Advertising.
CO3	Acquiring knowledge about different forms of business organisation and their sources of finance.
CO4	Understanding the concept, objectives, classification of E- Commerce and application of E- Commerce technologies.
CO5	Gaining knowledge on the framework of Marketing Management and its services. Textbooks
Textbooks	
1	Fundamentals of Commerce: V.K.Puri and Vijay Kapur, Applied Publisher Pvt Limited Mumbai.
2	Business Organisation and Management: C.B Gupta., Sultan Chand Publisheis, New Delhi
3	Marketing Management:Dr.N.Rajan Nair and C.B Gupta, Sultan Chand and Sons,New Delhi.
Reference Books	
1	Business Organsation :S.Kathiresan and Dr.V.Radha, Prasenna Publication and Distributers, Chennai.
2	Marketing Management R.S.N Pillai and Bhagavathy, Sultan Chand & Sons, New Delhi.
3	E-Commerce – Vijayalakshmi – Sri MeenakshiPublication,Karaikudi.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://youtu.be/7MYPCIgoRO4
2	https://youutu.be/OkATjAtImk0
3	https://youutu.be/rUCIasx21.E
4	https://youutu.be/kn85gnKI7Lk
5	https://youutu.be/2oHJAewS-Ok

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	2	2	3	2	3	3	3	3	3	3
CO2	3	3	3	3	3	3	2	2	3	3	2	3	3
CO3	3	2	2	2	2	3	3	2	3	3	2	3	3
CO4	3	2	3	3	3	2	3	2	3	3	2	3	3
CO5	3	2	2	2	3	3	2	2	3	3	3	3	3
TOTAL	15	11	12	12	13	14	12	11	15	15	12	15	15
AVERAGE	3	2.2	2.4	2.4	2.6	2.8	2.4	2.2	3	3	2.4	3	3

3 – Strong, 2- Medium, 1- Low

FIRST YEAR – SEMESTER - II**CORE – III: FINANCIAL ACCOUNTING-II**

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				4	5	25	75	100
Learning Objectives									
LO1	The students are able to prepare different kinds of accounts such Higher purchase and Instalments System.								
LO2	To understand the allocation of expenses under departmental accounts								
LO3	To gain an understanding about partnership accounts relating to Admission and retirement								
LO4	Provides knowledge to the learners regarding Partnership Accounts relating to dissolution of firm								
LO5	To know the requirements of international accounting standards								
Prerequisites: Should have studied Accountancy in XII Std									
Unit	Contents							No. of Hours	
I	Hire Purchase and Instalment System Hire Purchase System – Accounting Treatment – Calculation of Interest - Default and Repossession - Instalment System .							15	
II	Branch and Departmental Accounts Branch – Dependent Branches: Accounting Aspects - Debtors system -Stock and Debtors system – Distinction between dependent and independent branches - Departmental Accounts: Basis of Allocation of Expenses – Inter- Departmental Transfer at Cost or Selling Price.							15	

III	Partnership Accounts – I Partnership Accounts: –Admission of a Partner – Treatment of Goodwill - Calculation of Hidden Goodwill –Retirement of a Partner .	15
IV	Partnership Accounts – II Death of a Partner- Dissolution of Partnership - Methods – Settlement of Accounts Regarding Losses and Assets – Realization account – Treatment of Goodwill – Preparation of Balance Sheet	15
V	Accounting Standards for financial reporting (Theory only) One or more Partners insolvent – All Partners insolvent – Application of Garner Vs Murray Theory – Accounting Treatment - Piecemeal Distribution – Surplus Capital Method – Maximum Loss Method - Objectives and Uses of Financial Statements for Users-Role of Accounting Standards - Development of Accounting Standards in India.	15
	TOTAL	75
THEORY 20% & PROBLEMS 80%		
Course Outcomes		
CO1	To evaluate the Hire purchase accounts and Instalment systems	
CO2	To prepare Branch accounts and Departmental Accounts	
CO3	To understand the accounting treatment for admission and retirement in partnership	
CO4	To know Settlement of accounts at the time of dissolution of a firm.	
CO5	To elaborate the role of IFRS	
Textbooks		
1	Radhaswamy and R.L. Gupta: Advanced Accounting, Sultan Chand, New Delhi.	
2	M.C. Shukla T.S. Grewal & S.C. Gupta, Advance Accounts, S Chand Publishing, New Delhi.	

3	R.L. Gupta and V.K. Gupta, “Financial Accounting”, Sultan Chand, New Delhi.
4	S P Jain and K. L. Narang: Financial Accounting- I, Kalyani Publishers, New Delhi.
5	T.S. Reddy& A. Murthy, Financial Accounting, Margam Publishers, Chennai.
Reference Books	
1	Dr. S.N. Maheswari: Financial Accounting, Vikas Publications, Noida.
2	Dr. Venkataraman& others (7 lecturers): Financial Accounting, VBH, Chennai.
3	Dr.Arulanandan and Raman: Advanced Accountancy, Himalaya publications, Mumbai.
4	Tulsian , Advanced Accounting, Tata MC. Graw hills, India.
5	Charumathi and Vinayagam, Financial Accounting, S.Chand and sons, New Delhi.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://www.slideshare.net/mcsharma1/accounting-for-depreciation-1
2	https://www.slideshare.net/ramusakha/basics-of-financial-accounting
3	https://www.accountingtools.com/articles/what-is-a-single-entry-system.html

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	3	2	3	2	2	3	2	2	3	3
CO2	3	2	3	3	3	2	2	2	3	2	2	3	3
CO3	3	2	2	3	3	2	2	2	3	2	2	3	3
CO4	3	2	3	3	2	2	2	2	3	2	2	3	3
CO5	3	3	3	3	3	3	3	3	3	3	3	3	3
TOTAL	16	11	14	15	14	12	11	11	15	11	11	15	15
AVERAGE	3.2	2.2	2.8	3	2.8	2.4	2.2	2.2	3	2.2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

FIRST YEAR – SEMESTER – II**CORE – IV: BUSINESS LAW**

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				4	5	25	75	100
Learning Objectives									
LO1	To know the nature and objectives of Mercantile law and the essentials of valid contract								
LO2	To gain knowledge on performance contracts								
LO3	To be acquainted with the rules of Indemnity and Guarantee								
LO4	To make aware of the essentials of Bailment and pledge								
LO5	To understand the provisions relating to sale of goods								
Prerequisites: Should have studied Commerce in XII Std									
Unit	Contents							No. of Hours	
I	Elements of Contract Indian Contract Act 1872: Definition of Contract, Essentials of Valid Contract, Classification of Contract, Offer and Acceptance – Consideration – Capacity to Contract – Free Consent - Legality of Object – Contingent Contracts – Void Contract							15	
II	Performance of Contract Meaning of Performance, Offer to Perform, Devolution of Joint liabilities & Rights, Time and Place of Performance, Reciprocal Promises, Assignment of Contracts - Remedies for Breach of contract - Termination and Discharge of Contract - Quasi Contract							15	

III	Contract of Indemnity and Guarantee Contract of Indemnity and Contract of Guarantee - Extent of Surety’s Liability, Kinds of Guarantee, Rights of Surety, Discharge of Surety –	15
IV	Bailment and Pledge Bailment and Pledge – Bailment – Concept – Essentials - Classification of Bailments, Duties and Rights of Bailor and Bailee – Law of Pledge – Meaning – Essentials of Valid Pledge, Pledge and Lien, Rights of Pawner and Pawnee.	15
V	Sale of Goods Act 1930: Definition of Contract of Sale – Formation - Essentials of Contract of Sale - Conditions and Warranties - Transfer of Property – Contracts involving Sea Routes - Sale by Non-owners - Rights and duties of buyer - Rights of an Unpaid Seller	15
	TOTAL	75
Course Outcome		
CO1	Explain the Objectives and significance of Mercantile law	
CO2	Understand the clauses and exceptions of Indian Contract Act.	
CO3	Outline the contract of indemnity and guarantee	
CO4	Familiar with the provision relating to Bailment and Pledge	
CO5	Explain the various provisions of Sale of Goods Act 1930	
Textbooks		
1	N.D. Kapoor , Business Laws- Sultan Chand and Sons, New Delhi.	
2	R.S.N. Pillai – Business Law, S.Chand, New Delhi.	
3	M C Kuchhal& Vivek Kuchhal, Business law, S Chand Publishing, New Delhi	
4	M.V. Dhandapani, Business Laws, Sultan Chand and Sons, New Delhi.	
5	Shusma Aurora, Business Law, Taxmann, New Delhi.	

Reference Books	
1	Preethi Agarwal, Business Law, CA foundation study material, Chennai.
2	Business Law by Saravanavel, Sumathi, Anu, Himalaya Publications, Mumbai.
3	Kavya and Vidhyasagar, Business Law, Nithya Publication, New Delhi.
4	D.Geet, Business Law Nirali Prakashan Publication, Pune.
5	M.R. Sreenivasan , Business Laws, Margham Publications, Chennai.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	www.cramerz.com www.digitalbusinesslawgroup.com
2	http://swcu.libguides.com/buslaw
3	http://libguides.slu.edu/businesslaw

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	3	2	2	2	2	2	2	2	3	3
CO2	3	2	3	3	2	2	2	2	2	2	2	3	3
CO3	3	2	2	3	2	2	2	2	2	2	2	3	3
CO4	3	2	3	3	2	2	2	2	2	2	2	3	3
CO5	3	2	3	3	2	2	2	2	2	2	2	3	3
TOTAL	15	10	13	15	10	10	10	10	10	10	10	15	15
AVERAGE	3	2	2.6	3	2	2	2	2	2	2	2	3	3

3 – Strong, 2- Medium, 1- Low

FIRST YEAR – SEMESTER – II**ELECTIVE– II: OFFICE AUTOMATION AND LAB**

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2		2		3	4	25	75	100
Learning Objectives									
LO1	The major objective in introducing the Computer Skills course is to impart training for students in Microsoft Office which has different components like MS Word, MS Excel and Power point.								
LO2	The course is highly practice oriented rather than regular class room teaching.								
LO3	To acquire knowledge on editor, spread sheet and presentation software.								
Prerequisites: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introductory concepts: Hardware and Software - Memory unit – CPU-Input Devices: Key board, Mouse and Scanner. Output devices: Monitor, Printer. Introduction to Operating systems - Introduction to Programming Languages.								12
II	Word Processing: File menu operations - Editing text – tools, formatting, bullets and numbering - Spell Checker - Document formatting – Paragraph alignment, indentation, headers and footers, printing – Preview, options, merge.								12
III	Spreadsheets: Excel – opening, entering text and data, formatting, navigating; Formulas – entering, handling and copying								12
IV	Charts – creating, formatting and printing, analysis tables, preparation of financial statements, introduction to data analytics.								12
V	Power point: Introduction to Power point - Features – Understanding slide typecasting & viewing slides – creating slide shows. Applying special object – including objects & pictures – Slide transition – Animation effects, audio inclusion, timers.								12

	Total	60
Course Outcomes		
CO1	Understand the basics of computer systems and its components.	
CO2	Understand and apply the basic concepts of a word processing package.	
CO3	Understand and apply the basic concepts of electronic spreadsheet software.	
CO4	Understand and apply the basic concepts of database management system.	
CO5	Understand and create a presentation using PowerPoint tool.	
Textbooks		
1	Peter Norton, “Introduction to Computers” –Tata McGraw-Hill.	
Reference Books		
1	Jennifer Ackerman Kettel, Guy Hat-Davis, Curt Simmons, “Microsoft 2003”, Tata McGraw- Hill.	
NOTE: Latest Edition of Textbooks May be Used		
Web Resources		
1	Web content from NDL / SWAYAM or opensource web resources	

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	2	3	2	2	2	3	2	2	3	3
CO2	3	2	3	2	2	2	2	2	3	2	2	3	3
CO3	3	2	2	2	2	2	2	1	3	2	2	3	3
CO4	3	2	2	2	2	2	2	2	3	2	2	3	3
CO5	3	2	3	2	2	2	2	1	3	2	2	3	3
TOTAL	15	10	12	10	11	10	10	8	15	10	10	15	15
AVERAGE	3	2	2.4	2	2.2	2	2	1.6	3	2	2	3	3

3 – Strong, 2- Medium, 1- Low

Office Automation Lab	
<p>Learning Objectives: (for teachers: what they have to do in the class/lab/field) Office tools course would enable the students in crafting professional word documents, excel spread sheets, power point presentations using the Microsoft suite of office tools. To familiarize the students in preparation of documents and presentations with office automation tools.</p>	
<p>Course Outcomes: (for students: To know what they are going to learn) CO1: to perform documentation CO2: to perform accounting operations CO3: to perform presentation skills</p>	

List of Programs
<p>Word</p> <p>Word Orientation : The instructor needs to give an overview of Microsoft word & Importance of MS Word as word Processor, Details of the four tasks and</p>

features that would be covered Using word – Accessing, overview of toolbars, saving files, Using help and resources, rulers, format painter.

Task 1 : Using word to create project certificate. Features to be covered:-

Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colours, Inserting Header and Footer, Using Date and Time option in Word.

Task 2 : Creating project abstract Features to be covered:-Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check , Track Changes.

Task 3 : Creating a Newsletter : Features to be covered:- Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes and Paragraphs

Excel

Excel Orientation :The instructor needs to tell the importance of MS Excel as a Spreadsheet tool, give the details of the four tasks and features that would be covered Excel – Accessing, overview of toolbars, saving excel files, Using help and resources {Comdex Information Technology course tool kit Vikas }

Task1: Creating a Scheduler - Features to be covered: Gridlines, Format Cells, Summation, auto fill, Formatting Text

Task 2 : Calculations - Features to be covered:- Cell Referencing, Formulae in excel – average, standard deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, LOOKUP/VLOOKUP

Task 3 : Performance Analysis - Features to be covered:- Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators, Conditional formatting

MS Power Point

Task1 :Students will be working on basic power point utilities and tools which help them create basic power point presentation. Topic covered includes :- PPT Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows

Task 2 :This session helps students in making their presentations interactive. Topics covered includes: Hyperlinks, Inserting –Images, Clip Art, Audio, Video, Objects, Tables and Charts

Task 3 :Concentrating on the in and out of Microsoft power point. Helps them learn best practices in designing and preparing power point presentation. Topics covered includes :- Master Layouts (slide, template, and notes), Types of views

(basic, presentation, slide slotter, notes etc), Inserting – Background, textures, Design Templates, Hidden slides.Auto content wizard, Slide Transition, Custom Animation, Auto Rehearsing

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC –CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill
1. Comdex Information Technology course tool kit Vikas Gupta, WILEY Dreamtech,2005 2. The Complete Computer upgrade and repair book,3rd edition Cheryl A Schmidt, WILEY Dreamtech . Introduction to Information Technology, ITL Education Solutions limited, Pearson Education. 4. PC Hardware and A + Handbook – Kate J. Chas PHI (Microsoft)	

FIRST YEAR – SEMESTER - II**ELECTIVE - II: PROGRAMMING IN C++ AND LAB**

	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	Externa l	Total
	2		2		3	4	25	75	100
Learning Objectives									
LO1	To engender an appreciation for the need and characteristics of Object-orientation.								
LO2	To impart knowledge of the C++ language grammar in order to design and implement programming solutions to simple problems by applying Object-oriented thinking.								
Prerequisites: Should have studied Commerce in XII Std									
Unit	Contents							No. of Hours	
I	Object Oriented Programming Concepts: Complexity in software - The need for object-orientation – Abstraction – Encapsulation – Modularity – Hierarchy. Basic Elements of C++: Classes – Objects – Data members and member functions – private and public access specifiers - Static members - Constructors – Singleton class - Destructors							12	
II	Friend Functions and Friend Classes - Array of objects – Pointer to objects - this pointer – References – Dynamic memory allocation - Namespaces. Function Overloading: Overloading a function - Default arguments – Overloading Constructors. Operator Overloading: Overloading an operator as a member function – Overloading an operator as a friend function							12	
III	Overloading the operators [], (), -> and comma operators – Conversion Functions. Inheritance: Types of inheritance – protected access specifier –Virtual Base Class – Base class and derived class constructors. Run-time Polymorphism: Virtual Functions							12	
IV	Function overriding - Pure virtual function – Abstract base class. Templates: Function templates – Overloading a function template – Class templates.							12	

V	Exception Handling: Exceptions – try, catch, throw – Rethrowing an exception – Restricting exceptions - Handling exceptions in derived classes - terminate(), abort(), unexpected(), set_terminate(). I/O Streams: Formatted I/O with ios class functions - Manipulators – Creating own manipulator – Overloading << and >> operators.	12
	Total	60
Course Outcomes		
CO1	Explain the various basic concepts of Object-orientation.	
CO2	Write programs to implement static binding	
CO3	Write programs to implement inheritance and dynamic binding	
CO4	Write programs to implement templates and exception handling and learn how to use STL class library.	
CO5	Write programs implementing File and Stream I/O.	
Textbooks		
1	Herbert Schildt, <i>C++ - The Complete Reference</i> , Third Edition, TMH, 1999.	
2	Grady Booch, <i>Object Oriented Analysis and Design</i> , Pearson Education, 2008. (For Unit I)	
Reference Books		
1	Bjarne Strousstrup, <i>The C++ Programming Language</i> , Addison Wesley, 2000.	
2	J. P. Cohoon and J. W. Davidson, <i>C++ Program Design – An Introduction to Programming and Object-Oriented Design</i> , Second Edition, McGraw Hill, 1999.	
3	C. J. Lippman, <i>C++ Primer</i> , Third Edition, Addison Wesley, 2000.	
NOTE: Latest Edition of Textbooks May be Used		

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	2	2	2	2	2	3	2	3	3	3
CO2	3	2	3	2	2	2	2	2	3	2	2	3	3
CO3	3	2	2	2	2	2	2	1	3	2	2	3	3
CO4	3	2	2	2	2	2	2	2	3	2	2	3	3
CO5	3	2	3	2	2	2	2	1	3	2	2	3	3
TOTAL	15	10	12	10	10	10	10	8	15	10	11	15	15
AVERAGE	3	2	2.4	2	2	2	2	1.6	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

FIRST YEAR – SEMESTER - II

Object Oriented Programming with C++	
Learning Objectives: (for teachers: what they have to do in the class/lab/field) <ul style="list-style-type: none">• Design classes for the given problems.• Write programs in C++.• Code, debug and execute a C++ program to solve the given problems using an IDE.	
Course Outcomes: (for students: To know what they are going to learn) CO1: Design and create classes. Implement Stream I/O as appropriate. CO2: Design appropriate data members and member functions. CO3: Implement functions, friend functions, static members, constructors and compile-time polymorphism. CO4: Implement inheritance, run-time polymorphism and destructors. CO5: Implement templates and exceptions. Use STL class library. Implement File I/O.	

List of Programs
<ol style="list-style-type: none">1. Write a class to represent a complex number which has member functions to do the following<ol style="list-style-type: none">a. Set and show the value of the complex numberb. Add, subtract and multiply two complex numbersc. Multiplying the complex number with a scalar value2. Write a Point class that represents a 2-d point in a plane. Write member functions to<ol style="list-style-type: none">a. Set and show the value of a pointb. Find the distance between two pointsc. Check whether two points are equal or not4. Design and implement a class to represent a Solid object.<ol style="list-style-type: none">a. Apart from data members to represent dimensions, use a data member to specify the type of solid.b. Use functions to calculate volume and surface area for different solids.5. Design a class representing time in hh:mm:ss. Write functions to<ol style="list-style-type: none">a. Set and show the timeb. Find the difference between two time objectsc. Adding a given duration to a timed. Conversion of the time object to seconds6. Design a 3x3 matrix class and demonstrate the following:<ol style="list-style-type: none">a. Addition and multiplication of two matrices using operator overloadingb. Maintaining a count of the number of matrix object created7. Design a class called cString to represent a string data type. Create a data member in the class to represent a string using an array of size 100. Write the following functionality as member functions:<ol style="list-style-type: none">a. Copy Constructorb. Concatenate two stringsc. Find the length of the string

<ul style="list-style-type: none"> d. Reversing a string e. Comparing two strings
<p>8. Design a class called cString to represent a string data type. Create a data member in the class to represent a string whose size is dynamically allocated. Write the following as member functions:</p> <ul style="list-style-type: none"> a. Copy Constructor b. Destructor c. Concatenate two strings d. Find the length of the string e. Reversing a string f. Comparing two strings

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC –CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

Learning Resources:

Learning Resources:

Recommended Texts

1. Herbert Schildt, *C++ - The Complete Reference*, Third Edition, TMH, 1999.
2. Grady Booch, *Object Oriented Analysis and Design*, Pearson Education, 2008. (For Unit I)

Reference Books

1. Bjarne Stroustrup, *The C++ Programming Language*, Addison Wesley, 2000.
2. J. P. Cohoon and J. W. Davidson, *C++ Program Design – An Introduction to Programming and Object-Oriented Design*, Second Edition, McGraw Hill, 1999.

C. J. Lippman, *C++ Primer*, Third Edition, Addison Wesley, 2000.

SEC – I: STOCK MARKET PRACTICES NME - II

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2				2	2	25	75	100
Learning Objectives									
LO	To enable the learners to know about the financial system and functioning of industrial securities market.								
Unit	Contents							No. of Hours	
I	Financial System in India Financial System in India – Financial assets - Financial Intermediaries.							6	
II	Financial Markets Financial Markets – Classification – Importance of Capital markets.							6	
III	New Issue Market New issue market – Functions –Methods of Issue							6	
IV	Secondary Market Stock Market – Functions of Stock Exchanges.							6	
V	Listing of Securities OTCEI – BSE – NSE – Listing of Securities – Procedure – Advantages – Demat Accounts – Mechanics of Trading in Stock Exchanges.							6	
TOTAL							30		
CO	Course Outcomes								
CO1	Understanding the financial concept, system and structure of financial market								
CO2	Gaining knowledge about the classification of financial markets								
CO3	Recognizing the role played by new issue market and analyzing the different methods of floating new issue								
CO4	Examining the functions of stock exchange								
CO5	Acquiring knowledge about listing of securities and mechanics of trading in stock exchanges								
Textbooks									

1.	E.Gordon & K.Natarajan, Financial Markets and Services, Himalaya Publishing House, Mumbai, 1st January 2018
Reference Books	
1.	Bhole,L, Financial Institutions and Markets, Tata McGraw Hill Publishing Company Ltd, New Delhi, 25th June 2017
2.	M.Y Khan, Financial Services, Tata McGraw Hill Publishing Company Ltd, New Delhi, 15th July 2019.
3.	S.Gurusamy, Essentials of Financial Services, Vijay Nicole Imprints Pvt Ltd, 2018
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1.	https://www.youtu.be/mvqOhBINWjc
2.	https://www.youtu.be/SxH-g7Htiho
3.	https://www.youtu.be/PssSd8cj1lw
4.	https://www.youtu.be/XID75ZoBEus

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	3	3	3	2	2	3	2	3	2	3	3	3
CO2	3	3	2	3	3	2	2	2	3	2	3	3	3
CO3	3	3	2	3	3	2	3	2	3	2	3	3	3
CO4	3	3	3	3	3	2	3	3	3	2	3	3	3
CO5	3	3	3	3	3	3	3	2	3	2	3	3	3
TOTAL	15	15	13	15	14	11	14	11	15	10	15	15	15
AVERAGE	3	3	2.6	3	2.8	2.2	2.8	2.2	3	2	3	3	3

3 – Strong, 2- Medium, 1- Low

FIRST YEAR – SEMESTER - II

SEC II: ENGLISH FOR CAREER DEVELOPMENT

	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	Extern al	Total
			2		2	2	25	75	100
Learning Objectives									
LO1	The course helps the learners to improve their vocabulary, reading skill, listening skill and oral and written communication.								
Unit	Contents								No. of Hours
I	Reading: Importance of Reading – Types of Reading – Reading of Given Texts – Reading Passages from Different Areas of Study – Reading Newspapers, Translation of Words, Sentences and Paragraphs.								6
II	Listening Skill: Listening to Speeches – Dialogues and Group Discussion.								6
III	Writing Skills: Describing a Person, Situation, Picture – Describing Family Members – Teachers – Favourite Actors, Players, etc., Master of Ceremony Preparation.								6
IV	Body Language and Postures: Use of Body Language – Non-verbal Cues – Gestures that Convey Positive Impression– Gestures that Carry Negative Overtones.								6
V	Speaking Skills: Self-Introduction – Role Play – Public Speaking Skills: Content of Public Speech– Delivery of Speech.								6
TOTAL								30	
100 % Practical									
CO	Course Outcomes								
CO1	Read the documents and newspapers with proper pronunciation and flow.								
CO2	Converse with a given situation and participate in panel discussion.								

CO3	Able to write an essay / article about a person, situation and a given picture.
CO4	Learnt about various Gestures and body language need to be adopted for different situations.
CO5	Deliver speech on various topics.
Reference books	
1.	Kathiresan, S., and Radha,V., <i>Business Communication</i> , Chennai, Prasanna Publication and Distributors.
2.	Themozhi, G., and Selvi, P., <i>Career Guidance</i> , Chennai, New Century Book House.
3.	Rajendra Pal and Korlahalli, J.S., <i>Essentials of Business Communication</i> , New Delhi, Sultan Chand & Sons.

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	2	2	3	2	2	2	3	2	3	3	3
CO2	3	2	2	2	2	2	2	2	3	2	2	3	3
CO3	3	2	2	2	2	2	2	2	3	2	2	3	3
CO4	3	2	2	2	2	2	2	2	3	2	2	3	3
CO5	3	2	2	2	2	2	2	2	3	2	2	3	3
TOTAL	15	10	10	10	11	10	10	10	15	10	11	15	15
AVERAGE	3	2	2	2	2.2	2	2	2	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER - III
CORE – V: CORPORATE ACCOUNTING I

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				4	5	25	75	100
Learning Objectives									
LO1	To understand about the pro-rata allotment and Underwriting of Shares								
LO2	To know the provisions of companies Act regarding Issue and Redemption of Preference shares and debentures								
LO3	To learn the form and contents of financial statements as per Schedule III of Companies Act 2013								
LO4	To examine the various methods of valuation of Goodwill and shares								
LO5	To identify the Significance of International financial reporting standard (IFRS)								
Prerequisite: Should have studied Financial Accounting in I Year									
Unit	Contents								No. of Hours
I	Issue of Shares Issue of Shares – Premium - Discount - Forfeiture - Reissue – Pro-rata Allotment - Underwriting of Shares and Debentures – Underwriting Commission - Types of Underwriting.								15
II	Issue & Redemption of Preference Shares & Debentures Redemption of Preference Shares–Provisions of Companies Act–Capital Redemption Reserve – Minimum Fresh Issue – Redemption at Par, Premium and Discount. Debentures: Issue and Redemption – Meaning – Methods –Excluding Ex Interest and Cum Interest - Sinking Fund Investment Method.								15
III	Final Accounts Introduction – Final Accounts – Form and Contents of Financial Statements as Per Schedule III of Companies Act 2013 – Part I Form of Balance Sheet – Part II Form of Statement of Profit and Loss – Ascertaining Profit for Managerial Remuneration								15
IV	Valuation of Goodwill & Shares Valuation of Goodwill – Meaning – Need for Valuation of Goodwill – Methods of Valuing Goodwill – Average Profit – Super Profit – Annuity and Capitalization Method. Valuation of Shares – Need for Valuation of Shares – Methods of Valuation of Shares – Net Assets Method – Yield and Fair Value Methods.								15
V	Indian Accounting Standards International Financial Reporting Standard (IFRS)–Meaning and its Applicability in India - Indian Accounting Standards – Meaning –								15

	Objectives – Significance – Procedures for Formulation of Standards – Ind AS – 1 Presentation of Financial Statement, Ind AS – 2 Valuation of Inventories. Ind AS 38 – Intangible Assets , Ind AS 110, Consolidated Financial Statement. (Theory Only)	
	TOTAL	75
THEORY 20% & PROBLEMS 80%		
Course Outcomes		
CO1	Prepare and account for various entries to be passed in case of issue, forfeiture and reissue of shares and compute the liability of underwrites	
CO2	Asses the accounting treatment of issue and redemption of preference shares and debentures	
CO3	Construct Financial Statements applying relevant accounting treatments	
CO4	Compute the value of goodwill and shares under different methods and assess its applicability	
CO5	Integrate theoretical knowledge on all accounting in par with IFRS and IND AS	
Textbooks		
1	S.P. Jain and N.L. Narang, Advanced Accounting Vol I, Kalyani Publication, New Delhi.	
2	R.L. Gupta and M. Radha swamy, Advanced Accounts Vol I, Sultan Chand, New Delhi.	
3	Broman, Corporate Accounting, Taxmann, New Delhi.	
4	Shukla, Grewal and Gupta- Advanced Accounts VolI,S.Chand, New Delhi.	
5	M.C.Shukla, Advanced accounting Vol I, S.Chand, New Delhi.	
Reference Books		
1	T.S. Reddy, A. Murthy – Corporate Accounting- Margham Publication, Chennai.	
2	D.S.Rawat&NozerShroff,Students Guide To Accounting Standards ,Taxmann, New Delhi	
3	Prof. Mukeshbramhbutt, Devi,Corporate Accounting I, Ahilya Publication, Madhya Pradesh	
4	Anil Kumar, Rajesh kumar, Corporate accounting I, Himalaya Publishing house, Mumbai.	
5	PrasanthAthma, Corporate Accounting I, Himalaya Publishing house, Mumbai.	
NOTE: Latest Edition of Textbooks May be Used		
Web Resources		
1	https://www.tickertape.in/blog/issue-of-shares/	
2	https://www.taxmann.com/bookstore/bookshop/bookfiles/chapter12valuationofgoodwillandshares.pdf	
3	https://www.mca.gov.in/content/mca/global/en/acts-rules/ebooks/accounting-standards.html	

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	2	2	2	2	3	2	2	3	3
CO2	3	2	3	2	2	2	2	2	3	2	2	3	3
CO3	3	2	3	2	3	2	2	2	3	2	2	3	3
CO4	3	1	3	2	3	2	2	2	3	2	2	3	3
CO5	3	3	3	2	3	2	2	2	3	2	2	3	3
TOTAL	15	11	15	10	13	10	10	10	15	10	10	15	15
AVERAGE	3	2.2	3	2	2.6	2	2	2	3	2	2	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER - III**CORE – VI: BUSINESS MATHEMATICS & STATISTICS**

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				4	5	25	75	100
Learning Objectives									
LO1	To impart knowledge on the basics of ratio, proportion, indices and proportions								
LO2	To learn about simple and compound interest and arithmetic, geometric and harmonic progressions.								
LO3	To familiarise with the measures of central tendency								
LO4	To conceptualise with correlation co-efficient								
LO5	To gain knowledge on time series analysis								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Ratio Ratio, Proportion and Variations, Indices and Logarithms.								15
II	Interest and Annuity Banker’s Discount – Simple and Compound Interest - Arithmetic, Geometric and Harmonic Progressions. Annuity - Meaning - Types of Annuity Applications.								15
III	Business Statistics Measures of Central Tendency Arithmetic Mean, Geometric Mean - Harmonic Mean - Mode and Median – Quartiles – Deciles - Percentiles. Measures of Variation – Range - Quartile Deviation and Mean Deviation - Variance and Standard Deviation & Co-efficient.								15

IV	Correlation and Regression Correlation - Karl Pearson's Coefficient of Correlation – Spearman's Rank Correlation – Regression Lines and Coefficients.	15
V	Time Series Analysis and Index Numbers Time Series Analysis : Secular Trend – Seasonal Variation – Cyclical variations - Index Numbers – Aggregative and Relative Index – Chain and Fixed Index –Wholesale Index – Cost of Living Index.	15
	TOTAL	75
Course Outcomes		
CO1	Learn the basics of ratio, proportion, indices and logarithm	
CO2	Familiarise with calculations of simple and compound interest and arithmetic, geometric and harmonic progressions.	
CO3	Determine the various measures of central tendency	
CO4	Calculate the correlation and regression co-efficient.	
CO5	Assess problems on time series analysis	
Textbooks		
1	Dr. B.N. Gupta, Business Mathematics & Statistics, Shashibhawan publishing house, Chennai	
2	Asim Kumar Manna, Business Mathematics & Statistics, McGraw hill education, Noida	
3	A.V. Rayarikar and Dr. P.G. Dixit, Business Mathematics & Statistics, Nirali Prakashan Publishing, Pune	
4	Dr.S. Sachdeva, Business Mathematics & Statistics, Lakshmi NarainAgarwal, Agra	
5	P.R. Vittal, Business Mathematics & Statistics, Margham Publications, Chennai	
Reference Books		

1	J.K. Sharma, Fundamentals of business statistics, Vikas publishing, Noida
2	Peter Waxman, Business Mathematics & Statistics, Prentice Hall, New York
3	Andre Francis, Business Mathematics & Statistics, Cengage Learning EMEA, Andover
4	Aggarwal B M, Business Mathematics & Statistics, Ane Book Pvt. Ltd., New Delhi
5	R.S. Bhardwaj, Business Mathematics & Statistics, Excel Books Publisher, New Delhi
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://www.britannica.com/biography/Henry-Briggs
2	https://corporatefinanceinstitute.com/resources/data-science/central-tendency/
3	https://www.expressanalytics.com/blog/time-series-analysis/

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	2	2	3	2	3	2	2	3	3
CO2	3	2	3	2	3	2	3	2	3	2	2	3	3
CO3	3	2	3	2	3	2	3	2	3	2	2	3	3
CO4	3	2	3	2	2	2	3	2	3	2	2	3	3
CO5	3	2	3	2	2	2	3	2	3	2	2	3	3
TOTAL	15	10	15	10	12	10	15	10	15	10	10	15	15
AVERAGE	3	2	3	2	2.4	2	3	2	3	2	2	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER - III**ELECTIVE III : WEB TECHNOLOGY(PHP) AND LAB**

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2		2		3	4	25	75	100
Learning Objectives									
LO1	To use PHP and My SQL to develop dynamic web sites for user on the Internet								
LO2	To develop web sites ranging from simple online information forms to complex e-commerce sites with My SQL database, building, connectivity, and maintenance								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introducing PHP – Basic development Concepts – Creating first PHP Scripts – Using Variable and Operators – Storing Data in variable – Understanding Data types – Setting and Checking variables Data types – Using Constants – Manipulating Variables with Operators.								12
II	Controlling Program Flow: Writing Simple Conditional Statements - Writing More Complex Conditional Statements – Repeating Action with Loops – Working with String and Numeric Functions.								12
III	Working with Arrays: Storing Data in Arrays – Processing Arrays with Loops and Iterations –Using Arrays with Forms - Working with Array Functions – Working with Dates and Times.								12
IV	Using Functions and Classes: Creating User-Defined Functions - Creating Classes – Using Advanced OOP Concepts.								12
V	Working with Database and SQL : Introducing Database and SQL- Using My SQL-Adding and modifying Data-Handling Errors – Using SQLite Extension and PDO Extension. Introduction XML - Simple XML and DOM Extension.								12

	TOTAL	60
CO	Course Outcomes	
CO1	Understand the general concepts of PHP scripting language for the development of Internet websites.	
CO2	Creating controlling program flow and strings	
CO3	Understanding the Array concepts	
CO4	Representing the functions and classes	
CO5	Understand the basic functions of MySQL database program and XML concepts	
Textbooks		
1	VikramVaswani, “PHP A Beginner's Guide”, Tata McGraw Hill 2008.	
Reference Books		
1	Steven Holzner , “The PHP Complete Reference”, Tata McGraw Hill, 2007.	
2	Steven Holzer , “Spring into PHP”, Tata McGraw Hill 2011, 5thEdition.	
NOTE: Latest Edition of Textbooks May be Used		
Web Resources		
1	https://www.w3schools.com/php/	
2	https://www.phptpoint.com/php-tutorial-pdf/	
3	http://www.xmlsoftware.com/	

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	3	2	2	2	2	2	3	2	3	3	3
CO2	3	2	3	2	2	2	2	2	3	2	2	3	3
CO3	3	2	3	2	2	2	2	2	3	2	2	3	3
CO4	3	2	3	2	2	2	2	2	3	2	2	3	3
CO5	3	2	3	2	2	2	2	2	3	2	2	3	3
TOTAL	15	10	15	10	10	10	10	10	15	10	11	15	15
AVERAGE	3	2	3	2	2	2	2	2	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER – III

WEB TECHNOLOGY LAB
Learning Objectives: (for teachers: what they have to do in the class/lab/field) <ul style="list-style-type: none">• The objectives of this course are to have a practical understanding about how to write PHP code to solve problems.• Display and insert data using PHP and MySQL.• Test, debug, and deploy web pages containing PHP and MySQL.• It also aims to introduce practical session to develop simple applications using PHP and MySQL.
Course Outcomes: (for students: To know what they are going to learn) <ol style="list-style-type: none">1. On the completion of this laboratory course the students ought to2. Obtain knowledge and develop application programs using Python.3. Create dynamic Web applications such as content management, user registration, and ecommerce using PHP and to understand the ability to post and publish a PHP website.4. Develop a MySQL database and establish connectivity using MySQL.

LIST OF PRACTICALS
<ol style="list-style-type: none">1. Write a PHP program which adds up columns and rows of given table2. Write a PHP program to compute the sum of first n given prime numbers3. Write a PHP program to find valid an email address4. Write a PHP program to convert a number written in words to digit.5. Write a PHP script to delay the program execution for the given number of seconds.6. Write a PHP script, which changes the colour of the first character of a word7. Write a PHP program to find multiplication table of a number.8. Write a PHP program to calculate Factorial of a number.9. Write a PHP code to create a student mark sheet table. Insert, delete and modify records.10. From a XML document (email.xml), write a program to retrieve and print all the e-mail addresses from the document using XML11. From a XML document (tree.xml), suggest three different ways to retrieve the text value 'John' using the DOM:12. Write a program that connects to a MySQL database and retrieves the contents of any one of its tables as an XML file. Use the DOM.

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC – CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
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Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill
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SECOND YEAR – SEMESTER – III

ELECTIVE - III: PROGRAMMING IN JAVA AND LAB

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2		2		3	4	25	75	100
Learning Objectives									
LO1	To provide fundamental knowledge of object-oriented programming.								
LO2	To equip the student with programming knowledge in Core Java from the basics up.								
LO3	To enable the students to use AWT controls, Event Handling and Swing for GUI.								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction: Review of Object-Oriented concepts - Java buzzwords (Platform independence, Portability, Threads)- JVM architecture –Java Program structure - –Java main method - Java Console output(System.out) - simple java program - Data types - Variables - type conversion and casting- Java Console input: Buffered input - operators - control statements - Static Data - Static Method - String and String Buffer Classes								12
II	Java user defined Classes and Objects – Arrays – constructors - Inheritance: Basic concepts - Types of inheritance - Member access rules - Usage of this and Super key word - Method Overloading - Method overriding - Abstract classes - Dynamic method dispatch - Usage of final keyword								12
III	Packages: Definition - Access Protection - Importing Packages - Interfaces: Definition – Implementation – Extending Interfaces Exception Handling: try – catch - throw - throws -- finally – Built-in exceptions - Creating own Exception classes - garbage collection, finalise								12

IV	Multithreaded Programming: Thread Class - Runnable interface – Synchronization – Using synchronized methods – Using synchronized statement – Inter thread Communication – Deadlock.	12
V	Adapter classes - Inner classes -Java Util Package / Collections Framework: Collection & Iterator Interface- Enumeration- List and Array List- Vector- Comparator	12
	TOTAL	60
Course Outcomes		
CO1	Understand the basic Object-oriented concepts.Implement the basic constructs of Core Java	
CO2	Implement of Array and Inheritance	
CO3	Creating packages, interfaces and exception handling of Core Java.	
CO4	Implement Multi-threaded programming and Deadlock of Core Java	
CO5	Understand the Adapter classes and Framework	
Textbooks		
1	Herbert Schildt, The Complete Reference, Tata McGraw Hill, New Delhi, 7th Edition, 2010.	
2	Gary Cornell, Core Java 2 Volume I – Fundamentals, Addison Wesley, 1999.	
Reference Books		
1	Head First Java, O’Rielly Publications, Y. Daniel Liang, Introduction to Java Programming, 7th Edition, Pearson Education India, 2010.	

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	3	2	2	2	2	2	3	2	3	3	3
CO2	3	2	3	2	2	2	2	2	3	2	2	3	3
CO3	3	2	3	2	2	2	2	2	3	2	2	3	3
CO4	3	2	3	2	2	2	2	2	3	2	2	3	3
CO5	3	2	3	2	2	2	2	2	3	2	2	3	3
TOTAL	15	10	15	10	10	10	10	10	15	10	11	15	15
AVERAGE	3	2	3	2	2	2	2	2	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

Java Programming Lab	Core -S2EC1L
Learning Objectives: (for teachers: what they have to do in the class/lab/field) <ul style="list-style-type: none"> To gain practical expertise in coding Core Java programs To become proficient in the use of AWT, Event Handling and Swing. 	
Course Outcomes: (for students: To know what they are going to learn) CO1: Code, debug and execute Java programs to solve the given problems CO2: Implement multi-threading and exception-handling CO3: Implement functionality using String and StringBuffer classes	

List of Programs
1. Write a Java program that prompts the user for an integer and then prints out all the prime numbers up to that Integer? 2. Write a Java program to multiply two given matrices. 3. Write a Java program that displays the number of characters, lines and words in a text? 4. Generate random numbers between two given limits using Random class and print messages according to the range of the value generated. 5. Write a program to do String Manipulation using Character Array and perform

the following string operations:

- a) String length
- b) Finding a character at a particular position
- c) Concatenating two strings

6. Write a program to perform the following string operations using String class:

- a) String Concatenation
- b) Search a substring
- c) To extract substring from given string

7. Write a program to perform string operations using StringBuffer class:

- a) Length of a string
- b) Reverse a string
- c) Delete a substring from the given string

8. Write a java program that implements a multi-thread application that has three threads. First thread generates random integer every 1 second and if the value is even, second thread computes the square of the number and prints. If the value is odd, the third thread will print the value of cube of the number.

9. Write a threading program which uses the same method asynchronously to print the numbers 1 to 10 using Thread1 and to print 90 to 100 using Thread2.

10. Write a program to demonstrate the use of following exceptions.

- a) Arithmetic Exception
- b) Number Format Exception
- c) Array Index Out of Bound Exception
- d) Negative Array Size Exception

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC –CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

Learning Resources:

Recommended Texts

Herbert Schildt, The Complete Reference, Tata McGraw Hill, New Delhi, 7th Edition, 2010.

Gary Cornell, Core Java 2 Volume I – Fundamentals, Addison Wesley, 1999.

Reference Books

Head First Java, O’Rielly Publications, Y. Daniel Liang, Introduction to Java Programming, 7th Edition, Pearson Education India, 2010.

Web resources: Web resources from NDL Library, E-content from open-source libraries

SECOND YEAR – SEMESTER – III

SEC –IV: PRODUCT LAUNCHING- PRACTICAL

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
			1		1	1	25	75	100
Learning Objectives									
LO	The course enlightens the students with the practical aspects on product Launching.								
Unit	Contents								No. of Hours
I	Introduction: Entrepreneur-Meaning-Definition-Characteristics- Functions- Types.								3
II	Product: Meaning- Definition- New Product Planning-Product Lifecycle.								3
III	Branding: Meaning- Functions- Packaging-Introduction								3
IV	Branding- Labelling- Packaging[Practical]								3
V	Product Launching-Sales [Practical]								3
TOTAL								15	
Course Outcomes									
CO	Course Outcomes								
CO1	Understanding the concept, importance and types of entrepreneurs.								
CO2	Explaining the meaning and definitions of women entrepreneurs and differentiate it from male entrepreneurs								
CO3	Analyzing the problems of women entrepreneurs and identifying institutions supporting women entrepreneurs.								
CO4	Creating ideas to business journey in a structured way.								
CO5	Imparting awareness regarding the systematic process of developing the product launching.								
Textbooks									
1.	E.Gordon&K.Nataranjan, Entrepreneurship Development, Himalaya Publishing House, Mumbai, 2020, 6 th edition								
Reference Books									
1.	S.S.Khanka, Entrepreneurial Development, S.Chand & Co , New Delhi 2007.								
2.	R.Vasantha Gopal & S.Santha, Women Entrepreneuership in India, New Century Book House, New delhi 2008,1 st edition								
3.	Grishma Vijay & Capt. Shekhar Gupta, Most Successful Female Entrepreneurs of India ,Notion Press Chennai 2019.								
4.	Dr.C.B.Gupta & Dr.N.P.Srinivasan , Entrepreneurial Development, Sultan Chand & Sons , New Delhi 2020.								
NOTE: Latest Edition of Textbooks May be Used									

Web Resources	
1.	https://www.youtube.com/watch?v=MdNNGfoxrqA
2.	https://www.youtube.com/watch?v=7YTemWyingA0&feature=youtu.be
3.	https://www.youtube.com/watch?v=ePmfH5_UCPU&feature=youtu.be
4.	https://www.youtube.com/watch?v=K1TwNKA0BM
5.	https://www.youtube.com/watch?v=1C0en74UwTE

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO 3	PSO 4	PSO 5
CO1	3	2	2	2	2	2	2	2	2	2	2	3	3
CO2	3	2	2	2	2	2	2	2	2	2	2	3	3
CO3	3	3	3	3	3	2	2	2	2	2	2	3	3
CO4	3	3	3	3	2	2	2	2	2	2	2	3	3
CO5	3	2	3	2	2	2	2	2	2	2	2	3	3
TOTAL	15	12	13	12	11	10	10	10	10	10	10	15	15
AVERAGE	3	2.4	2.6	2.4	2.2	2	2	2	2	2	2	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER – III

SEC - V:COMPUTERIZED ACCOUNTING PACKAGE-I PRACTICAL

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
			2		2	2	25	75	100
Learning Objectives									
LO	The course aims to enrich the student’s practical knowledge in accounting tools, techniques and packages and to prepare them with required skill for employability.								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction to Accounting Software Introduction to accounting software - Starting Tally – Company Creation – Ledger Creation								6
II	Creation of Vouchers Voucher Entry : Single Entry mode – Double Entry mode - Day Book Summary.								6
III	Preparation of Trail Balance and Ratio Analysis Trial Balance – Display Ratio analysis.								6
IV	Preparation of Financial Statements Final Accounts without adjustments – Cash flow and Fund flow statement								6
V	Finding the Stock Level and Preparation of Stores Ledger Reorder level status – FIFO –LIFO								6
	TOTAL								30

CO	Course Outcomes
CO1	Developing company creation and ledger.
CO2	Preparing day book summary and able to do vouching entry.
CO3	Preparing trial balance and conduct ratio analysis.
CO4	Preparing final accounts, cash flow and fund flow statement.
CO5	Finding the stock level and preparing store ledger

PROGRAM LIST

1. Company creation
2. Display ledgers
3. Creation of Vouchers
4. Day book preparation
5. Preparation of Trial Balance
6. Calculation of ratios.
7. Display the Final Accounts without Adjustments
8. Prepare Cash flow and Fund flow Statement
9. Display Reorder Level Status
10. Inventory control method FIFO and LIFO

Reference Books	
1.	Official Guide to Financial Accounting using Tally.ERP 9 with GST, BPB, 1 st January 2018.
2.	DT Editorial Services, Tally.ERP 9 with GST in simple steps, Dreamtech Press, 1 st February 2020
3.	SoumyaRajanBehera, Learn Tally.ERP 9 with GST, B.K.PublicationPvt Ltd, 1 st January 2014.
4.	Dr.NamrataAgrawal, Comdex Tally.ERP 9, Dream Tech Press, 1 st January 2019.
Web Resources	
1	https://youtu.be/_Ghu1JlnoZI
2	https://youtu.be/_0FqS3WYTeE
3	https://youtu.be/8JAE0JyhHtQ
4	https://youtu.be/tirOxKxkbPc

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	2	2	3	2	3	2	2	3	3
CO2	3	2	3	2	3	2	3	2	3	2	2	3	3
CO3	3	2	3	2	3	2	3	2	3	2	2	3	3
CO4	3	2	3	2	2	2	3	2	3	2	2	3	3
CO5	3	2	3	2	2	2	3	2	3	2	2	3	3
TOTAL	15	10	15	10	12	10	15	10	15	10	10	15	15
AVERAGE	3	2	3	2	2.4	2	3	2	3	2	2	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER – III

PART-V: ENVIRONMENTAL STUDIES

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	1					1	-	-	-

The Earth is an incredibly precious enigma. Environmental Activities for Students are necessary to encourage sustainability. Environmental Activity means any investigation, study, assessment, evaluation, sampling, testing, monitoring, containment, removal, disposal, closure, corrective action, remediation (regardless of whether active or passive), natural attenuation, restoration, bioremediation, response, repair, corrective measure, cleanup or abatement that is required or necessary under any applicable Environmental Law, including institutional or engineering controls or participation in a governmental voluntary cleanup program to conduct voluntary investigatory and remedial actions for the clean-up, removal or remediation of Hazardous Substances that exceed actionable levels established pursuant to Environmental Laws, or participation in a supplemental environmental project in partial or whole mitigation of a fine or penalty.

The students are to be engaged in Environmental activities such as:

- * Start a Garden Club
- * Plant .. Anything
- * Go on a Nature Scavenger Hunt
- * Recycle Waste Materials
- * Start a Green Team
- * Do Mini Greenhouse Craft
- * Create Worm Farm
- * Take Plastic Pledge
- * Access the Wisdom of Local Community
- * Hold an Energy-free (or Energy-Light) Day etc.

Evaluation:

The participation and performance of the students in Environmental activities will be assessed and best performers will be rewarded.

SECOND YEAR – SEMESTER – IV
CORE – VII: CORPORATE ACCOUNTING - II

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				5	5	25	75	100
Learning Objectives									
LO1	To know the types of Amalgamation, Internal and external Reconstruction								
LO2	To know Final statements of banking companies								
LO3	To understand the accounting treatment of Insurance company accounts								
LO4	To understand the procedure for preparation of consolidated Balance sheet								
LO5	To have an insight on modes of winding up of a company								
Prerequisite: Should have studied Financial Accounting in I Year									
Unit	Contents								No. of Hours
I	Amalgamation, External & Internal Reconstruction Amalgamation – Meaning - Purchase Consideration - Lump sum Method, Net Assets Method, Net Payment Method, Intrinsic Value Method - Types of Methods of Accounting for Amalgamation - The Pooling of Interest Method - The Purchase Method (Excluding Inter-Company Holdings) External Reconstruction: Accounting Treatment of External Reconstruction. Internal Reconstruction: Internal Reconstruction – Conversion of Stock – Increase and Decrease of Capital.								15
II	Accounting of Banking Companies Final Statements of Banking Companies (As Per New Provisions) - Non-Performing Assets - Rebate on Bills Discounted- Profit and Loss a/c - Balance Sheet as Per Banking Regulation Act 1949.								15
III	Insurance Company Accounts: Meaning of Insurance – Principles – Types – Preparation of Final Accounts of Insurance Companies – Accounts of Life Insurance Business – New Format.								15
IV	Consolidated Financial Statements Introduction-Holding & Subsidiary Company-Legal Requirements Relating to Preparation of Accounts -Preparation of Consolidated Balance Sheet (Excluding Inter-Company Holdings).								15
V	Liquidation of Companies Meaning-Modes of Winding Up – Preparation of Statement of Affairs and Statement of Deficiency or Surplus (List H) Order of Payment – Liquidators Remuneration- Liquidator's								15

	Final Statement of Accounts.	
	TOTAL	75
THEORY 20% & PROBLEMS 80%		
Course Outcomes		
CO1	Understand the accounting treatment of amalgamation, Internal and external reconstruction	
CO2	Construct Profit and Loss account and Balance Sheet of Banking Companies in accordance in the prescribed format.	
CO3	Synthesize and prepare final accounts of Insurance companies in the prescribed format	
CO4	Give the consolidated accounts of holding companies	
CO5	Preparation of liquidator’s final statement of account	
Textbooks		
1	S.P. Jain and K.L Narang. Advanced Accountancy, Kalyani Publishers, New Delhi.	
2	Dr.K.S .Raman and Dr. M.A. Arulanandam , Advanced Accountancy, Vol. II, Himalaya Publishing House, Mumbai.	
3	R.L. Gupta and M. Radhaswamy, Advanced Accounts, Sultan Chand, New Delhi.	
4	M.C. Shukla and T.S. Grewal, Advanced Accounts Vol.II, S Chand & Sons, New Delhi.	
5	T.S. Reddy and A.Murthy, Corporate Accounting II, Margham Publishers, Chennai	
Reference Books		
1	B.Raman, Corporate Accounting, Taxmann, New Delhi	
2	M.C.Shukla, Advanced Accounting,S.Chand, New Delhi	
3	Prof. MukeshBramhbutt, Devi Ahilya publication, Madhya Pradesh	
4	Anil kumar, Rajesh kumar, Advanced Corporate Accounting, Himalaya Publishing house, Mumbai.	
5	PrasanthAthma, Corporate Accounting, Himalaya Publishing house, Mumbai.	
NOTE: Latest Edition of Textbooks May be Used		
Web Resources		
1	https://www.accountingnotes.net/amalgamation/amalgamation-absorption-and-reconstruction-accounting/126	
2	https://www.slideshare.net/debchat123/accounts-of-banking-companies	
3	https://www.accountingnotes.net/liquidation/liquidation-of-companies-accounting/12862	

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	2	2	3	2	3	2	2	3	3
CO2	3	2	3	2	3	2	3	2	3	2	2	3	3
CO3	3	2	3	2	3	2	3	2	3	2	2	3	3
CO4	3	2	3	2	2	2	3	2	3	2	2	3	3
CO5	3	2	3	2	2	2	3	2	3	2	2	3	3
TOTAL	15	10	15	10	12	10	15	10	15	10	10	15	15
AVERAGE	3	2	3	2	2.4	2	3	2	3	2	2	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR– SEMESTER– IV
COREPAPERVIII –COMPANY LAW

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				4	5	25	75	100
Learning Objectives									
LO1	To know Company Law 1956 and Companies Act 2013								
LO2	To have an understanding on the formation of a company								
LO3	To understand the requisites of meeting and resolution								
LO4	To gain knowledge on the procedure to appoint and remove Directors								
LO5	To familiarize with the various modes of winding up								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents							No. of Hours	
I	Introduction to Company law Companies Act 2013 – Definition of a Company, Characteristics of Company – Lifting or Piercing the Corporate Veil – Company Distinguished from Partnership and Limited Liabilities Partnerships – Classification of Companies – Based on Incorporation, Liability, Number of Members, Control.							15	
II	Formation of Company Formation of a Company – Promoter –Incorporation Documents e-filing – Memorandum of Association – Contents – Alteration – Legal Effects – Articles of Association - Certificate of Incorporation – Prospectus – Contents - Kinds – Liabilities – Share Capital – Kinds – Issue – Alteration – Dividend – Debentures.							15	

III	Meeting Meeting and Resolution – Types – Requisites – Voting & Poll – Quorum – Proxy - Resolution – Ordinary & Special - Audit & Auditors – Qualification, Disqualification, Appointment and Removal of an Auditor -	15
IV	Management & Administration Management & Administration – Directors – Legal Position – Board of Directors – Appointment/ Removal – Disqualification – Director Identification Number – Directorships – Powers – Duties – Board Committees – Related Party Transactions – Contract by One Person Company – Insider Trading- Managing Director – Manager – Secretarial Audit – Administrative Aspects and Winding Up – National Company Law Tribunal (NCLT) – National Company Law Appellate Tribunal (NCLAT) – Special Courts.	15
V	Winding up Meaning – Modes – Compulsory Winding Up – Voluntary Winding Up – Consequences of Winding Up Order – Powers of Tribunal – Petition for Winding Up – Company Liquidator.	15
	TOTAL	75
Course Outcomes		
CO1	Understand the classification of companies under the act	
CO2	Examine the contents of the Memorandum of Association & Articles of Association	
CO3	Know the qualification and disqualification of Auditors	
CO4	Understand the workings of National Company Law Appellate Tribunal (NCLAT)	
CO5	Analyse the modes of winding up	
Textbooks		
1	N.D. Kapoor, Business Laws, Sultan Chand and Sons, Chennai	

2	R.S.N. Pillai – Business Law, S.Chand, New Delhi.
3	M.V. Dhandapani, Business Laws Sultan Chand and Sons, Chennai
4	Shusma Aurora, Business Law, Taxmann, New Delhi
5	M.C.Kuchal, Business Law, Vikas Publication, Noida
Reference Books	
1	Gaffoor&Thothadri, Company Law, Vijay Nichole Imprints Limited, Chennai
2	M.R. Sreenivasan, Business Laws, Margham Publications, Chennai
3	KavyaAndVidhyasagar, Business Law, Nithya Publication, Bhopal
4	S.D.Geet, Business Law Nirali Prakashan Publication, Pune
5	PreethiAgarwal, Business Law, CA foundation study material
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://www.mca.gov.in/content/mca/global/en/acts-rules/companies-act/companies-act-2013.html
2	https://vakilsearch.com/blog/explain-procedure-formation-company/
3	https://www.investopedia.com/terms/w/windingup.asp

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	3	3	2	3	3	2	2	3	3
CO2	3	2	3	2	3	3	2	3	3	2	2	3	3
CO3	3	2	3	2	3	3	2	3	3	2	2	3	3
CO4	3	2	3	2	3	3	2	3	3	2	2	3	3
CO5	3	2	3	2	3	3	2	3	3	2	2	3	3
TOTAL	15	10	15	10	15	15	10	15	15	10	10	15	15
AVERAGE	3	2	3	2	3	3	2	3	3	2	2	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER – IV

ELECTIVE IV –RELATIONAL DATABASE MANAGEMENT SYSTEM

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	3				3	3	25	75	100
Learning Objectives									
LO1	Gain a good understanding of the architecture and functioning of Database Management Systems								
LO2	Understand the use of Structured Query Language (SQL) and its syntax.								
LO3	Apply Normalization techniques to normalize a database.								
LO4	Understand the need of transaction processing and learn techniques for controlling the consequences of concurrent data access.								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction to DBMS– Data and Information - Database – Database Management System – Objectives- Advantages – Components - Architecture. ER Model: Building blocks of ER Diagram –								9
II	Relationship Degree – Classification – ER diagram to Tables – ISA relationship – Constraints –Aggregation and Composition – Advantages Structure of Relational Database. Introduction to Relational Database Design - Objectives – Tools –Redundancy and Data Anomaly								9
III	– Functional Dependency - Normalization – 1NF – 2NF – 3NF –BCNF. Transaction Processing – Database Security.								9
IV	Introduction to SQL: Data Definition Commands – Data Manipulation Commands – SELECT Queries – Additional Data Definition Commands – Additional SELECT Query Keywords – Joining Database Tables.Advanced SQL:Relational SET Operators: UNION – UNION ALL – INTERSECT - MINUS.								9

V	SQL Join Operators: Cross Join – Natural Join – Join USING Clause – JOIN ON Clause – Outer Join. Sub Queries and Correlated Queries: WHERE – IN – HAVING – ANY and ALL – FROM. SQL Functions: Date and Time Function – Numeric Function – String Function – Conversion Function	9
	TOTAL	
Course Outcomes		
CO1	Describe Basic concepts of database system	
CO2	Design a Data model and Schemas in RDBMS	
CO3	Understand Normalization and Database Security	
CO4	Competent in use of SQL	
CO5	Analyse functional dependencies for designing robust Database	
Textbooks		
1	S. Sumathi, S. Esakkirajan, “Fundamentals of Relational Database Management System”, Springer International Edition 2007.	
Reference Books		
1	Abraham Silberchatz, Henry F. Korth, S. Sudarshan, “Database System Concepts”, McGrawHill 2019, 7th Edition.	
2	Alexis Leon & Mathews Leon, “Fundamentals of DBMS”, Vijay Nicole Publications 2014, 2 nd Edition.	
NOTE: Latest Edition of Textbooks May be Used		
Web Resources		
1	https://nptel.ac.in/courses/106106093/	
2	https://nptel.ac.in/courses/106106095/	
3	NPTEL & MOOC courses titled Relational Database Management Systems	

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	3	2	2	2	2	2	3	2	3	3	3
CO2	3	2	3	2	2	2	2	2	3	2	2	3	3
CO3	3	2	3	2	2	2	2	2	3	2	2	3	3
CO4	3	2	3	2	2	2	2	2	3	2	2	3	3
CO5	3	2	3	2	2	2	2	2	3	2	2	3	3
TOTAL	15	10	15	10	10	10	10	10	15	10	11	15	15
AVERAGE	3	2	3	2	2	2	2	2	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER - IV

ELECTIVE - IV: INTRODUCTION TO DATA SCIENCE

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	3				3	3	25	75	100
Learning Objectives									
LO1	To introduce the concepts, techniques and tools in Data Science								
LO2	To understand the various facets of data science practice, including data collection and integration, exploratory data analysis, predictive modelling, descriptive modelling and effective communication.								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction: Benefits and uses – Facets of data – Data science process – Big data ecosystem and data science								9
II	The Data science process: Overview – research goals - retrieving data - transformation – Exploratory Data Analysis – Model building - Data Visualization								9
III	Algorithms: Machine learning algorithms – Modeling process – Types – Supervised – Unsupervised - Semi-supervised								9
IV	Introduction to Hadoop: Hadoop framework – Spark – replacing Map Reduce– NoSQL – ACID – CAP – BASE – types								9
V	Case Study: Prediction of Disease - Setting research goals - Data retrieval – preparation - exploration - Disease profiling - presentation and automation								9
	TOTAL								45
Course Outcomes									

CO1	To describe what Data Science is, what Statistical Inference means, identify probability distributions, fit a model to data and use tools for basic analysis and communication
CO2	To describe what Data Science is, what Statistical Inference means, identify probability distributions, fit a model to data and use tools for basic analysis and communication
CO3	To describe what Data Science is, what Statistical Inference means, identify probability distributions, fit a model to data and use tools for basic analysis and communication
CO4	To describe what Data Science is, what Statistical Inference means, identify probability distributions, fit a model to data and use tools for basic analysis and communication
CO5	To describe what Data Science is, what Statistical Inference means, identify probability distributions, fit a model to data and use tools for basic analysis and communication
Textbooks	
1	Davy Cielen, Arno D. B. Meysman, Mohamed Ali, “Introducing Data Science”, manning publications 2016
	Roger Peng, “The Art of Data Science”, lulu.com 2016.
	MurtazaHaider, “Getting Started with Data Science – Making Sense of Data with Analytics”, IBM press, E-book.
Reference Books	
1	Davy Cielen, Arno D.B. Meysman, Mohamed Ali, “Introducing Data Science: Big Data, Machine Learning, and More, Using Python Tools”, Dreamtech Press 2016.
2	Annalyn Ng, Kenneth Soo, “Numsense! Data Science for the Layman: No Math Added”, 2015, 1st Edition.
3	Cathy O'Neil, Rachel Schutt, “Doing Data Science Straight Talk from the Frontline”, O'Reilly Media 2013.
4	Lillian Pierson, “Data Science for Dummies”, 2015 II Edition
NOTE: Latest Edition of Textbooks May be Used	

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	3	2	2	2	2	2	3	2	3	3	3
CO2	3	2	3	2	2	2	2	2	3	2	2	3	3
CO3	3	2	3	2	2	2	2	2	3	2	2	3	3
CO4	3	2	3	2	2	2	2	2	3	2	2	3	3
CO5	3	2	3	2	2	2	2	2	3	2	2	3	3
TOTAL	15	10	15	10	10	10	10	10	15	10	11	15	15
AVERAGE	3	2	3	2	2	2	2	2	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER – IV

SEC – VI: AUDITING

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2				2	2	25	75	100
Learning Objectives									
LO	The course aims to enrich the students' knowledge about duties of an auditor and to gain knowledge as to vouching of business transactions.								
Unit	Contents							No. of Hours	
I	Auditing: Definition – Objectives – Types – Advantages – Auditing Vs Investigation – Qualities of an Auditor – Rights and Duties of an Auditor.							6	
II	Company Auditor– Qualification – Appointment - Powers, Duties and Liabilities – Removal							6	
III	Audit programme – Audit notes – Audit files – Working papers - Procedures for Audit – Internal Control – Internal Check- Auditor's duty as Regards Internal Check.							6	
IV	Vouching – Meaning – Internal Check as Regards Cash - Procedure to be followed in Vouching Debit and Credit side of Cash Book.							6	
V	Audit Report – Elements – Specimen – Kinds of an Audit Report, Computer assisted Audit Techniques (CAAT) – Meaning – Advantages.							6	
TOTAL							30		
CO	Course Outcomes								
CO1	Assessing the qualities of an auditor, his rights and duties, procedure to be followed for appointment and removal of auditors.								
CO2	Acquiring knowledge on various records to be maintained for carrying out audit work.								
CO3	Knowing the concepts of vouching and procedure to be followed in vouching of cash book.								
CO4	Understanding the steps required in vouching of trade transactions in an organization.								
CO5	Knowing the steps involved in verification and valuation of assets and liabilities.								
Textbooks									
1.	Dr.B.N.Tandon, Dr.S.Susharsanam, S.Sundharabahu, Practical Auditing, S.Chand Co Ltd, New Delhi.14 th Edition, 2006.								

Reference Books	
1.	M.S.Ramasamy, Auditing, S.Chand Co Ltd, New Delhi, 2005.
2.	DinkarPagare, Principles and Practice of Auditing, Sultan Chand & Sons, New Delhi, 13 th Edition, 2020.
3.	Ravinder Kumar & Virender Sharma, Principles and Practice of Auditing, PHI Learning Private Limited, New Delhi, 3 rd Edition.
4.	Pardeep KumarBaldevSachdeva, Auditing, Kalyani Publisher, New Delhi, 8 th Revised Edition, 2004.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1.	https://youtu.be/qGMO57weOW0
2.	https://youtu.be/beKcJeynTqo
3.	https://youtu.be/iyP4CoXMMUw
4.	https://youtu.be/oYyZ8EPNppE

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	2	2	2	2	2	2	2	2	3	3
CO2	3	3	3	2	2	2	2	2	2	2	2	3	3
CO3	3	2	2	3	2	2	2	2	2	2	2	3	3
CO4	3	2	3	2	2	2	2	2	2	2	2	3	3
CO5	3	2	3	2	2	2	2	2	2	2	2	3	3
TOTAL	15	11	13	11	10	10	10	10	10	10	10	15	15
AVERAGE	3	2.2	2.6	2.2	2	2	2	2	2	2	2	3	3

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER – IV

SEC - VII: COMPUTERIZED ACCOUNTING PACKAGE-II PRACTICAL

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
			2		2	2	25	75	100
Learning Objectives									
LO	The course aims to enrich the students practical knowledge in accounting tools, techniques and packages and to prepare them with required skill for employability.								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction to Inventory Voucher Final Account with adjustments - Introduction to Inventory								6
II	Stock Group Creation Stock Group Creation – Item Creation – Godown – Unit of Measurement -- Accounting Voucher with Inventory details								6
III	Creation of Cost center Cost Center – Cost Categories – with class and without class.								6
IV	Employee Payroll Debit Note – Credit Note – Bills Registers – Sales, Purchase Summary- Employee payroll.								6
V	Inventory Voucher Entry and GST calculation Inventory Voucher Entry – Receipt Note – Delivery Note – Rejection In, Rejection Out – GST calculation.								6
	TOTAL								30

CO	Course Outcomes
CO1	Preparing the final account with adjustments and Inventory.
CO2	Preparing Accounting Voucher with Inventory and Creating stock summary
CO3	Designing cost centre and cost categories.
CO4	Creating employee pay roll and bill – wise statement.
CO5	Computing purchase order and sales order status and Computing GST.

PROGRAM LIST

1. Display the Final Accounts with final accounts.
2. Create stock groups and stock items
3. Prepare accounting voucher with inventory details
4. Design cost centers and cost categories
5. Show Cost centers and Cost Categories with class
6. Create Purchase order and Sales order
7. Prepare Employee Payroll
8. Display bill-wise statement
9. Calculation of Goods and Service Tax (GST)

Reference Books	
1.	Official Guide to Financial Accounting using Tally.ERP 9 with GST, BPB, 1 st January 2018.
2.	DT Editorial Services, Tally.ERP 9 with GST in simple steps, Dreamtech Press, 1 st February 2020
3.	SoumyaRajanBehera, Learn Tally.ERP 9 with GST, B.K.PublicationPvt Ltd, 1 st January 2014.
4.	Dr.NamrataAgrawal, Comdex Tally.ERP 9, Dream Tech Press, 1 st January 2019.
Web Resources	
1.	https://youtu.be/_Ghu1JlnoZI
2.	https://youtu.be/_0FqS3WYTeE
3.	https://youtu.be/8JAE0JyhHtQ
4.	https://youtu.be/tirOxKxkbPc

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	2	2	3	2	3	2	2	2	2
CO2	3	2	3	2	3	2	3	2	3	2	2	2	2
CO3	3	2	3	2	3	2	3	2	3	2	2	2	2
CO4	3	2	3	2	2	2	3	2	3	2	2	2	2
CO5	3	2	3	2	2	2	3	2	3	2	2	2	2
TOTAL	15	10	15	10	12	10	15	10	15	10	10	10	10
AVERAGE	3	2	3	2	2.4	2	3	2	3	2	2	2	2

3 – Strong, 2- Medium, 1- Low

SECOND YEAR – SEMESTER – IV

PART-V: ENVIRONMENTAL STUDIES

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
					2	2	-	-	-

Learning Objectives:

This course aims to

LO1 – build physical and mental strength of the learners

LO2 – strengthen the emotional and spiritual aspects of the learners.

LO1 – make the learners responsible and cooperative citizens

LO3 – develop democratic way of thinking and inculcate spirit of national integration

LO4 – develop the practice of paying respect for dignity of individual and diversity in society

COURSE CONTENT

Unit – I: The Environment:

The Atmosphere, Hydrosphere, Lithosphere, Biosphere, Ecology, Ecosystem, Biogeochemical Cycle (Carbon Cycle, Nitrogen Cycle),

Unit – II: Environment Pollution:

Air Pollution, Water Pollution, Soil Pollution, Radiation Pollution.

Unit – III: Population Ecology:

Individuals, Species, Pollution, Community, Control Methods of Population, Urbanization and its effects on Society, Communicable Diseases and its Transmission, Non-Communicable Diseases.

Unit- IV: Environmental Movements in India:

Grassroot Environmental movements in India, Role of women, Environmental Movements in Tamil Nadu, State Pollution Control Board, Central Pollution Control Board.

Unit –V Natural Resources:

Conservation of Natural Resources, Management and Conservation of Wildlife, Soil Erosion and Conservation, Environmental Laws: Water Act, 1974, Air

Act, 1981, The Wildlife (Protection) Act, 1972, Environment Protection, 1986, Natural Disasters and their Management.

References:

1. Dr Bharucha Erach, Text Book of Environmental Studies for UG Course, University Press (India) Pvt. Ltd.
 2. Dr Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd, Ahmedabad – 380 013, India.
 3. Katyal Timi & Satake M., Environmental Pollution, Anmol Publication Pvt. Ltd, New Delhi.
 4. G. R. Chhatwal, M. C. Mehra, M. Satake, T. Katyal & Mohan V., Environmental Radiation and Thermal Pollution and their control, Anmol Publications, New Delhi.
 5. R. C. Brunner, Hazardous Waste Incineration, Mc Graw Hill Inc.
 6. K. C. Agarwal, Environmental Biology, Nidi Publishing Ltd, Bikaner.
- R. N. Basu (Editor), Environment Calcutta University, Kolkata

CORE – IX: COST ACCOUNTING - I

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				4	5	25	75	100
Learning Objectives									
LO1	To understand the various concepts of cost accounting.								
LO2	To prepare and reconcile Cost accounts.								
LO3	To gain knowledge regarding valuation methods of material.								
LO4	To familiarize with the different methods of calculating labour cost.								
LO5	To know the apportionment of Overheads.								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction of Cost Accounting								15
	Definition-Nature and Scope – Principles of Cost Accounting – Cost Accounting and Financial Accounting - Cost Accounting Vs Management Accounting –Installation of Costing System – Classification of Costs– Cost Centre– Profit Centre.								
II	Cost Sheet and Methods of Costing								15
	Preparation of Cost Sheet - Tenders & Quotations - Reconciliation of Cost and Financial Accounts –Unit Costing-Job Costing.								
III	Material Costing								15
	Material Control – Meaning and Objectives – Purchase of Materials – EOQ –Stores Records – Reorder Levels – ABC Analysis - Issue of Materials –Methods of Issue – FIFO – LIFO – Base Stock Method – Specific Price Method – Simple and Weighted Average Method.								
IV	Labour Costing								15
	Direct Labour and Indirect Labour – Time Keeping – Methods and Calculation of Wage Payments – Time Wages – Piece Wages – Incentives – Different Methods of Incentive Payments - Idle time–Overtime – Labour Turnover - Meaning, Causes and Measurement.								

V	Overheads Costing Overheads – Definition – Classification – Allocation and Apportionment of Overheads – Basis of Apportionment – Primary and Secondary Distribution - Absorption of Overheads – Methods of absorption Preparation of Overheads Distribution Statement – Machine Hour Rate – Computation of Machine Hour Rate.	15
	TOTAL	75
THEORY 20% & PROBLEMS 80%		
Course Outcomes		
CO1	Remember and recall the various concepts of cost accounting	
CO2	Demonstrate the preparation and reconciliation of cost sheet.	
CO3	Analyse the various valuation methods of issue of materials.	
CO4	Examine the different methods of calculating labour cost.	
CO5	Critically evaluate the apportionment of Overheads.	
Textbooks		
1	Jain S.P. and Narang K.L, Cost Accounting. Kalyani Publishers, New Delhi	
2	Khanna B.S., Pandey I.M., Ahuja G.K., and Arora M.N., Practical Costing, S. Chand & Co, New Delhi,	
3	Dr.S.N. Maheswari, Principles of Cost Accounting, Sultan Chand Publications, New Delhi	
4	T.S. Reddy and Y. Hari Prasad Reddy, Cost Accounting, Margham publications, Chennai	
5	S.P. Iyengar, Cost Accounting, Sultan Chand Publications, New Delhi	
Reference Books		
1	Polimeni, Cost Accounting: Concepts and Applications for Managerial Decision Making, 1991, McGraw–Hill, New York.	
2	Jain S.P. and Narang K.L. Cost Accounting, Latest Edition.2013, Kalyani Publishers, New Delhi,	
3	V.K.Saxena and C.D.Vashist, Cost Accounting, Sultan Chand publications, New Delhi	
4	Murthy A &GurusamyS,CostAccounting,Vijay Nicole Imprints Pvt. Ltd. Chennai	
5	Prasad.N.K and Prasad.V.K, Cost Accounting, Book Syndicate, Kolkata	
NOTE: Latest Edition of Textbooks May be Used		
Web Resources		
1	https://study.com/learn/lesson/cost-accounting-principles-examples-what-is-cost-accounting.html	
2	https://www.accountingtools.com/articles/what-is-material-costing.html	

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	2	2	2	2	3	2	2	3	3
CO2	3	2	2	2	2	2	2	2	3	2	2	3	3
CO3	3	2	3	2	2	2	2	2	3	2	2	3	3
CO4	3	2	2	2	2	2	2	2	3	2	2	3	3
CO5	3	2	3	2	2	2	2	2	3	2	2	3	3
TOTAL	15	10	13	10	10	10	10	10	15	10	10	15	15
AVERAGE	3	2	2.6	2	2	2	2	2	3	2	2	3	3

3 – Strong, 2- Medium, 1- Low

THIRD YEAR – SEMESTER - V

CORE – X: BANKING LAW AND PRACTICE

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				4	5	25	75	100
Learning Objectives									
LO1	To help the students understand various provision of Banking Regulation Act 1949 applicable to banking companies including cooperative banks								
LO2	To trace the evolution of central bank concept and prevalent central banking system around the world and their roles and function								
LO3	To throw light on Central Bank in India, its formation, nationalizing its organization structure, role of bank to government, role in promoting agriculture and industry, role in financial inclusion								
LO4	To understand how capital fund of commercial banks, objectives and process of Asset securitization etc.								
LO5	To explore practical banking systems relationship of bankers and customers, crossing of cheques, endorsement etc.								
Unit	Contents								No. of Hours
I	Introduction to Banking History of Banking- Provisions of Banking Regulations Act 1949 - Components of Indian Banking - Indian Banking System- Phases of Development - Banking Structure in India – Public Sector Banks, Private Banks, Foreign Banks, RRB, UCB, Payment Banks and Small Finance Banks - Banking System – Branch Banking - Unit Banking - Universal Banking- Financial Inclusion								15
II	Central Bank and Commercial Bank Central Banking: Definition –Need - Principles- Central Banking Vs Commercial Banking - Functions of Central Bank – Credit Creation. Commercial Banking: Definition - Functions – Personal Banking – Corporate Banking – Digital banking – Core Banking System (CBS) - Role of Banks in Economic Development.								15

III	Banking Practice Types of Accounts CASA – Types of Deposits - Opening Bank Account- Jan Dhan Yojana - Account Statement vs Passbook vs e-statement - Banker Customer Relationship - Special Types of Customers –KYC norms. Loans & Advances –Lending Sources- Lending Principles-Types of Loans - classification of assets and income recognition / provisioning (NPA) – Repo Rate & Reverse Repo Rate - securities of lending-Factors influencing bank lending.	15
IV	Negotiable Instruments Act Negotiable Instruments – Meaning & Definition – Characteristics -Types of negotiable instruments. Crossing of Cheques– Concept - Objectives – Types of Crossing - - Consequences of Non-Crossing. Endorsement - Meaning-Components-Kinds of Endorsements-Cheques payable to fictitious person Endorsement by legal representative –Negotiation bank-Effect of endorsement-Rules regarding Endorsement. Paying banker - Banker’s duty - Dishonouring of Cheques- Discharge by paying banks - Payments of a crossed cheque - Refusal of cheques Payment. Duties of Collecting Banker-Statutory protection under section 131-Collecting bankers’ duty –RBI instruction –Paying Banker Vs Collecting Banker- Customer Grievances-Grievance Redressal –Banking Ombudsman.	15
V	Digital Banking Meaning- Services - e-banking and financial services- Initiatives- Opportunities - Internet banking Vs Traditional Banking Mobile banking–Anywhere Banking-Any Time Banking-Electronic Mobile Wallets. ATM – Concept - Features - Types-. Electronic money-Meaning-Categories-Merits of e-money - National Electronic Funds Transfer (NEFT), RTGS, IMPS, UPI and Digital currency – Differences - Safety and Security in Digital Banking.	15
	TOTAL	75
Course Outcomes		
CO1	Aware of various provision of Banking Regulation Act 1949 applicable to banking companies including cooperative banks	
CO2	Analyse the evolution of Central Banking concept and prevalent Central Banking system in India and their roles and function	
CO3	Gain knowledge about the Central Bank in India, its formation, nationalizing its organization structure, role of bank to government, role in promoting agriculture and industry, role in financial inclusion	

CO4	Evaluate the role of capital fund of commercial banks, objectives and process of Asset securitization etc
CO5	Define the practical banking systems relationship of bankers and customers, crossing of cheques, endorsement etc.
Textbooks	
1	Gurusamy S, Banking Theory: Law and Practice, Vijay Nicole Publication, Chennai
2	Muraleedharan, Modern Banking: Theory and Practice, Prentice Hall India Learning Private Ltd, New Delhi
3	Gupta P.K. Gordon E. Banking and Insurance, Himalaya publication, Kolkata
4	Gajendra, A Text on Banking Theory Law & Practice, Vrinda Publication, Delhi
5	K P Kandasami, S Natarajan & Parameswaran, Banking Law and Practice, S Chand publication, New Delhi
Reference Books	
1	B. Santhanam, Banking & Financial System, Margam Publication, Chennai
2	KataitSanjay , Banking Theory and Practice, Lambert Academic Publishing,
3	Henry Dunning Macleod, The Theory And Practice Of Banking, Hard Press Publishing, Old New Zealand
4	William Amasa Scott, Money And Banking: An Introduction To The Study Of Modern Currencies, Kesinger publication, USA
5	Nektarios Michail, Money, Credit, and Crises: Understanding the Modern Banking System, Palgrave Macmillan, London
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://www.rbi.org.in/
2	https://businessjargons.com/e-banking.html
3	https://www.wallstreetmojo.com/endorsement/

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	3	2	2	2	3	3	2	3	3
CO2	3	2	2	2	3	2	2	2	3	3	2	3	3
CO3	3	2	3	2	3	2	2	2	3	3	2	3	3
CO4	3	2	2	2	3	2	2	2	3	3	2	3	3
CO5	3	2	3	2	3	2	2	2	3	3	2	3	3
TOTAL	15	10	13	10	15	10	10	10	15	15	10	15	15
AVERAGE	3	2	2.6	2	3	2	2	2	3	3	2	3	3

3 – Strong, 2- Medium, 1- Low

THIRD YEAR – SEMESTER - V

CORE – XI: INCOME TAX LAW AND PRACTICE-I

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				4	5	25	75	100
Learning Objectives									
LO1	To understand the basic concepts & definitions under the Income Tax Act,1961.								
LO2	To compute the residential status of an assessee and the incidence of tax.								
LO3	To compute income under the head salaries.								
LO4	To learn the concepts of Annual value, associated deductions and the calculation of income from House property.								
LO5	To compute the income from Business & Profession considering its basic principles & specific disallowances.								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents							No. of Hours	
I	Introduction to Income Tax & Residential Status							15	
	Introduction to Income Tax – History – Objectives of Taxation - Features of Income Tax – Meaning of Income – Types – Important Definitions Under the Income Tax Act – Types of Assessee – Income exempted under Section 10.								
	Residential Status								
	Residential Status – Residential Status of an Individual – Company – HUF – Basic Conditions – Additional Conditions – Incidence of Tax and Residential Status – Problems on Residential Status only.								

II	Income from Salary Salary Income - Definition – Allowances –Taxability - Perquisites – Kinds of Perquisites –Types of Provident Fund - Gratuity – Pension – Commutation of Pension – Deduction of Salary - Profits in Lieu of Salary - Computation of Salary Income .	15
III	Income from House Property Income from House Property –Basis of Charge – Annual Value – Gross Annual Value, Net Annual Value - Let-out vs Deemed to be let out Self-Occupied Property – Deductions – Computation of Income from House Property.	15
IV	Profits and Gains from Business or Profession Income from Business or Profession – Allowable Expenses – Expenses Disallowed - General Deductions – Depreciation and Investment Allowances– Undisclosed Income & Investments, – Computation of Income from Business or Profession.	15
V	Capital Gains Capital Assets – Transfer – Short term vs Long term capital assets - Computation of Capital Gains – Exemption under Section 54 , 54B, 54D, 54EC, 54F, 54GA. Income From Other Sources Chargeability - Computation of Income from Other Sources – Deductions Allowed	15
	TOTAL	75
Course Outcomes		
THEORY 20% & PROBLEMS 80%		
CO1	Demonstrate the understanding of the basic concepts and definitions under the Income Tax Act.	
CO2	Assess the residential status of an assessee& the incidence of tax.	
CO3	Compute income of an individual under the head salaries.	

CO4	Ability to compute income from house property.
CO5	Evaluate income from a business carried on or from the practice of a Profession.
Textbooks	
1	V.P. Gaur, Narang, Puja Gaur and Rajeev Puri - Income Tax Law and Practice, Kalyani Publishers, New Delhi.
2	T.S. Reddy and Hariprasad Reddy, Income Tax Law and Practice, Margham Publications, Chennai.
3	DinkarPagare, Income Tax Law and Practice, Sultan & Chand Sons, New Delhi.
4	H.C. Mehrotra, Dr.Goyal S.P, Income Tax Law and Accounts, SahityaBhavan Publications, Agra.
5	T. Srinivasan – Income Tax & Practice –Vijay Nicole Imprints Private Limited , Chennai.
Reference Books	
1	Hariharan N, Income Tax Law & Practice, Vijay Nicole Imprints Pvt. Ltd. Chennai
2	Bhagwati Prasad, Income Tax Law and Practice, VishwaPrakasan. New Delhi.
3	Vinod K. Singhanian, Students Guide to Income Tax.,U.K.Bharghava Taxman.
4	Dr.Vinod K Singhanian, Dr. Monica Singhanian, Taxmann's Students' Guide to Income Tax, New Delhi.
5	Mittal Preethi Rani and BansalAnshika, Income Tax Law and Practice, Sultan & Chand Sons, New Delhi.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://cleartax.in/s/residential-status/
2	https://www.legalraasta.com/itr/income-from-salary/

3	https://taxguru.in/income-tax/income-house-properties.html
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**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	3	2	2	2	3	3	2	3	3
CO2	3	2	2	2	2	2	2	2	3	2	2	3	3
CO3	3	3	3	2	3	2	2	2	3	3	2	3	3
CO4	3	2	2	2	2	2	2	2	3	3	2	3	3
CO5	3	3	3	2	3	2	2	2	3	2	2	3	3
TOTAL	15	12	13	10	13	10	10	10	15	13	10	15	15
AVERAGE	3	2.2	2.6	2	2.6	2	2	2	3	2.6	2	3	3

3 – Strong, 2- Medium, 1- Low

THIRD YEAR – SEMESTER - V

CORE – XII: PROJECT [INDIVIDUAL]

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				4	5	25	75	100

Preamble:

The course aim to impart research skill in the application of various theoretical concepts and develop the ability of the students to prepare a project report. The course also aims to strengthen and enhance the research skill of the learners.

Evaluation Method for Project Report:

Internal (to be awarded by the Guide)

Topic Selection	:	10
Data Processing	:	10
Regularity	:	5
Total		25

External (to be awarded by the External Examiner)

Report	:	50
Viva-Voce	:	25
Total		75

The Project Report must be in the prescribed form. It should be typed neatly in MS word. The font size of the letter should be 13 point with 1.5space. The format of the Project Reports should have the following components.

First page should contain:

1. Title of Project Report
2. Name of the candidate.
3. Register number.
4. Name of the supervisor.
5. Address of the institution.
6. Month & year of submission.

Contents.

- 1) Declaration by candidate
- 2) Certificate by supervisor.
- 3) Acknowledgement.
- 4) List of tables
- 5) List of figures
- 6) Chapters
- 7) Bibliography
- 8) Appendix

THIRD YEAR – SEMESTER - V

DISCIPLINE SPECIFIC ELECTIVE – 1 /2 : INDIRECT TAXATION

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	4				3	4	25	75	100
Learning Objectives									
LO1	To get introduced to indirect taxes								
LO2	To have an overview of Indirect taxes								
LO3	To be familiar the CGST and IGST Act								
LO4	To learn procedures under GST								
LO5	To gain knowledge about Customs Duty.								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction to Indirect Tax Concept and Features of Indirect Taxes - Difference between Direct and Indirect Taxes –Special Feature of Indirect Tax Levies – Contribution to Government Revenues – Role of Indirect Taxation – Merits and Demerits of Indirect Taxation – Reforms in Indirect Taxation – Introduction to Foreign Trade Policy (FTP) 2023								12
II	An Overview of Goods & Service Tax (GST) Introduction of Goods and Service Tax in India— Kelkar Committee - Constitutional Amendment - Goods and Service Tax: Concepts, Meaning, Significance, Features and Benefits - Important GST Common Portals – Taxes and Duties not Subsumed in GST – Rates of GST in India - Role of GSTN in Implementation of GST - Challenges in Implementation of GST.								12

III	CGST & IGST Act 2017 Supply – Meaning – Classification – Time of Supply – Valuation –Voluntary – Compulsory – Input Tax Credit – Eligibility – Reversal – Reverse charge Mechanism – E-Way Bill - Various Provisions Regarding E-way Bill in GST – IGST Act - Export and Import of Goods and Services– Inter State Vs Intra State Supply – Place of Supply.– Anti Profiteering Rules – Doctrine of Unjust Enrichment	12
IV	Procedures under GST Registration under GST Law, Tax Invoice Credit and Debit Notes, Different GST Returns, Electronic Liability Ledger, Electronic Credit Ledger, Electronic Cash Ledger, Different Assessment under GST, Interest Penalty under GST, Mechanism of Tax Deducted at Source (TDS) and Tax Collected at Source (TCS), Audit under GST.	12
V	Customs Act 1962 Custom Duty: Concepts; Territorial Waters - High Seas - Levy of Customs Duty, Types of Custom Duties – Valuation - Baggage Rules &Exemptions.	12
	TOTAL	60
Course Outcomes		
CO1	Acquaintance with Indirect tax laws	
CO2	Exposed to the overview of GST.	
CO3	Apply provisions of CGST and IGST	
CO4	Summarise procedures of GST	
CO5	Discuss aspects of Customs Duty in India	
Textbooks		
1	Vinod K Singhania, Indirect Taxes, Taxman’s Publications, New Delhi.	
2	Dr. H.C. Mehrotra &Prof .V.P Agarwal, Goods and Services Tax (GST), Sahitya Bhawan Publications, Agra.	
3	Rajat Mohan, Goods & Services Tax, Bharat Law Publications House, New Delhi.	
4	CA. Pushpendra Sisodia, Indirect Tax Laws, Bharat Publications, New Delhi.	
Reference Books		
1	V.S.Datey, All About GST, Taxmann Publications, New Delhi.	
2	T.S. Reddy&Y.Hariprasad Reddy, Business Taxation, Margham Publications, Chennai.	

3	Study Material on GST - The Institute of Chartered Accountants of India /The Institute of Cost Accountants of India, Chennai.
4	Guidance material on GST issued by CBIC, Government of India.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://iimskills.com/goods-and-services-tax/#:~:text=GST-%20an%20acronym%20for%20Goods%20and%20Services%20Tax-,etc.%2C%20to%20stand%20as%20a%20unified%20tax%20regime.
2	https://tax2win.in/guide/gst-procedure
3	https://www.cbic.gov.in/htdocs-cbec/customs/cs-act/cs-act-ch9

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	3	2	3	3	3	2	2	3	3
CO2	3	2	2	2	2	2	2	2	3	2	3	3	3
CO3	3	3	3	2	3	2	3	3	3	2	2	3	3
CO4	3	2	2	2	2	2	2	2	3	2	2	3	3
CO5	3	3	3	2	3	2	3	3	3	2	3	3	3
TOTAL	15	12	13	10	13	10	13	13	15	10	12	15	15
AVERAGE	3	2.2	2.6	2	2.6	2	2.6	2.6	3	2	2.4	3	3

3 – Strong, 2- Medium, 1- Low

THIRD YEAR – SEMESTER – V
DISCIPLINE SPECIFIC ELECTIVE – 2 / 2 : FINANCIAL MANAGEMENT

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	4				3	4	25	75	100
Learning Objectives									
LO1	To introduce the concept of financial management.								
LO2	To learn the capital structure theories.								
LO3	To gain knowledge about techniques in capital budgeting								
LO4	To learn about dividend payment models.								
LO5	To understand the needs and calculation of working capital in an organization.								
Prerequisites: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction Meaning and Objectives of Financial Management – Functions of Financial Management. Finance - Sources of Finance-Role of Financial Manager - Financial Goals- Profit maximization Vs. Wealth Maximization – Concept of Time Value Money –Risk and Return – Components of Financial Management.								12
II	Financial Decision Capital Structure – Definition - Meaning- Theories- Factors determining Capital Structure – Various approaches of Capital structure Cost of Capital – Meaning – Factors determining cost of capital - Methods - Cost of Equity Capital – Cost of Preference Capital – Cost of Debt – Cost of Retained Earnings – Weighted Average (or) Composite Cost of Capital (WACC) Leverage – Concept – Operating and Financial Leverage								12
III	Investment Decision Capital Budgeting - Meaning - Process – Cash Flow Estimation Capital Budgeting Appraisal Methods: Traditional Methods - Payback Period – Accounting Rate of Return (ARR). Discounted Cash-flow Methods: Net Present Value (NPV) – Internal Rate of Return – Profitability Index.								12

IV	Dividend Decision Meaning – Dividend Policies – Factors Affecting Dividend Payment – Provisions on Dividend Payment in Company Law – Dividend Models - Walter’s Model - Gordon’s Model – M&M Model.	12
V	Working Capital Decision Working Capital - Meaning and Importance – Classification - Working Capital Cycle - Factors Influencing Working Capital – Determining Working Capital - Management of Current Assets: Inventories, Accounts Receivables and Cash.	12
	TOTAL	60
THEORY 40% & PROBLEMS 60%		
Course Outcomes		
CO1	Recall the concepts in financial management.	
CO2	Apply the various capital structure theories.	
CO3	Apply capital budgeting techniques to evaluate investment proposals.	
CO4	Determine dividend pay-outs.	
CO5	Estimate the working capital of an organization.	
Textbooks		
1	R.K. Sharma, Shashi K Gupta, Financial Management, Kalyani Publications, New Delhi.	
2	M.Y. Khan and P.K.Jain, Financial Management, McGraw Hill Education, Noida.	
3	I.M. Pandey, Financial Management, Vikas Publications, Noida.	
4	Dr.S.N. Maheshwari, Elements of Financial Management, Sultan Chand & Sons, New Delhi.	
5	Dr.Kulkarni and Dr. Sathya Prasad, Financial Management, Himalaya Publishing House, Mumbai.	
Reference Books		
1	Prasana Chandra, Financial Management, Tata McGraw Hill, NewDelhi.	
2	I.M. Pandey, Financial Management, Vikas Publishing, Noida.	
3	Khan & Jain, Financial Management, Sultan Chand & Sons, New Delhi.	
4.	A.Murthy, Financial Management, ,Margham Publications, Chennai.	
5.	J. Srinivasan and P. Periyasamy, Financial Management, Vijay Nicole Publishers, Chennai.	
NOTE: Latest Edition of Textbooks May be Used		

Web Resources	
1	https://efinancemanagement.com/financial-management/types-of-financial-decisions
2	https://efinancemanagement.com/dividend-decisions
3	https://www.investopedia.com/terms/w/workingcapital.asp

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	3	2	3	3	3	2	2	3	3
CO2	3	2	2	2	3	2	2	2	3	2	3	3	3
CO3	3	3	3	2	3	2	3	3	3	2	2	3	3
CO4	3	2	2	2	3	2	2	2	3	2	2	3	3
CO5	3	3	3	2	3	2	3	3	3	2	2	3	3
TOTAL	15	12	13	10	15	10	13	13	15	10	11	15	15
AVERAGE	3	2.2	2.6	2	3	2	2.6	2.6	3	2	2.1	3	3

3 – Strong, 2- Medium, 1- Low

DISCIPLINE SPECIFIC ELECTIVE IV – 1/2 : SOFTWARE ENGINEERING AND UML LAB

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2		2		3	4	25	75	100
Learning Objectives									
LO1	To introduce the software development life cycles								
LO2	To introduce concepts related to structured and objected oriented analysis & design co								
LO3	To provide an insight into UML and software testing techniques								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction – Evolution – Software Development projects – Emergence of Software Engineering. Software Life cycle models – Waterfall model – Rapid Application Development – Agile Model – Spiral Model								9
II	Requirement Analysis and Specification – Gathering and Analysis – SRS – Formal System Specification								9
III	Software Design – Overview – Characteristics – Cohesion & Coupling – Layered design – Approaches Function Oriented Design – Structured Analysis – DFD – Structured Design – Detailed design								9
IV	Object Modeling using UML – OO concepts – UML – Diagrams – Use case, Class, Interaction, Activity, State Chart – Postscript								9
V	Coding & Testing – coding – Review – Documentation – Testing – Black-box, White-box, Integration, OO Testing, Smoke testing.								9
	TOTAL								45
Course Outcomes									

CO1	The students should be able to specify software requirements, design the software using tools
CO2	Represent of the Requirement Analysis and Specification
CO3	Develop the Software design and Function oriented design.
CO4	Understand the UML Concepts
CO5	Implement the Test cases using different testing techniques.
Textbooks	
1	Rajib Mall, “Fundamentals of Software Engineering”, PHI 2018, 5th Edition.
2	Roger S. Pressman, “Software Engineering - A Practitioner’s Approach”, McGraw Hill 2010, 7thEdition.
Reference Books	
1	Pankaj Jalote, “An Integrated Approach to Software Engineering”, Narosa Publishing House 2011,3rd Edition.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	NPTEL online course – Software Engineering - https://nptel.ac.in/courses/106105182/

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	2	3	2	2	2	2	2	3	2	3	3	3
CO2	3	2	3	2	2	2	2	2	3	2	2	3	3
CO3	3	2	3	2	2	2	2	2	3	2	2	3	3
CO4	3	2	3	2	2	2	2	2	3	2	2	3	3
CO5	3	2	3	2	2	2	2	2	3	2	2	3	3
TOTAL	15	10	15	10	10	10	10	10	15	10	11	15	15
AVERAGE	3	2	3	2	2	2	2	2	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

UML Lab Common for both Electives in semester V	Core - Core -S5EC1/2L
Credits 4	Lecture Hours:5 per week
Learning Objectives: (for teachers: what they have to do in the class/lab/field) <ul style="list-style-type: none"> • To get familiarized to the usage of UML tool kit. • To understand the requirements of the software and to map them appropriately to subsequent phases of the software development • To develop the ability to verify and validate their designs 	
Course Outcomes: (for students: To know what they are going to learn) <p>CO1: Students must be able to analyse and design the problem at hand.</p> <p>CO2: Students should be able to use UML tools for the designing the software and test the correctness and soundness of their software through testing tools.</p>	

LIST OF PRACTICALS
Using UML tools produce analysis and design models for a. Library Management System b. Automatic Teller Machine c. Student Information Management d. Matrimony Service e. Stock Management System

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC – CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC – CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
Skills acquired from the Course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill

Learning Resources:**Recommended Texts**

1. Roger D. Peng,” R Programming for Data Science “, 2012
2. Norman Matloff,”The Art of R Programming- A Tour of Statistical Software Design”, 2011

Reference Books

1. Garrett Golemund, Hadley Wickham,”Hands-On Programming with R: Write Your Own Functions and Simulations” , 1st Edition, 2014
2. Venables , W.N.,and Ripley,”S programming“, Springer, 2000.

THIRD YEAR – SEMESTER – V

DISCIPLINE SPECIFIC ELECTIVE VI-2/2: OBJECT ORIENTED ANALYSIS
AND DESIGN AND UML LAB

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2		2		3	4	25	75	100
Learning Objectives									
LO1	To make aware of the software requirements, design the software using tools								
LO2	To be acquainted with the writing of test cases using different testing techniques.								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Object Orientation – System development – Review of objects - inheritance - Object relationship – Dynamic binding – OOSD life cycle – Process – Analysis – Design – prototyping – Implementation – Testing- Overview of Methodologies								9
II	Rambaugh methodology, OMT – Booch methodology, Jacobson methodology – patterns – Unified approach – UML – Class diagram – Dynamic modelling.								9
III	Introduction - UML – Meta model - Analysis and design - more information. Outline Development Process: Overview of the process-Inception - Elaboration-construction- refactoringpatternstransmission- iterative development -use cases.								9
IV	OO Design axioms – Class visibility – refining attributes – Methods –Access layer – OODBMS – Table – class mapping view layer								9
V	Interaction diagram-package diagram-state diagram-activity diagram-deployment diagram - UML and programming								9

	TOTAL	45
Course Outcomes		
CO1	The students should be able to specify software requirements, design the software using tools	
CO2	Understand Booch methodology.	
CO3	Develop UML and Dynamic modelling	
CO4	Understand OO Design axioms and concepts	
CO5	Write test cases using different testing techniques	
Textbooks		
1	Ali Bahrami, “Object Oriented System Development”, McGraw-Hill International Edition 2017.	
2	Martin Fowler, Kendall Scott, "UML Distilled", Addison Wesley	
3	Eriksson, "UML Tool Kit", Addison Wesley	
Reference Books		
1	Booch G., “Object oriented analysis and design”, Addison- Wesley Publishing Company 3 rd edition.	
2	Rambaugh J, Blaha.M. Premeriani, W., Eddy F and Lorezen W., “ObjectOrientedModeling and Design”, PHI	
NOTE: Latest Edition of Textbooks May be Used		

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	2	2	2	2	3	2	3	3	3
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CO5	3	2	3	2	2	2	2	2	3	2	2	3	3
TOTAL	15	10	15	10	10	10	10	10	15	10	11	15	15
AVERAGE	3	2	3	2	2	2	2	2	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

UML Lab Common for both Electives in semester V	Core - Core -S5EC1/2L
Credits 4	Lecture Hours:5 per week
Learning Objectives: (for teachers: what they have to do in the class/lab/field) <ul style="list-style-type: none"> • To get familiarized to the usage of UML tool kit. • To understand the requirements of the software and to map them appropriately to subsequent phases of the software development • To develop the ability to verify and validate their designs 	
Course Outcomes: (for students: To know what they are going to learn) CO1: Students must be able to analyse and design the problem at hand. CO2: Students should be able to use UML tools for the designing the software and test the correctness and soundness of their software through testing tools.	

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Extended Professional Component	Questions related to the above topics, from various competitive examinations UPSC / TRB / NET / UGC – CSIR / GATE / TNPSC / others to be solved (To be discussed during the Tutorial hour)
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THIRD YEAR – SEMESTER – V

PART IV – VALUE EDUCATION

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2				2	2			100

Learning Objectives:

This course aims to

LO1 – build physical and mental strength of the learners

LO2 – strengthen the emotional and spiritual aspects of the learners.

LO1 – make the learners responsible and cooperative citizens

LO3 – develop democratic way of thinking and inculcate spirit of national integration

LO4 – develop the practice of paying respect for dignity of individual and diversity in society

COURSE CONTENT

Unit I - Yoga and Physical Health

- Physical Structure – Three Bodies – Five Limitations
- Simplified Physical Exercises – Hand Exercises – Leg Exercises – Breathing Exercises – Eye Exercises – Kapalapathi
- Maharasanas 1-2 – Massages – Acu-puncture – Relaxation
- Yogasanas – Padmasana – Vajrasanas – Chakrasanas(Side) – Viruchasanas – Yoga Muthra – Patchimothasanas – Ustrasanas – Vakkarasanas - Salabasanas

Unit II - Art of Nurturing the life force and Mind

- 2.1 Maintaining the youthfulness - Postponing the ageing process
- 2.2 Sex and Spirituality - Significance of sexual vital fluid - Married life-Chastity
- 2.3 Ten stages of Mind
- 2.4 Mental frequency - Methods for concentration

Unit III-Sublimation

- 3.1 Purpose and Philosophy of life
- 3.2 Introspection - Analysis of Thought
- 3.3 Moralization of Desires
- 3.4 Neutralization of Anger

Unit IV - Human Resources Development

- 4.1 Eradication of Worries
- 4.2 Benefits of Blessings
- 4.3 Greatness of Friendship
- 4.4 Individual Peace and World Peace

Unit V-Law of Nature

- 5.1 Unified force- Cause and Effect system
- 5.2 Purity of Thought and Deed and Genetic Centre

5.3 Love and Compassion

5.4 Cultural Education-Fivefold Culture

1. NahfKk; cly;eyKk;

1.1 clyikg;G - 3 cly;fs; - le;jpy; msTKiw

1.2 vspakiw clw;gapw;rp - ifg;gapw;rp - fhy; gapw;rp - %r;Rgapw;rp - fz; gapw;rp
– fghygpj

1.3 kfuhrdk; 1-2 - cly; Nja;j;jy; - mf;Fgpu~u; gapw;rp - cly; jsu;j;jy;

1.4 Nahfhrdq;fs;; gj;khrdk; - t[;uhrdk; - rf;fuhrdk; (gf;fthl;by;) - tpUr;rhrdk; - Nahf
Kj;uh - gr;rp Nkhj;jhrdk; - c];l;uhrdk; - tf;fuhrdk; - ryghrdk;.

2. capu;tsKk; kdtsKk;

2.1 ,sik fhj;jy; - KJikiaj; js;spg;NghLjy;

2.2 ghYzu;Tk; Md;kPfKk; - tpj;jpd; kfpik - ,y;yw tho;T - fw;Gnewp

2.3 kdjpd; gj;J gbepiyfs;

2.4 kd miyr;Roy; - kd Xu;ikf;fhd gapw;rpfs;

3. Fzeyg;NgW

3.1 tho;tpd; Nehf;fk; - tho;f;ifj; jj;Jtk;

3.2 mfj;jha;T - vz;zk; Muha;jy;

3.3 Mir rPuikj;jy;

3.4 rpdk; ftpu;f;fy;

4. kdpjts Nkk;ghL

4.1 ftiy xopj;jy;

4.2 tho;j;Jk; gaDk;

4.3 el;G eyk;

4.4 jdpkdpj mikjp - cyf mikjp

5. ,aw;if epajp

5.1 xUq;fpizg;G Mw;wy; - nray;tpisTj; jj;Jtk;

5.2 kdj;J}a;ik> tpidj;J}a;ik – fUikak;

5.3 md;Gk; fUizAk;

5.4 gz;ghl;Lf; fy;tp le;njhOf;fg; gz;ghL

Reference Book:

Manavalakalai Yoga, Vethathri Publications, Tamil Nadu, 2008.

Evaluation Pattern:

Practical [Performing Yoga & Meditation] – 25 marks

Theory [End-Semester Examination] – 75 marks

Question Pattern:

Section – A:

Ten objective type questions with multiple answers are to be given. (10 x 1=10)

Section – B:

Five short essay type questions in ‘Either – Or’ pattern are to be given. (5 x 7=35)

Section – C:

Five long essay type questions are to be given. Three questions are to be answered. (3 x 10=30)

THIRD YEAR – SEMESTER - V

PART IV – SUMMER INTERNSHIP / INDUSTRIAL TRAINING

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
					2		25	75	100

Learning Objectives:

LO1	To offer a hands-on-learning experience, that allows the learners to maximize the outcome and benefits of their theoretical knowledge through practical implementation.
LO2	By adding technical skills, accounting skills, marketing skills and professional experience to the learners' resume, they can enhance their chances of securing the job they desire
LO3	To provide the learners an experience of the real corporate world and thus help them to understand the expectations and requirements of the industry
LO4	To enable the learners build their network and professional relationships, which turns them into confident future professionals.

Duration of the Training:

- * The learners of all the Under-Graduation Programmes are to undergo the Internship / Industrial Training during the summer vacation, after completion of the IV Semester examinations. The students undergo training for a period of minimum 15 days / 2weeks.

Evaluation:

- * After completion of the training, the evaluation of the performance of the learners will be done in the V semester.
- * Two credits will be awarded for the students who complete the training successfully.
- * Viva-voce examination will be conducted and the learners have to appear for the Viva-voce individually.

CORE -XIII: COST ACCOUNTING - II

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	6				4	6	25	75	100
Learning Objectives									
LO1	To understand the standards in Cost Accounting								
LO2	To know the concepts of contract costing.								
LO3	To be familiar with the concept of process costing.								
LO4	To learn about operation costing.								
LO5	To gain insights into standard costing.								
Prerequisite: Should have studied Cost Accounting in V Sem									
Unit	Contents								No. of Hours
I	Cost Accounting Standards An Introduction to CAS – Purpose of CAS – Advantages of CAS – Difference between CAS and FAR Regulations – Different Degrees of CAS Coverage – Cost Accounting Standards - Responsibility Accounting and Divisional Performance Measurement.								18
II	Job Costing, Batch Costing and Contract Costing Definitions - Features - A Comparison - Calculation of Profit on Contracts – Cost Plus Contract - Preparation of Contract A/c.								18
III	Process Costing Process Costing – Meaning – Features of Process Costing – Application of Process Costing – Fundamental Principles of Process Costing – Preparation of Process Accounts - Treatment of Loss and Gain : Normal and Abnormal Loss - Abnormal Gain - Concept of Equivalent Production - Joint Products and By Products.								18

IV	Operation Costing Operation Costing – Meaning – Preparation of Operating Cost Sheet – Transport Costing – Power Supply Costing– Hospital Costing–Simple Problems.	18
V	Standard Costing and Variance Analysis Definition – Objectives – Advantages – Standard Cost and Estimated Cost – Installation of Standard Costing System – Variance Analysis – Material, Labour, Overhead, and Sales Variances – Calculation of Variances.	18
	TOTAL	90
THEORY 20% & PROBLEMS 80%		
Course Outcomes		
CO1	Remember and recall standards in cost accounting	
CO2	Apply the knowledge in contract costing	
CO3	Analyze and assimilate concepts in process costing	
CO4	Understand various bases of classification cost and prepare operating cost statement.	
CO5	Set up standards and analyse variances.	
Textbooks		
1	Jain S.P. and Narang K.L. Cost Accounting. Kalyani Publishers. New Delhi.	
2	Khanna B.S., Pandey I.M., Ahuja G.K., and Arora M.N., Practical Costing, S Chand & Co, New Delhi.	
3	Dr.S.N. Maheswari, Principles of Cost Accounting, Sultan Chand publications, New Delhi.	
4	T.S. Reddy and Y. Hari Prasad Reddy, Cost Accounting, Margham publications, Chennai.	
5	S.P. Iyengar, Cost Accounting, Sultan Chand Publications, New Delhi.	
Reference Books		
1	Polimeni, Cost Accounting: Concepts and Applications for Managerial Decision Making, New York, McGraw–Hill, Noida.	
2	Jain S.P. and Narang K.L. Cost Accounting, Kalyani Publishers, New Delhi.	
3	V.K.Saxena and C.D. Vashist, Cost Accounting, Sultan Chand publications, New Delhi.	
4	Murthy A &Gurusamy S, Cost Accounting, Vijay Nicole Imprints Pvt. Ltd. Chennai.	
5	Prasad. N.K and Prasad.V.K, Cost Accounting, Book Syndicate, Bangladesh.	
NOTE: Latest Edition of Textbooks May be Used		

Web Resources	
1	https://www.economicsdiscussion.net/cost-accounting/contract-costing/32597
2	https://www.wallstreetmojo.com/process-costing/
3	https://www.accountingnotes.net/cost-accounting/operating-costing/17755

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO3	PSO3
CO1	3	3	3	2	3	3	3	3	3	2	2	3	3
CO2	3	3	3	2	2	3	2	2	3	2	3	3	3
CO3	3	3	3	2	3	3	3	3	3	2	2	3	3
CO4	3	3	3	2	2	3	2	2	3	2	2	3	3
CO5	3	3	3	2	3	3	3	3	3	2	3	3	3
TOTAL	15	15	15	10	13	15	13	13	15	10	12	15	15
AVERAGE	3	3	3	2	2.6	3	2.6	2.6	3	2	2.4	3	3

3 – Strong, 2- Medium, 1- Low

THIRD YEAR – SEMESTER – VI

CORE – XIV: MANAGEMENT ACCOUNTING

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	6				4	6	25	75	100
Learning Objectives									
LO1	To understand basics management accounting								
LO2	To know the aspects of Financial Statement Analysis								
LO3	To familiarize with fund flow and cash flow analysis								
LO4	To learn about budgetary control								
LO5	To gain insights into marginal costing.								
Prerequisite: Should have studied Financial Accounting in I Semester.									
Unit	Contents								No. of Hours
I	Introduction to Management Accounting Management Accounting – Meaning – Scope – Importance- Limitations - Management Accounting Vs Cost Accounting – Management Accounting Vs Financial Accounting. Analysis and Interpretation of Financial Statements – Nature and Significance – Types of Financial Analysis – Tools of Analysis – Comparative Statements – Common Size Statement – Trend Analysis.								18
II	Ratio Analysis Ratio Analysis: Meaning – Advantages – Limitations – Types of Ratios – Liquidity Ratios – Profitability Ratios -Turnover Ratios –Solvency Ratios – Leverage Ratios - Preparation of Financial Statements from Ratios.								18
III	Funds Flow & Cash Flow Analysis Introduction, Meaning of Funds Flow Statement-Ascertainment of Flow of Funds - Schedule of Changes in Working Capital-Adjusted Profit and Loss Account - Preparation of Funds Flow Statement. Cash Flow Statement: Meaning – Advantages – Limitations – Preparation of Cash Flow Statement as per AS 3 –Cash Flow from Operating, Financing and Investing activities								18

IV	Budget and Budgetary Control Meaning – Preparation of Various Budgets – Cash Budget - Flexible Budget– Production Budget – Sales Budget – Master Budget – Budgetary Control – Benefits	18
V	Marginal Costing: Meaning - Features – Marginal Costing vs Absorption Costing - Fixed Cost, Variable Cost and Semi Variable Cost- Contribution- Marginal Cost Equation- P/V Ratio - Break Even Point - Margin of Safety – Cost- Volume Profits Analysis. Decision Making: Selection of a Product Mix – Make or Buy Decision – Discontinuance of a product line – Change or Status quo – Limiting Factor or Key Factor.	18
	TOTAL	90
THEORY 20% & PROBLEMS 80%		
CO	Course Outcomes	
CO1	Remember and recall basics in management accounting	
CO2	Apply the knowledge of preparation of Financial Statements	
CO3	Analyse the concepts relating to fund flow and cash flow	
CO4	Evaluate techniques of budgetary control	
CO5	Formulate criteria for decision making using principles of marginal costing.	
Textbooks		
1	Jain S.P. & Narang K.L. (2018) Cost and Management Accounting, Kalyani Publications,	
2	Rds. Maheswari, Cost and Management Accounting, Sultan Chand Sons Publications, New Delhi.	
3	Sharma and Shashi K. Gupta, Management Accounting, Kalyani Publishers, Chennai.	
4	Jenitra L Mervin ,Daslton L Cecil, Management Accounting, Lerantec Press, Chennai.	
5	T.S.Reddy& Y. Hari Prasad Reddy, Management Accounting, MarghamPublications,Chennai.	
Reference Books		
1	Chadwick – The Essence of Management Accounting, Financial Times Publications, England.	
2	Charles T.Horngren and Gary N. Sundem–Introduction to Management Accounting, Pearson, Chennai.	
3	Murthy A and GurusamyS ,Management Accounting- Theory &Practice, Vijay Nicole Imprints Pvt. Ltd .Chennai.	
4	Hansen - Mowen, Cost Management Accounting and Control, South Western College, India.	

5	N.P. Srinivasan, Management Accounting, New Age publishers, Chennai.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://www.accountingnotes.net/companies/fund-flow-analysis/fund-flow-analysis-accounting/13300
2	https://accountingshare.com/budgetary-control/
3	https://www.investopedia.com/terms/m/marginalcostofproduction.asp

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	3	2	3	3	3	2	2	3	3
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CO5	3	3	3	2	3	2	3	3	3	2	3	3	3
TOTAL	15	11	13	10	15	10	13	13	15	10	12	15	15
AVERAGE	3	2.1	2.6	2	2	2	2.6	2.6	3	2	2.4	3	3

3 – Strong, 2- Medium, 1- Low

THIRD YEAR – SEMESTER – VI**CORE – XIV: MANAGEMENT ACCOUNTING**

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	6				4	6	25	75	100
Learning Objectives									
LO1	To understand basics management accounting								
LO2	To know the aspects of Financial Statement Analysis								
LO3	To familiarize with fund flow and cash flow analysis								
LO4	To learn about budgetary control								
LO5	To gain insights into marginal costing.								
Prerequisite: Should have studied Financial Accounting in I Semester.									
Unit	Contents								No. of Hours
I	Introduction to Management Accounting Management Accounting – Meaning – Scope – Importance- Limitations - Management Accounting Vs Cost Accounting – Management Accounting Vs Financial Accounting. Analysis and Interpretation of Financial Statements – Nature and Significance – Types of Financial Analysis – Tools of Analysis – Comparative Statements – Common Size Statement – Trend Analysis.								18
II	Ratio Analysis Ratio Analysis: Meaning – Advantages – Limitations – Types of Ratios – Liquidity Ratios – Profitability Ratios -Turnover Ratios –Solvency Ratios – Leverage Ratios - Preparation of Financial Statements from Ratios.								18

III	Funds Flow & Cash Flow Analysis Introduction, Meaning of Funds Flow Statement-Ascertainment of Flow of Funds - Schedule of Changes in Working Capital-Adjusted Profit and Loss Account - Preparation of Funds Flow Statement. Cash Flow Statement: Meaning – Advantages – Limitations – Preparation of Cash Flow Statement as per AS 3 –Cash Flow from Operating, Financing and Investing activities	18
IV	Budget and Budgetary Control Meaning – Preparation of Various Budgets – Cash Budget - Flexible Budget– Production Budget – Sales Budget – Master Budget – Budgetary Control – Benefits	18
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	TOTAL	90
THEORY 20% & PROBLEMS 80%		
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AND PROGRAMME SPECIFIC OUTCOMES**

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TOTAL	15	12	13	10	13	10	13	13	15	10	12	15	15
AVERAGE	3	2.2	2.6	2	2.6	2	2.6	2.6	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

THIRD YEAR – SEMESTER – VI

DISCIPLINE SPECIFIC ELECTIVE 5/6 ENTREPRENEURIAL DEVELOPMENT

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				3	5	25	75	100
Learning Objectives									
LO1	To know the meaning and characteristics of entrepreneurship								
LO2	To identify the various business opportunities								
LO3	To understand the Process of setting up an enterprise								
LO4	To gain knowledge in the aspects of legal Compliance of setting up of an enterprise								
LO5	To develop an understanding of the role of MSME in economic growth								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction to Entrepreneur Meaning of Entrepreneurship – Characteristics of Entrepreneurship – Types of Entrepreneurship – Self Employment – Difference between Entrepreneurship and Employment – Meaning of Entrepreneur – Traits – Classification – Functions – Entrepreneurial Scenario in India.								15
II	Design Thinking Idea Generation – Identification of Business Opportunities – Design Thinking Process – Creativity – Invention – Innovation – Differences – Value Addition – Concept and Types – Tools and Techniques of Generating an Idea – Turning Idea into Business Opportunity.								15
III	Setting up of an Enterprise Process of Setting Up an Enterprise – Forms of an Enterprise – Sole Proprietorship – Partnership – Limited Liability Partnership Firm – Joint Stock Company – One Man partnership – Choice of Form of an Enterprise – Feasibility Study – Marketing, Technical, Financial, Commercial and Economical.								15

IV	Business Model Canvas and Formulation of Project Report Introduction – Contents of Project Report – Project Description – Market Survey – Fund Requirement – Legal Compliance of setting Up of an Enterprise – Registration – Source of Funds – Modern Sources of Funds.	15
V	MSME's and Support Institutions Government Schemes and Women Entrepreneurship – Importance of MSME for Economic Growth – MSME – Definition – Role of Government Organizations in Entrepreneurship Development – MSME DI – DIC – Khadi and Village Industries Commission – NSIC – NABARD, SICVI, SFC, SDC, EDII, EPCCB. Industrial Estates – Government Schemes – Prime Minister Employment Generation Programme – Women Entrepreneurship in India.	15
TOTAL		75
Course Outcomes		
CO1	Identify the various traits of an entrepreneur	
CO2	Turn ideas into business opportunities	
CO3	Do feasibility study before starting a project	
CO4	Identify the sources of funds for funding a project	
CO5	Develop an understanding about the Government schemes available for women entrepreneurs	
Textbooks		
1	Jayashree Suresh, (Reprint 2017) Entrepreneurial Development, Margham Publications. Chennai.	
2	Dr. C.B. Gupta &Dr. S.S. Khanka (Reprint 2014).Entrepreneurship And Small Business Management, Sultan Chand & Sons, New Delhi.	
3	Charantimath Poornima, (Reprint 2014.), Entrepreneurship development- Small, Pearson Education, India.	
4	RajShankar,(Reprint2016),EntrepreneurshipTheoryandPractice,VijayNic oleandImprints Pvt. Ltd, Chennai.	
5	Vasant Desai, (Reprint 2017).Dynamics of Entrepreneurial Development & Management Twenty Fourth Edition. Himalaya Publishing House. Mumbai.	

Reference Books	
1	Anil kumar, Poornima, Principles of Entrepreneurial development, Newage publication, Chennai.
2	Dr.A.K.singh, Entrepreneurial development and management, Laxmi publications, Chennai.
3	Dr. R.K. Singal, Entrepreneurial development and management, S.K.Kataria publishers, New Delhi.
4	Dr. M.C. Garg, Entrepreneurial Development, New Delhi.
5	E.Gordon, K.Natrajan, Entrepreneurial development, Himalaya publishing, Mumbai.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1.	https://www.interaction-design.org/literature/topics/design-thinking
2.	https://www.bms.co.in/steps-involved-in-setting-up-of-an-enterprise/
3.	http://www.msme.gov.in/

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	3	2	3	3	3	2	2	3	3
CO2	3	2	2	2	2	2	2	2	3	2	3	3	3
CO3	3	3	3	2	3	2	3	3	3	2	2	3	3
CO4	3	2	2	2	2	2	2	2	3	2	2	3	3
CO5	3	3	3	2	3	2	3	3	3	2	3	3	3
TOTAL	15	12	13	10	13	10	13	13	15	10	12	15	15
AVERAGE	3	2.2	2.6	2	2.6	2	2.6	2.6	3	2	2.4	3	3

3 – Strong, 2- Medium, 1- Low

THIRD YEAR – SEMESTER – VI

DISCIPLINE SPECIFIC ELECTIVE – 6 /6: HUMAN RESOURCE MANAGEMENT

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				3	5	25	75	100
Learning Objectives									
C1	To explore to the aspects relating of Human resource management								
C2	Toequip with the various processes of Recruitment and Selection								
C3	To be acquainted with Training methods and the concept of Performance Appraisal								
C4	To learn about Industrial Relations								
C5	To assimilate knowledge on employee welfare.								
Prerequisite: Should have studied Commerce in XII Std									

Unit	Contents	No. of Hours
I	Introduction to HRM Definition of HRM, Objectives – Importance – Nature- Scope, Role and Qualities of a HR Manager - Human Resource Planning - Meaning, Definition, Importance, Factors Affecting HRP, Process Involved in Human Resource Planning. Human Resource Information System (HRIS) - Job Analysis, Need for Job Analysis, Steps in Job Analysis, Job Description and Specification.	12
II	RECRUITMENT AND SELECTION Definition – Objectives – Factors affecting recruitment – internal and external source of recruitment – Selection Process – Curriculum Vitae –Test- types– Kinds of employment interview – Medical Screening – Appointment Order.	12
III	TRAINING AND DEVELOPMENT Induction – Training – Methods – Techniques – Identification of the training needs – Training and Development – Performance appraisal – Transfer – Promotion and termination of services – Career Development.	12

IV	INDUSTRIAL RELATIONS Industrial Disputes and Settlements (Laws Excluded) – Settling Industrial Disputes in India – Arbitration – Adjudication – SettlementLabour Relation – Functions of Trade Unions – Forms of collective bargaining-Workers’ participation in management – Types and effectiveness. .	12
V	EMPLOYEE WELFARE Employee Welfare: Meaning, Objectives, Philosophy, Scope, Limitations, Types of Employee Welfare, Statutory and Non-Statutory Welfare Measures, and Labour Welfare Theories- Social Security, Health, Retirement &Other Benefits-Remuneration – Components of remuneration – Incentives – Benefits	12
	TOTAL	60
CO	Course Outcomes	
CO1	Examine the role of HRM in the new ageorganisation and plan man power requirements andimplement techniques of job design.	
CO2	Formulate action plans for employee Recruitment and Selection.	
CO3	Choose appropriate methods of Training	
CO4	Estimate, defend and handle legal compliance in HRM involving trade union disputes and employee retention.	
CO5	Formulate strategies for employee welfare.	
Textbooks		
1	Ashwathappa, Human Resource Management, Tata McGraw-Hill Education, Noida.	
2	Mamoria, C.B. and Gaonkar, S.V, Personnel Management, Himalaya Publishing House, Mumbai.	
3	Sunil Lalla and Neha Shukla, Human Resource Management, Nirali Prakashan Publishers, Pune.	
4	P.Subba Rao, Personnel and Human Resource Management, Himalaya Publishing House, Mumbai.	
Reference Books		
1	L.M. Prasad, Human Resource Management, Sultan and Chand sons Publications, New Delhi.	
2	DeCenzo, D.A. and Robbins, S.P Human Resource Management, Wiley, India.	
3	Dr.K.Sundar and Dr.J Srinivasan, Human Resource Development, Margham Publications, Chennai.	

4	Jane Weightman, Human Resource Management, VMP Publishers, Mumbai.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://hr.university/shrm/strategic-human-resource-management/
2	https://www.investopedia.com/terms/c/collective-bargaining.asp
3	https://www.yourarticlelibrary.com/human-resource-management-2/employee-welfare/employee-welfare/99778

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	2	3	2	3	3	3	2	2	3	3
CO2	3	2	2	2	2	2	2	2	3	2	3	3	3
CO3	3	3	3	2	3	2	3	3	3	2	2	3	3
CO4	3	2	2	2	2	2	2	2	3	2	2	3	3
CO5	3	3	3	2	3	2	3	3	3	2	3	3	3
TOTAL	15	12	13	10	13	10	13	13	15	10	12	15	15
AVERAGE	3	2.2	2.6	2	2.6	2	2.6	2.6	3	2	2.2	3	3

3 – Strong, 2- Medium, 1- Low

THIRD YEAR – SEMESTER - VI

DISCIPLINE SPECIFIC ELECTIVE – 7/8: R LANGUAGE

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
		2	3		3	5	25	75	100
Learning Objectives									
LO1	Acquire programming skills in core R Programming								
LO2	Acquire Object-oriented programming skills in R Programming.								
LO3	Develop the skill of designing graphical-user interfaces (GUI) in R Programming								
LO4	Acquire R Programming skills to move into specific branches								
Prerequisite: Should have studied Commerce in XII Std									

	List of Exercises	
	1. Data In R 2. Reading And Writing Data 3. R And Databases 4. Dates 5. Factors 6. Subscribing 7. Character Manipulation 8. Data Aggregation 9. Reshaping DataBasics 10. The R Environment 11. Probability And Distributions 12. Descriptive Statistics and Graphics 13. One- And Two-Sample Tests 14. Regression And Correlation 15. Analysis Of Variance And The Kruskal–Wallis Test 16. Tabular Data 17. Power And The Computation Of Sample Size 18. Advanced Data Handling 19. Multiple Regression 20. Linear Models 21. Logistic Regression 22. Survival Analysis 23. Rates And Poisson Regression 24. Nonlinear Curve Fitting	
TOTAL		
Course Outcomes		
CO1	To understand the problem solving approaches	
CO2	To learn the basic programming constructs in R Programming	
CO3	To practice various computing strategies for R Programming -based solutions to real world problems	
CO4	To use R Programming data structures - lists, tuples, dictionaries.	
CO5	To do input/output with files in R Programming	

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	3	2	3	2	2	3	2	2	3	3
CO2	3	2	3	3	3	2	2	2	3	2	2	3	3
CO3	3	2	3	3	3	2	2	2	3	2	2	3	3
CO4	3	2	3	3	2	2	2	2	3	2	2	3	3
CO5	3	2	3	3	3	2	2	2	3	2	2	3	3
TOTAL	15	10	15	15	13	11	10	10	15	10	10	15	15
AVERAGE	3	2	3	3	2.6	2.2	2	2	3	2	2	3	3

3 – Strong, 2- Medium, 1- Low

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
		2	3		3	5	25	75	100
Learning Objectives									
LO1	Examination of general accounting applications as they apply to computerized financial records for each step of the accounting cycle to the completion of financial statements, as well as management accounting applications.								
Prerequisite: Should have studied Commerce in XII Std									
	List of Exercises								

	<ol style="list-style-type: none"> 1. Preparation of Trial Balance - preparation of profit and loss accounts, Balance sheet 2. Interest simple, compound interest calculation. Setting ledger master, Interest report. 3. Receivable and payable management, meaning activating bill wise details, all types of entries 4. Cost Centres and Category summary, cost centre breakup ledgers and group breakup outstanding receivable and payable, interest receivable and payable, statistics, cash and fund flow daybook list of account reversing journals, optional vouchers. 5. Budget Budgetary control creation of budget, group budget Budgetary ledger creation alteration of budget deletion of budget. 6. Introduction to GST, Getting started with GST, Transferring Input tax to GST, Interest supply of goods, GST reports 7. Recording advance entries, Exports, Imports, Exempted Goods, Adjustment and Return filing, GST tax payments 8. Electronic Commerce Introduction, Tax Collected at Source (TCS), Procedures for E-commerce Operator, Input Tax Credit: - Introduction, Important Points, Input Service Distributors 9. Matching of Input Tax Credit, Returns, GSTR-2, Other Taxable Persons, Annual Return, Overview of the IGST Act, Overview, Other Provisions. 10. GST Portal, Introduction, GST Eco-system, GST Suvidha Provider (GSP), Uploading Invoices 	
TOTAL		60
Course Outcomes		
CO1	Prepare Journal entries, adjust entries	
CO2	Prepare Bill wise details and Cash flow statement	
CO3	Prepare Financial statements for cash and accrual-based businesses	
CO4	Prepare record vendor, customer, and inventory transactions essential for maintaining accounts payable, accounts receivable, and inventory subsidiary ledgers	
CO5	Prepare TCS and GST and upload invoices	

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	3	2	3	2	2	3	2	2	3	3
CO2	3	2	3	3	3	2	2	2	3	2	2	3	3
CO3	3	2	3	3	3	2	2	2	3	2	2	3	3
CO4	3	2	3	3	2	2	2	2	3	2	2	3	3
CO5	3	2	3	3	3	2	2	2	3	2	2	3	3
TOTAL	15	10	15	15	13	11	10	10	15	10	10	15	15
AVERAGE	3	2	3	3	2.6	2.2	2	2	3	2	2	3	3

3 – Strong, 2- Medium, 1- Low

THIRD YEAR – SEMESTER - VI

PROFESSIONAL COMPETENCY SKILL

GENERAL AWARENESS FOR COMPETITIVE EXAMINATION

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2				2	2	25	75	100
Learning Objectives									
LO1	To create the opportunity for learning across different disciplines and builds experience for students as they grow into lifelong learners.								
LO2	To build experiences for students as they grow into lifelong learners.								
LO3	To know the basic concepts of various discipline								
Prerequisites: Should have studied Commerce in XII Std									
UNIT	Details								No. of Hours
I	Indian Polity Basics concepts- Three organs of Indian government (Executives, Legislature, Judiciary), Introduction to Indian Constitution – Salient features of constitution, Preamble, Fundamental rights, Fundamental duties, Directive Principles of State policy, Types of Majority, Amendments to the Constitution, Basic structure Doctrine, Division of subjects between the union and the states local Governance, Elections in India and Election Commission, CAG.								6
II	Geography Major oceans of the world –Important Canals – Gulfs – Straits and passes – Indian Rivers and its Tributaries – Climatology – Atmosphere, Wind systems, Clouds systems, World climatic classification – Indian climate – Indian Monsoon – Indian’s physical features, Indian Soil types and Distribution – Importance Trade routes and projects, Indian natural vegetation – Indian agriculture- Major crops and its distribution, Indian Industries and its Distribution.								6

III	Economy National Income – Inflation – Money and Banking - Agriculture in India – Union Budget – Planning in India – Poverty – Unemployment – Inclusive Development and Development issues – Industrial policies – Financial Markets.	6
IV	History Modern India – formation of Indian National Congress – Morley Minto Reforms, Revolutionary activities – World War I and India's Response – Home Rule league – Montague Chelmsford reforms – Rowlett Act – Non –Cooperation Movement – Simon commission and Nehru Report – Civil Disobedience Movement and Round Table conferences – Quit India Movement and Demand for Pakistan – Cabinet Mission – Formation of Constituents Assembly and partition of India.	6
V	Environment and Ecology Basic concepts – Ecology, Biodiversity- Food chain and food web – Bio Geo Chemical Cycles – International Bio Diversity organisations- International Conventions – Conferences and Protocol – Indian Environmental laws and Environment Related organisation	6
	TOTAL	30
Course Outcomes		
CO1	Develop board knowledge of the different components in polity	
CO2	Understand the Geographical features across countries and in India	
CO3	Acquire knowledge on the aspects of Indian Economy	
CO4	Understand the significance of India's Freedom Struggle	
CO5	Gain knowledge on Ecology and Environment	

Textbooks	
1	Class XI and XII NCERT Geography
2	History – Old NCERT'S Class XI and XII
Reference Books	
1	M. Laxmi Kant (2019), Indian polity, McGraw- Hill
2	Ramesh Singh (2022), Indian Economy, McGraw - Hill
3	G.C Leong, Physical and Human Geography, Oxford University Press

4	Majid Hussain- India Map Entries in Geography, GK Publications Pvt, Ltd.
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://www.freebookkeepingaccounting.com/using-excel-in-accounts
2	https://courses.corporatefinanceinstitute.com/courses/free-excel-crash-course-for-finance
3	https://www.youtube.com/watch?v=Nv_Nnw01FaU

**MAPPING WITH PROGRAMME OUTCOMES
AND PROGRAMME SPECIFIC OUTCOMES**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	3	2	3	2	2	3	2	2	3	3
CO2	3	2	3	3	3	2	2	2	3	2	2	3	3
CO3	3	2	3	3	3	2	2	2	3	2	2	3	3
CO4	3	2	3	3	2	2	2	2	3	2	2	3	3
CO5	3	2	3	3	3	2	2	2	3	2	2	3	3
TOTAL	15	10	15	15	13	11	10	10	15	10	10	15	15
AVERAGE	3	2	3	3	2.6	2.2	2	2	3	2	2	3	3

3 – Strong, 2- Medium, 1- Low



EXTRA CREDIT COURSES

HUMAN RIGHTS AND DUTIES

Course Code:

Year: First (I Semester)

Batch :

Credit:

Unit I

Concepts of Human rights – Meaning – Definition – Nature and scope of human rights

Unit II

Constitutional Perspective and Mechanism – Fundamental Rights, Fundamental Duties and their Co- relation – Enforcement of Human Rights: Legislative – Executive – Judiciary.

Unit III

Statutory Mechanism for Enforcement of Human Rights – Composition and Role of National Human Rights Commission - State Human Rights Commission, Committee for SC/ST, Women's commission.

Unit IV

Environment and Human Rights – Rights to Clean Environment its Content and scope - Rights to Environment Vs Rights to development.

Unit V

National regime for Environment Protection – Constitutional Rights and Duties, Statutory Rights and Duties.

BOOK FOR REFERENCE

1. Human Rights under the Indian Constitution – Mehta .P.L Neena and Verma
2. Human Rights and law – Dikshit. R.C

DISASTER MANAGEMENT

Course Code:
Semester)

Year: Second (III

Batch :

Credit:

Unit-I

Introduction to Disaster- Meaning, Definition- Difference between Hazards and Vulnerability- Disaster management-Meaning- Goals.

Unit-II

Types of Disasters.

Unit-III

Do's and Don't during various types of Disaster.

Unit-IV

Concept of Risk Management and Crisis Management.

Unit-V

Hazard and Vulnerability Profile of India.

BOOKS FOR REFERENCE:

1. Disaster Management- R. Ruthra, P.Sri .Balaji, S.Banupriya – Suchitra Publications.
2. Disaster Management- Arun Kumar, S.K.Kataria& Sons Publications.
3. Disaster Management- R.Subramanian, Vikas Publishing House.
4. Disaster Management – A.K. Srivastava, Scientific Publishers.
5. An Introduction to Disaster Management- S.Vaidyanathan , CBS Publishers and Distributors.

HUMAN RESOURCE DEVELOPMENT

Course Code:

Year: Third (V Semester)

Batch :

Credit:

Unit I

HRD – Meaning – Definition – Objectives – Features – Need – Methods – Processes – Outcomes – HRD Vs Personnel function.

Unit II

Career Planning and Development: Concept of Career – Career Stages – Career Planning - Definition – Objectives – Process – Benefits – Career development - Career Development Programme – CDP benefits to employees.

Unit III

Recruitment: Concept – Purpose – Importance – Recruitment Policy - Factors Affecting Recruitment Policy – Recruitment Process – Selection – Concept - Process

Unit IV

Training and Development – Concept – Role – Need – Methods – Organising Training and Development Programmes – Developing Inter-Personal Relationship.

Unit V

Performance Appraisal – Objectives - Appraisal Methods – Process – Problems of Performance Appraisal.

BOOKS FOR PREFERENCE

1. Human Resource Management: S.S. Khanka, S. Chand, New Delhi.
2. Human Resource Development: A.C. Tripathi, Sultan Chand & Sons, New Delhi.
3. Human Resource Management: L.M. Prasad Sultan Chand & Sons, New Delhi.
4. Human Resource and Personnel Management : K. Aswathappa, Tata McGraw Hill Publishing Co Ltd, New Delhi
5. Personnel Management and Human Resources : C.S VenkataRatnam and B.K. Srivastava, Tata McGraw Hill Publishing Co Ltd, New Delhi

VALUE ADDED COURSES

Course Code		Course Title	Batch:	
Hrs / Week	30	Value Added Course - I Retail Marketing	Semester:	
			Credits:	

Course Outcomes

COs	Description	Blooms' Taxonomy Level
CO1	To understand the meaning, functions, Characteristics, and benefits of Retail marketing	Knowledge [Level 1 & 2]
CO2	To know about retail marketing mix, retail pricing, and factors influencing retail pricing.	Knowledge [Level 1 & 2]
CO3	To acquire knowledge about retail promotion mix and retailing in India.	Knowledge [Level 3]

SYLLABUS

UNIT-I

Retail marketing-Meaning, Introduction-Functions of retail marketing-Characteristics of retail marketing-Benefits of retail marketing.

UNIT-II

Retail marketing mix and its types-Product,Price,Place,Promotion.

UNIT-III

Retail Pricing-Factors Influencing retail pricing-Internal and External Factors.

UNIT-IV

Retail promotion mix-Components of Retail promotion mix.

UNIT-V

Retailing in India-FDI in retail sector-Future trends of Retail in India.

Books for Reference:

- Retail marketing - Dr.L.Natarajan, Margham Publications , Year of Publication 2019.

Question Pattern: Section- A

Twenty questions will be given. Each Questions carry 5 marks 20 * 5 =100 marks

Total Marks =100

Course Code		Course Title	Batch:	
Hrs / Week	30	Value Added Course - II	Semester:	
		Aptitude Skills	Credits:	

Preamble

This course aims to improve the analytical and reasoning skills of the students which will help them to face competitive examinations.

Course Outcome

On the successful completion of the course, the students will be able to

CO Number	CO Statement	Blooms' Taxonomy Level
CO1	Understand and apply the shortcut techniques of mathematics in problem solving.	Knowledge (level 1) Comprehension (Level 2)
CO2	Recollect and apply the basic concepts of reasoning in real life situations.	Application (Level 3)
CO3	Solve the complex problems with speed, accuracy and presence of mind.	Analysis (Level 4)

UNIT – I

Logical Reasoning: Number series – Coding and Decoding – Day sequence

UNIT – II

Data Interpretation: Line Graph – Bar Graph – Pie Chart – Tabular Data

UNIT – III

Quantitative Aptitude: Time and Distance – Time and Work

UNIT – IV

Quantitative Aptitude: Profit & Loss problems – Age Problems – HCF and LCM

Calculations

UNIT – V

Quantitative Aptitude: Ratio and Proportion

TEXT BOOK

1. Quantitative Aptitude for Competitive Examination – R.S. Aggarwal, S. Chand & Company Ltd, New Delhi.

Question Pattern: Section- A

Twenty questions will be given. Each Questions carry 5 marks $20 * 5 = 100$ marks

Total Marks =100

Course Code		Course Title	Batch:	
Hrs / Week	30	Value Added Course -III	Semester:	
		Business Analytics using Ms-Excel	Credits:	

Course Outcomes:

Cos	Description	Blooms' Taxonomy Level
CO1	Gaining knowledge of the use of Excel and Excel add-ins to solve business problems	Knowledge (level 1)
CO2	Comprehending the methodologies in business analytics to formulate and solve business problems and support managerial decision making.	Comprehension (Level 2)
CO3	Applying the gained knowledge to solve business problems.	Application (Level 3)
CO4	Becoming familiar with the processes needed to develop, report and analyze business data.	Synthesis (Level 6)

Unit – I

Introduction to Ms-Excel – Worksheet - Moving and Copying, Inserting and Deleting Rows and Columns - Creating Charts - Functions: Date and Time, Mathematical and Statistics - Formatting a Cell - Conditional formatting - Sort-Filter - Auto Filter - Advanced Filter.

Unit – II

1. Entering data with the given fields:
 - a) Serial No
 - b) Name
 - c) Address
 - d) City
 - e) Date of joining
 - f) Salary
 - g) Course
 - h) Duration
 - i) No of students
 - j) Total fees
2. Performing the following:
 - a) Change font as bold
 - b) Arrange the alignment as center
 - c) Rename the sheet
 - d) Insert a new sheet
 - e) Move a sheet
 - f) Delete a sheet
 - g) Hide/unhide column

- h) Change Column width
3. Entering the semester marks and calculating total auto-sum and average, result, class using function wizard and inserting a chart.
4. Designing the Electricity Bill in Ms-Excel by considering the following conditions:

Unit Consumed	Rate Per Unit (RS)
Upto to 100 Units	1.00
101 to 200 Units	1.50
Above 200 Units	2.00
Minimum Rate Rs.40	

Unit – III

1. Creating Pivot Table to analyze Sales report.
2. Creation of trend line to estimate share price using the functions Graph and Trend Setting.

Unit – IV

1. Calculation of Current Ratio, Liquid Ratio, Stock Turnover Ratio and Operating Ratio.
2. Calculate the Simple and Compound Interest.
3. Computation of Mean, Median and Mode.

Unit – V

1. Preparing Employee Payroll with following details
 - a) Dearness Allowance-40% on Basic Pay
 - b) House Rent Allowance-Rs.400
 - c) Medical Allowance-Rs.100
 - d) Provident Fund-12% on Basic Pay+ Dearness Allowance
2. Preparing Inventory List Creation.
3. Advanced Filtering with Multi Criteria-including vlookup , hlookup.

Books for Reference:

- ✚ R.K. (2008) PC Software Windows Made Simple, New Delhi: Tata McGraw Hill Publishing co.Ltd.
- ✚ Russell Stultz, A, (2000) Learn Microsoft Office.
- ✚ Sanjay Saxeena. (2002). Ms Office 2000. New Delhi: Kalyani Publication.

Course Code		Course Title	Batch:	
Hrs / Week	30	Value Added Course -IV Digital Fluency for Business	Semester:	

Course Outcomes

COs	Description	Blooms' Taxonomy Level
CO1	Creating the documents and tables and formatting tools and Designing the flow chart and creating Word Art and Mail ID in MS.Word.	Knowledge (level 1)
CO2	Gaining knowledge of the use of business applications to solve business problems	Comprehension (Level 2)
CO3	Comprehending the methodologies in business analytics to formulate and solve business problems and support managerial decision making.	Comprehension (Level 2)
CO4	Applying the gained knowledge to solve business problems and Becoming familiar with the processes needed to develop, report and analyze business data.	Application (Level 3) Synthesis (Level 6)
CO5	Gaining the knowledge about Ledger, Day Book, trail balance ,inventory ,cost centre, purchase & sales order and employee payroll	Application (Level 3) Synthesis (Level 6)

Unit – I

Introduction to Ms-Word- formatting text: Bold, Italic, Underline – Alignment: center, right, left, justified- Font style and size- change case- Mail merge- page layouts- Print documents.

Unit – II

Introduction to Ms-Excel – Worksheet - Moving and Copying, Inserting and Deleting Rows and Columns - Creating Charts.

Unit – III

Entering data – Performance of data- Formatting a Cell - Conditional formatting - Sort-Filter - Auto Filter - Advanced Filter - function wizard and inserting a chart





Unit – IV

Functions: Date and Time, Mathematical and Statistics - Pivot Table - functions Graph and Trend Setting-ratio analysis-Inventory List Creation-Advanced Filtering with Multi Criteria-including vlookup , hlookup.

Unit – V

Introduction of accounting software - Starting Tally – Company Creation –Single , Multiple, Voucher entry -Stock Group Creation – Godown – Unit of Measurement – - Accounting Voucher with Inventory details - Debit Note – Credit Note – Bills Registers – Sales, Purchase Summary- Employee payroll - Inventory Voucher Entry – Receipt Note – Delivery Note – Rejection In, Rejection Out

Books for Reference:

-  R.K. (2008) PC Software Windows Made Simple, New Delhi: Tata McGraw Hill Publishing co.Ltd.
-  Russell Stultz, A, (2000) Learn Microsoft Office.
-  Sanjay Saxeena. (2002). Ms Office 2000. New Delhi: Kalyani Publication.
-  Official Guide to Financial Accounting using Tally. ERP 9 with GST

Learn Tally. ERP 9 with GST .Soumya Rajan Behera