

**DHANRAJ BAID JAIN COLLEGE
(Autonomous)**

(Owned & Managed by Tamil Nadu Educational and Medical Foundation)

Rajiv Gandhi Salai, Jyothi Nagar, IT Corridor, Thoraipakkam, Chennai – 600097

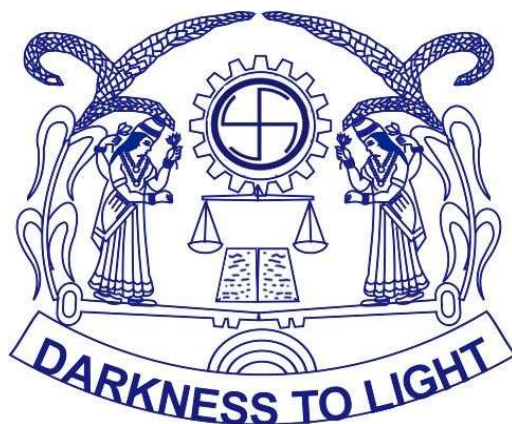
A Jain Minority Institution, Co-Education

Affiliated to the University of Madras

Approved by the Government of Tamilnadu

Re-Accredited with 'A' Grade by NAAC, 4th Cycle

**DEPARTMENT OF COMMERCE
B.Com. (Computer Applications)**



**SYLLABUS
(WITH EFFECT FROM 2026-2027)
(Choice Based Credit System)**

Total No. of Semesters: **6**

Total No. of Credits: **146**

DHANRAJ BAID JAIN COLLEGE (AUTONOMOUS) CHENNAI- 97.
DEPARTMENT OF
COMMERCE
B.Com. (Computer Applications)
DEGREE COURSE
Choice Based Credit System
(Effective from the academic year 2026-2027)

REGULATIONS

**(AS PER THE INTEGRATED COMMON REGULATIONS OF THE
UNIVERSITY OF MADRAS)**

1. ELIGIBILITY FOR ADMISSION:

Candidates for admission to the first year of the Degree of Bachelor of Commerce (Computer Applications), shall be required to have passed the Higher Secondary Examinations (Academic or Vocational Stream) conducted by the Government of Tamil Nadu or an Examination accepted as equivalent thereof by the Syndicate of the University of Madras.

2. ELIGIBILITY FOR AWARD OF THE DEGREE:

A candidate shall be eligible for the award of the Degree only if he / she has undergone the prescribed course of study for a period of not less than three academic years, passed the examinations of all the Six Semesters prescribed earning 146 credits and fulfilled such conditions as have been prescribed therefore.

3. DURATION:

(a) Each academic year shall be divided into two semesters. The first academic year shall comprise the first and second semesters, the second academic year the third and the fourth semesters and the third academic year the fifth and sixth semesters respectively.

(b) The odd semesters shall consist of the period from June to November of each year and the even semesters from December to April of each year. There shall be not less than 90 working days for each semester.

4. COURSE OF STUDY:

The Main Subject of Study for Bachelor Degree shall consist of the following.

Part - I FOUNDATION COURSES: The course shall comprise the study of:
Tamil or any other Modern (Indian or Foreign) or
Classical Languages; and

Part - II English

Part - III CORE COURSES consisting of (a) Core courses, (b) Electives (c) Practical's
if any

Part - IV Consists of SEC / NME, FC, EVS, Value education & Internship.

Part - V Consists of professional competency & extension activities.

5. COMPULSORY EXTENSION SERVICE:

Students shall be awarded a maximum of 1 Credit for Compulsory Extension Service. All the Students shall have to enrol for NSS /NCC/ NSO (Sports & Games) Retract/ Youth Red Cross or any other Service Organizations in the College and shall have to put in compulsory minimum attendance of 40 hours which shall be duly certified by the Principal of the College before 31st March in a year. If a student lacks 40 hours' attendance in the first year, he or she shall have to compensate the same during the subsequent years. Those students who complete minimum attendance of 40 hours in one year will get 'half-a-credit' and those who complete the attendance of 80 or more hours in Two Years will get 'one credit'. Literacy and Population Education and Field Work shall be compulsory components in the above extension service activities.

6. SCHEME OF EXAMINATION SHALL BE GIVEN IN APPENDIX 'A'

REQUIREMENTS FOR PROCEEDING TO SUBSEQUENT SEMESTER

- (a) Candidates shall register their names for the First Semester Examination after admission in the UG Courses.
- (b) Candidates shall be permitted to proceed from the First Semester up to Final Semester irrespective of their failure in any of the Semester Examinations subject to the condition that the candidates should register for all the arrear subjects of earlier semesters along with current (subsequent) semester subjects.
- (c) Candidates shall be eligible to go to subsequent semester, only if they earn sufficient attendance as prescribed thereof from time to time, provided in case of a candidate earning less than 50% of attendance in any one of the semesters due to any extraordinary circumstance such as medical grounds, such candidates who shall produce Medical Certificate issued by the Authorized Medical Attendant (AMA), duly certified by the Principal of the College, shall be permitted to proceed to the next semester and to complete the Course of Study. Such candidates shall have to repeat the missed Semester by re-joining after completion of Final Semester of the Course, after paying the fee for the break of study as prescribed from time to time.

7. PASSING MINIMUM:

- There shall be no passing minimum for Internal.
- For external examination, passing minimum shall be 40% [Forty Percentage] of the maximum marks prescribed for the paper for each Paper/Practical/Project and Viva-Voce.
- In the aggregate [External/Internal] the passing minimum shall be of 40%.
- He / She shall be declared to have passed the whole examination, if he/she passes in all the papers and practical wherever prescribed as per the scheme of the examinations by earning 140 CREDITS in Part I, II, III, IV, V&VI. He/she shall also fulfil the extension activities prescribed earning 1 credit to qualify for the Degree.

8. CLASSIFICATION OF SUCCESSFUL CANDIDATES

(I) FOUNDATION COURSES

- (a) LANGUAGE OTHER THAN ENGLISH: Successful candidate passing the examinations for the Language and securing marks (I) 60 percent and above and (II) 50 percent and above but below 60 percent in the aggregate shall be declared to have passed the examination in the FIRST and SECOND Class, respectively. All other successful candidates shall be declared to have passed the examination in THIRD Class.
- (b) ENGLISH: Successful candidates passing the examination for English and securing the marks
(I) 60 percent and above and (II) 50 percent and above but below 60 percent in the aggregate shall be declared to have passed the examination in the FIRST and SECOND Class, respectively. All other successful candidates shall be declared to have passed the examination in THIRD Class.

(II) CORE COURSES (consisting) of (a) Main Subjects (b) Allied Subjects (c) Application Oriented Subjects and Practical, etc., if any)

Successful candidates passing the examinations for Core Courses together and securing the marks (i) 60 percent and (ii) 50 percent and above but below 60 percent in the aggregate of the marks prescribed for the Core Courses together shall be declared to have passed the examination in the FIRST and SECOND Class, respectively. All other successful candidates shall be declared to have passed the examination in the THIRD Class.

9. RANKING:

Candidates who pass all the examinations prescribed for the Course in the FIRST APPEARANCE ITSELF ALONE are eligible for Classification / Ranking / Distinction.

Provided in the case of Candidates who pass all the examinations prescribed for the Courses with a break in the First Appearance due to the reasons as furnished in the Regulations.7. (c) supra are only eligible for Classification / Distinction.

Contents

I. PO and PSO Description

II. UG – Template

III. Methods of Evaluation & Methods of Assessment

IV. Semester Index.

V. Subjects – Core, Elective, Non major, Skill Enhanced, Ability Enhanced, Extension
Activity, Environment, Professional Competency

1) *Course Lesson Box*

2) *Course Objectives*

3) *Units*

4) *Learning Outcome*

5) *Reference and Text Books*

6) *Web Sources*

7) *PO & PSO Mapping tables*

B.COM., COMPUTER APPLICATION

PROGRAMME OBJECTIVE:

The B.Com. Degree Programme provides ample exposure to courses from the fields of Commerce, Accountancy and Management. The course equips the students for entry level jobs in industry, promotes the growth of their professional career, entrepreneurship and a key contributor to the economic development of the country.

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.

TANSICHE REGULATIONS ON LEARNING OUTCOMES-BASED CURRICULUM FRAMEWORK GUIDELINES BASED REGULATIONS FOR UNDER GRADUATE PROGRAMME	
Programme:	B.COM., COMPUTER APPLICATION
Programme Code:	40
Duration:	UG - 3 years
Programme Outcomes:	1. The Programme facilitates students to acquire knowledge in the basic concepts of Accounting, Finance, Object Oriented Concepts, Web Technology, Taxation, Business and Company laws. 2. To develop critical thinking skills, cultivating the capacity to address challenges and find effective solutions in a business context. To focuses on a number of specialization and practical subjects that augments the students to face the challenges in the field of employment. 3. Program includes various accounting courses, enables the students to gain theoretical and problem solving ability of the students. 4. Acquire professional education, business ethics and also to be proficient in using relevant business technologies and software. 5. Develop Basic Computer Technology and to expertise in handling Computer based problem solving techniques

Programme Specific Outcomes:	1. Enable students; acquire comprehensive foundational and intermediate practical knowledge in the areas of accounting, management, law, finance and taxation to become self-sufficient, readily employable and professionally competent individuals. 2. Effective communication skills for gainful employment could be developed. 3. Students will apply theoretical knowledge to analyse and interpret legal provisions, case laws and draft reports and financial statements. 4. Raise technically sound professionals by adopting application-oriented, skill-based learning in line with national and global corporate standards for multi-level sustenance. 5. To produce employable, ethical and innovative professionals to sustain in the dynamic business world.
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Credit Distribution for UG Programmes

[illegible]

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	5
Part-2	English	3	5
Part-3	Core Courses & Elective Courses [in Total]	14	16
Part-4	Skill Enhancement Course SEC-1	2	2
	Foundation Course	2	2
		24	30

Semester-II

Part	List of Courses	Credit	No. of Hours
Part-1	Language – Tamil	3	5
Part-2	English	3	5
Part-3	Core Courses & Elective Courses including laboratory [in Total]	14	16
Part-4	Skill Enhancement Course -SEC-2	2	2
	Skill Enhancement Course -SEC-3 (Discipline / Subject Specific)	2	2
		24	30

Second Year – Semester-III

Part	List of Courses	Credit	No. of Hours
Part-1	Language – Tamil	3	5
Part-2	English	3	5
Part-3	Core Courses & Elective Courses including laboratory [in Total]	14	16
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
		23	30

Semester-IV

Part	List of Courses	Credit	No. of Hours
Part-1	Language – Tamil	3	5
Part-2	English	3	5
Part-3	Core Courses & Elective Courses including laboratory [in Total]	14	15
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
		26	30

**Third Year
Semester-V**

Part	List of Courses	Credit	No. of Hours
Part-3	Core Courses including Project / Elective Based	23	26
Part-4	Value Education	2	2
	Internship / Industrial Visit / Field Visit	2	2
		27	30

Semester-VI

Part	List of Courses	Credit	No. of Hours
Part-3	Core Courses including Project / Elective Based & LAB	19	28
Part-4	Extension Activity	1	-
	Professional Competency Skill	2	2
		22	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	14	14	14	14	23	19	98
Part IV	4	4	3	6	4	1	22
Part V	-	-	-	-	-	2	2
Total	24	24	23	26	27	22	146

*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 EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	40 Marks
	Assignments, Seminars, Attendance and Class Participation	
External Evaluation	End Semester Examination	60 Marks
Total		100 Marks
METHODS OF ASSESSMENT		
Remembering (K1)	- 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)	- Understanding of facts and ideas by comprehending, 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)	- 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)	- Analyzing the question is one that asks the student to break down something into its component parts. - Analyzing requires students to identify reasons, causes or motives and reach conclusions or generalizations.	
Evaluate (K5)	- 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)	- 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:

1. 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.
2. 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.
3. 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.
4. The curriculum is designed so as to strengthen the Industry-Academia interface and provide more job opportunities for the students.
5. 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.
6. 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.
7. 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.
8. 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.	• Instill confidence among students • Create interest for the subject
I, II, III, IV	Skill Enhancement papers (Discipline centric / Generic / Entrepreneurial)	• 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	1. Strengthening the domain knowledge 2. Introducing the stakeholders to the State-of Art techniques from the streams of multi-disciplinary, cross disciplinary and inter disciplinary nature 3. Students are exposed to Latest topics on Computer Science / IT, that require strong statistical background 4. 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, Biostatistics, Statistical Quality Control, Official Statistics, Operations Research	5. Exposure to industry moulds students into solution providers 6. Generates Industry ready graduates 7. Employment opportunities enhanced

II year Vacation activity	Internship / Industrial Training	1. 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	2. Self-learning is enhanced 3. Application of the concept to real situation is conceived resulting in tangible outcome
VI Semester	Introduction of Professional Competency component	- 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		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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Part	Course Code	Title of the Course	Credits	Hours
FIRST YEAR				
FIRST SEMESTER				
Part I	26L11AA	Language – Tamil -I	3	5
Part II	26E11AA	English -I	3	5
Part III	26C401A	Core Paper I – Financial Accounting	5	5
Part III	26C401B	Core Paper II - Management Principles and Practices	5	5
Part III	26E401A	Elective- I - Programming in C	2	3
	26E401B	Elective- I - Python Programming		
	26E401A1	Practical Based on Elective –I Programming in C Lab	2	3
	26E401B1	Practical Based on Elective –I Python Programming Lab		
Part IV	26401SA1	SEC – 1 – MS Office For Commerce (Practical)	2	2
	26401FC	FC- HTML Lab	2	2
		TOTAL	24	30
SECOND SEMESTER				
Part I	26L12AB	Language – Tamil -II	3	5
Part II	26E12AB	English-II	3	5
Part III	26C402A	Core Paper III –Advanced Financial Accounting	5	5
Part III	26C402B	Core Paper IV- Business Law	5	5
Part III	26E402A	Elective -II - Programming in JAVA	2	3
	26E402B	Elective - II - Programming in C++		
	26E402A1	Practical Based on Elective –II Programming in JAVA Lab	2	3
	26E402B1	Practical Based on Elective –II Programming in C++ Lab		
Part IV	26402SA	SEC - II - Interview Skills and Resume Writing	2	2
	26402SB1	SEC - III - Accounting using Excel Practical	2	2
		TOTAL	24	30

CORE – I: FINANCIAL ACCOUNTING

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				5	5	40	60	100
Learning Objectives									
LO1	Understand the fundamental principles, concepts, conventions, and accounting process used in financial accounting.								
LO2	Prepare and analyse final accounts of sole trading concerns with necessary adjustments including GST.								
LO3	Apply various methods of depreciation accounting and compute depreciation using appropriate methods.								
LO4	Analyse and prepare accounts from incomplete records (Single Entry System) using different methods of profit ascertainment.								
LO5	Understand the role of Artificial Intelligence (AI) in Accounting, its benefits, impact on accounting functions, and future scope.								
Prerequisites: Should have studied Accountancy in XII Std.									
Unit	Contents								No. of Hours
I	Fundamentals of Financial Accounting Accounting structure – Basic Accounting Concepts and Conventions – Methods of Accounting – Accounting Equation– Rectification of Errors – Bank Reconciliation Statement								15
II	Final Accounts Final Accounts of Sole Trading Concern – Preparation of Trading, Profit and Loss Account and Balance Sheet with Adjustments including GST								15
III	Depreciation Depreciation Accounting – Meaning and Features – Need for Depreciation - Factors determining Depreciation – Methods of providing Depreciation (Theory only) – Problems on Straight Line Method and Diminishing Balance Method – Revaluation Method – Annuity Method (AS10& AS28)								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	Fire Insurance Claims – Need – Computation of Claims to be lodged for loss of stock – Loss of Profit – Gross Profit ratio – Abnormal items – Average Clause. Role of AI in Accounting – Benefits –Impact of AI in Accounting Functions of Accountants replaced by AI – Future of AI in Accounting (Theory only)								15
TOTAL								75	
THEORY 25% & PROBLEM 75%									

CO	Course Outcomes
CO1	Describe accounting principles, accounting equation, rectification of errors, and prepare Bank Reconciliation Statements.
CO2	Construct Trading Account, Profit & Loss Account, and Balance Sheet with necessary adjustments including GST.
CO3	Apply Straight Line Method, Diminishing Balance Method, Revaluation Method, and Annuity Method for depreciation accounting.
CO4	Ascertain profit under Single Entry System and prepare final statements using Statement of Affairs and Conversion methods.
CO5	Students will be able to calculate claims for loss of stock and loss of profit, and critically evaluate the impact, benefits, and future role of AI in accounting.
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**

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	2	1	3	2	2	1	1
CO2	3	3	3	2	2	3	2	3	2	2
CO3	3	3	3	2	2	3	2	3	2	2
CO4	3	3	3	2	2	3	2	3	3	2
CO5	2	3	2	3	3	2	2	2	3	3
TOTAL	14	14	13	11	10	14	10	13	11	10
AVERAGE	2.8	2.8	2.6	2.2	2	2.8	2	2.6	2.2	2

3 – Strong, 2- Medium, 1- Low

QUESTION PAPER PATTERN

Section	Theory/ Problem	Unit-I	Unit-II	Unit-III	Unit-IV	Unit-V	From any Unit	TOTAL
Section – A (2 marks) Answer any 10 out of 12	Theory	1	1	1	1	1	-	12
	Problem	1	1	1	1	1	2	
Section –B (7 marks) Answer any 5 out of 8	Theory	-	-	-	-	-	3	8
	Problem	1	1	1	1	1	-	
Section –C (15 marks) Answer any 3 out of 5	Theory	-	-	-	-	1	-	5
	Problem	1	1	1	1	-	-	
Total		4	4	4	4	4	5	25

COMMON TO B.COM A&F, CA,CS,GENERAL

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				5	5	40	60	100
Learning Objectives									
LO1	Explain the concepts, functions, levels, and principles of management.								
LO2	Apply planning techniques by formulating objectives, strategies, policies, procedures, and different types of plans for effective organizational decision-making..								
LO3	To understand organising, authority, delegation and organisational structure.								
LO4	To learn staffing, communication, motivation and leadership practices in business.								
LO5	To understand controlling, coordination and recent trends in management.								
Prerequisites: Should have studied Commerce in XII Std.									
Unit	Contents								No. of Hours
I	Introduction to Management: Meaning - Definitions - Features - Importance - Levels of Management - Roles and Skills of Managers - Fayol's 14 Principles - Evolution of Management Thought: Frederick Winslow Taylor, Henry Fayol, Elton Mayo and Peter F. Drucker - Management Practices of Indian Business Leaders: Ratan Tata, Azim Premji, Anand Mahindra and Mukesh Ambani - Indian Philosophy and Contemporary Management								18
II	Planning: Meaning - Nature - Importance - Types - Planning Process - Types of Plans: Single-Use Plans & Multi-Use Plans (Objectives, Strategies, Policies & Procedures)								18
III	Organising: Meaning - Nature - Importance - Organising Process - Formal and Informal Organisation. Authority & Responsibility: Meaning - Nature - Types of Authority: Line, Staff & Functional. Delegation: Meaning - Importance - Types. Centralisation & Decentralisation: Concept - Difference between Centralised and Decentralised Organisations								18
IV	Staffing: Meaning - Importance - Sources of Recruitment. Directing: Meaning - Nature - Role of Artificial Intelligence in Recruitment. Communication: Meaning - Importance - Channels and Barriers. Motivation: Meaning - Importance - Financial and Non-Financial Incentives - Motivation Theories: Maslow's Need Hierarchy Theory, Herzberg's Two Factor Theory, Theory X and Theory Y. Leadership: Meaning - Contemporary Leadership Styles: Transactional, Transformational, Democratic, Autocratic and Agile								18
V	Controlling: Meaning - Nature - Process. Co-ordination: Meaning - Importance. Recent Trends in Management: Total Quality Management - Crisis Management - Risk Management - Change Management. Styles of Business Management: Management by Objectives (MBO) - Management by Wandering Around (MBWA)								18
	Total								90

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.html
3	https://www.businessmanagementideas.com/notes/management-notes/coordination/coordination/21392

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

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	—	1	2	2	2	1	2	2	2
CO2	2	2	1	3	2	2	2	2	3	3
CO3	2	1	2	3	2	3	2	2	3	2
CO4	1	2	2	2	3	3	1	2	3	2
CO5	2	2	2	3	3	3	2	2	3	3
TOTAL	9	7	8	13	12	13	8	10	14	12
AVERAGE	1.8	1.4	1.6	2.6	2.4	2.6	1.6	2	2.8	2.4

3 – Strong, 2- Medium, 1- Low

QUESTION PAPER PATTERN

Section	Unit-I	Unit-II	Unit-III	Unit-IV	Unit-V	From any unit	TOTAL
	Theory	Theory	Theory	Theory	Theory	Theory	
Section - A (2 marks) Answer any 10 out of 12	2	2	2	2	2	2	12
Section -B (7 marks) Answer any 5 out of 8	1	1	1	1	1	3	08
Section –C (15 marks) Answer any 3 out of 5	1	1	1	1	1	-	05
Total	4	4	4	4	4	5	25

LECTIVE - I: PROGRAMMING IN C

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	3				2	3	40	60	100
Learning Objectives									
LO1	Describe the core syntax and semantics of C programming language.								
LO2	Discover the need for working with the operators.								
LO3	Discover the need for working with the strings and functions								
LO4	Illustrate the process of structuring the data using matrix.								
LO5	Describe the process of Pointers, Structures, and Unions.								
Unit	Contents								No. of Hours
I	Introduction to C Language: C Language Introduction-Features of C Language-Benefits of Cover other languages-Compilation of C Program-First Program in C Pre-processor in C Pre-processor directives								9
II	Variables, Data Types & Operators: Variables and Keywords in C-Scope rules in C-Data Types in C-Operators & Its Types-Typecasting in C								9
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								9
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								9
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)								9
	Total								45

Course Outcomes	
CO1	Apply the concept of Pre-processor.
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 Control Structures to solve any given problem.
CO4	Apply the concept of single and multi-dimensional arrays to solve problems related to searching, sorting and matrix operations.
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**

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	2	1	3	2	2	1	1
CO2	3	3	3	2	2	3	2	3	2	2
CO3	3	3	3	2	2	3	2	3	2	2
CO4	3	3	3	2	2	3	2	3	3	2
CO5	2	3	2	3	3	2	2	2	3	3
TOTAL	14	14	13	11	10	14	10	13	11	10
AVERAGE	2.8	2.8	2.6	2.2	2	2.8	2	2.6	2.2	2

3 – Strong, 2- Medium, 1- Low

QUESTION PAPER PATTERN

Section	Unit-I	Unit-II	Unit-III	Unit-IV	Unit-V	From any unit	TOTAL
	Theory	Theory	Theory	Theory	Theory	Theory	
Section - A (2 marks) Answer any 10 out of 12	2	2	2	2	2	2	12
Section -B (7 marks) Answer any 5 out of 8	1	1	1	1	1	3	08
Section –C (15 marks) Answer any 3 out of 5	1	1	1	1	1	-	05
Total	4	4	4	4	4	5	25

FIRST YEAR – SEMESTER - I
ELECTIVE - I: PYTHON PROGRAMMING

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	3				2	3	40	60	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 objects.								
LO5	Understand the usage of packages and Dictionaries								
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	Develop and execute simple Python Modules								
CO5	Represent compound data using Python lists, tuples, dictionaries etc.								
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

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
C01	2	2	1	2	3	2	1	1	2	2
C02	2	3	3	2	3	2	1	1	3	2
C03	2	3	2	2	3	2	1	1	3	2
C04	2	2	2	3	3	2	1	3	3	2
C05	2	2	3	2	3	2	1	3	2	2
TOTAL	10	12	11	11	15	10	5	9	13	10
AVERAGE	2	2.4	2.2	2.2	3	2	1	1.8	2.6	2

3-Strong, 2-Medium, 1- Low

QUESTION PAPER PATTERN

Section	Unit-I	Unit-II	Unit-III	Unit-IV	Unit-V	From any unit	TOTAL
	Theory	Theory	Theory	Theory	Theory	Theory	
Section - A (2 marks) Answer any 10 out of 12	2	2	2	2	2	2	12
Section -B (7 marks) Answer any 5 out of 8	1	1	1	1	1	3	08
Section –C (15 marks) Answer any 3 out of 5	1	1	1	1	1	-	05
Total	4	4	4	4	4	5	25

FIRST YEAR – SEMESTER – I
Elective Programming in C Lab

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
			3		2	3	40	60	100

Learning Objectives: (for teachers: what they have to do in the class/lab/field)

LO1: Understand problem statements and identify appropriate solutions.

LO2: Demonstrate the use of IDE and C Compiler.

LO3: Develop programs using C Programming Language.

LO4: Demonstrate the use of arrays, matrices, strings, structures, and file/text processing concepts for organizing and manipulating data.

LO5: Design, implement, test, and debug C programs using appropriate programming constructs and problem-solving techniques to develop logical and analytical skills.

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.

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.

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.

Web links 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/>

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

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	1	2	3	2	1	1	2	2
CO2	2	3	3	2	3	2	1	1	3	2
CO3	2	3	2	2	3	2	1	1	3	2
CO4	2	2	2	3	3	2	1	3	3	2
CO5	2	2	3	2	3	2	1	3	2	2
TOTAL	10	12	11	11	15	10	5	9	13	10
AVERAGE	2	2.4	2.2	2.2	3	2	1	1.8	2.6	2

**3 – Strong, 2- Medium, 1- Low
QUESTION PAPER PATTERN**

Answer any Two Questions out of 3 (2 X 40=80 Marks)

Record note Book=20Marks

Sl. No.	Title	Marks
1	AIM and Procedure	10
2	Program writing	10
3	Program Execution	10
4	Output and result	10
	Total	40 Marks

FIRST YEAR – SEMESTER – I
Based on Elective-I Python Programming Lab

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
			3		2	3	40	60	100

Python Programming Lab	
Learning Objectives: (for teachers: what they have to do in the class/lab/field) • 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	

List of Programs
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.

Course Outcomes:	CO1: Develop and execute Python programs using basic programming constructs such as variables, operators, expressions, input/output statements, and control structures. CO2: Apply looping constructs, functions, recursion, and data structures to solve computational and mathematical problems effectively.
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	CO3: Design and implement object-oriented programs using classes and objects in Python. CO4: To use Python data structures - lists, tuples, dictionaries. CO5: Analyze, test, and debug Python programs to develop efficient solutions for real-world problems and enhance problem-solving skills.
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	

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

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	2	3	2	1	1	2	2
CO2	2	3	3	2	3	2	1	2	3	2
CO3	2	3	2	2	3	2	1	1	3	2
CO4	2	2	2	3	3	2	1	3	3	2
CO5	2	2	3	2	3	2	2	3	2	2
TOTAL	10	12	12	11	15	10	6	10	13	10
AVERAGE	2	2.4	2.4	2.2	3	2	1.2	2	2.6	2

**3 – Strong, 2- Medium, 1- Low
QUESTION PAPER PATTERN**

Answer any Two Questions out of 3 (2 X 40=80 Marks)

Record note Book=20Marks

Sl. No.	Title	Marks
1	AIM and Procedure	10
2	Program writing	10
3	Program Execution	10
4	Output and result	10
	Total	40 Marks

Textbooks	
1	Hart-Davis, G., Kettell, J. A., Simmons, C. (2003). Microsoft Office 2003: The Complete Reference. United Kingdom: McGraw-Hill/Osborne.
2	Lambert, J., Frye, C. (2018). Microsoft Office 2019 Step by Step. United States: Pearson Education.
Reference Books	
1	Richardson, T., Held, B., Moriarty, B. (2019). Microsoft Excel Functions and Formulas with Excel 2019/Office 365. United States: Mercury Learning and Information
2	Lalwani, L. (2019). Excel 2019 All-in-One: Master the New Features of Excel 2019 /Office 365. India: BPB Publications.
3	Lambert, J., Cox, J. (2007). Microsoft Office Word 2007 Step by Step. United States: Microsoft Press.
Web Resources	
1	Ms Word tutorial: https://youtu.be/S-nHYzK-BVg
2	Ms PowerPoint: https://youtu.be/XF34-Wu6qWU
3	Ms Excel functions: https://youtu.be/ShBTJrdioLo

LIST OF EXPERIMENTS AS PER CURRICULUM

1. How to use mail merge using an Excel spreadsheet.
2. How to change text format in Ms word.
3. How to add bullets in MS-Word.
4. How to work with Master Slide.
5. Create a power-point slide using various features.
6. How to Add or change an effect for a picture.
7. How to create a graph using spreadsheets.
8. To create a two data series chart in Excel.
9. Students Mark sheet Preparation using Excel.
10. Payroll Processing using Excel.

MAPPING WITH PROGRAMME OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	2	3	2	1	1	2	2
CO2	2	3	3	2	3	2	1	2	3	2
CO3	2	3	2	2	3	2	1	1	3	2
CO4	2	2	2	3	3	2	1	3	3	2
CO5	2	2	3	2	3	2	2	3	2	2
TOTAL	10	12	12	11	15	10	6	10	13	10
AVERAGE	2	2.4	2.4	2.2	3	2	1.2	2	2.6	2

3 - Strong, 2 - Medium , 1- Low

QUESTION PAPER PATTERN

Answer any Two Questions out of 3 (2 X 40=80 Marks)

Record note Book=20Marks

Sl. No.	Title	Marks
1	AIM and Procedure	10
2	Program writing	10
3	Program Execution	10
4	Output and result	10
	Total	40 Marks

FIRST YEAR – SEMESTER – I
FOUNDATION COURSE

Category	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
			2		2	2	40	60	100
Learning Objectives									
LO1	Insert a graphic within a web page.								
LO2	Create a link within a web page.								
LO3	Create a table within a web page.								
LO4	Insert heading levels within a web page.								
LO5	Insert ordered and unordered lists within a web page. Create a web page.								
Prerequisite: Should have studied Commerce in XII Std									
Unit	Contents								No. of Hours
I	Introduction: Web Basics: What is Internet–Web browsers–What is Webpage –HTML Basics: Understanding-tags.								6
II	TagsforDocumentstructure(HTML,Head,BodyTag).Blockleveltextelements :Headingsparagraph(<p> tag)– Font style elements: (bold, italic, font, small, strong, strike, big tags)								6
III	Lists: Types of lists: Ordered ,Unordered– Nesting Lists–Other tags: Marquee, HR,BR-Using Images –Creating Hyperlinks.								6
IV	Tables:CreatingbasicTable,Tableelements,Caption– Tableandcellalignment–Rowspan,Colspan–Cellpadding.								6
V	Frames: Frameset–Targeted Links–No frame–Forms: Input, Text area, Select, Option.								6
	TOTAL								30
CO	Course Outcomes								
CO1	Explain the fundamentals of the Internet, web browsers, web pages, HTML, and the basic structure of an HTML document.								
CO2	Design web pages using HTML formatting tags, headings, paragraphs, images, hyperlinks, and lists to create structured and user-friendly web content.								
CO3	Construct web pages with tables and frames using appropriate HTML tags and attributes to organize and present information effectively.								
CO4	Develop interactive web pages by creating HTML forms using input controls such as text boxes, text areas, radio buttons, checkboxes, select lists, and buttons.								
CO5	Design and implement complete static web pages by integrating HTML elements and applying appropriate web design principles.								

Textbooks	
1	“Mastering HTML5 and CSS3 Made Easy”, TeachUComp Inc., 2014.
2	Thomas Michaud, “Foundations of Web Design: Introduction to HTML & CSS”

Reference Books	
1	E Stephen Mack, Janan Platt , “HTML”.
2	Laura Lemay ,“Teach Yourself Web Publishing with HTML 3.2 in 14 Days”, Techmedia
NOTE: Latest Edition of Textbooks May be Used	
Web Resources	
1	https://www.teachucomp.com/samples/html/5/manuals/Mastering-HTML5-CSS3.pdf
2	https://www.w3schools.com/html/default.asp

NME: HTML Lab

LIST OF EXERCISES:

1. Write a script to create an array of 10 elements and display its contents.
2. Create a simple calculator using form fields. Have two fields for number entry and one field for the result. Allow the user to be able to use plus, minus, multiply and divide.
3. Create a document and add a link to it. When the user moves the mouse over the link, it should load the linked document on its own. (user is not required to click on the link)
4. Create a document which opens a new window without a toolbar, address bar or a status bar that unloads itself after one minute.
5. Design an HTML page that includes document structure tags, title, line break, multiple headings and link to e-mail address.
6. Create an HTML file which is the main page with an image and some text messages along with hyperlinks which is linked to various pages. The navigation should be such that the links take you to the appropriate page and then back to the main page.
7. Create a HTML page to demonstrate the usage of Frames. Choose the content of the page on your own.
8. Design an application for pay slip through HTML forms.

MAPPING WITH PROGRAMME OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	2	3	2	2	1	2	2
CO2	2	3	3	2	3	2	2	2	3	2
CO3	2	3	2	2	3	2	1	1	3	2
CO4	2	2	2	3	3	2	1	3	3	2
CO5	2	2	3	2	3	2	2	3	2	2
TOTAL	10	12	12	11	15	10	8	10	13	10
AVERAGE	2	2.4	2.4	2.2	3	2	1.6	2	2.6	2

3 - Strong, 2 - Medium , 1- Low

QUESTION PAPER PATTERN

Answer any Two Questions out of 3 (2 X 40=80 Marks)

Record note Book=20Marks

Sl. No.	Title	Marks
1	AIM and Procedure	10
2	Program writing	10
3	Program Execution	10
4	Output and result	10
	Total	40 Marks

FIRST YEAR – SEMESTER - II

CORE – III ADVANCED FINANCIAL ACCOUNTING

COMMON TO B.COM A&F, B.COM G, B.COM C.A.

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				5	5	40	60	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 – Meaning and Features – Instalment Purchase system –Difference between Hire Purchase System and Instalment Purchase system – Accounting Treatment for High Value Goods under Hire Purchase System – Calculation of Interest–Default & Repossession (AS19).								15
II	Branch Accounts: Meaning – Need – Types – Features – Accounting Treatment of Dependent Branches – Debtors System – Stock & Debtors System – Goods Invoiced at Cost and Invoice Price (AS 17) (Excluding Independent and Foreign Branches). (Simple Problems) Departmental Accounts: Meaning – Allocation of Expenses – Inter Departmental Transfers at Cost and Invoice Price. (Simple Problems)								15
III	Partnership Accounts – Limited Liability Partnership (LLP) (Theory only) — Admission of a Partner – Adjustment in Profit Sharing Ratio – Methods of Valuation of Goodwill – Treatment of Goodwill (AS10) - Adjustment for revaluation of assets and liabilities – Adjustment for Capitals upon Admission of a New Partner.								15
IV	Retirement and Death of a Partner – Meaning – Profit Sharing Ratio – Difference between Sacrificing Ratio and Gaining Ratio – Adjustment for revaluation of assets and liabilities – Payment to the Retiring Partner – Modes of payment under Death of a Partner (Theory only) - Treatment of Goodwill on Retirement/Death of a Partner – Ascertainment of Deceased Partner’s Share of profit (Excluding Joint Life Policy)..								15
V	Dissolution of a Firm – Accounting Treatment for Dissolution - Insolvency of a Partner – Garner Vs Murray – Insolvency of one and all partners – Piecemeal Distribution – Proportionate Capital method and Maximum Loss Method Accounting Standards: Meaning – Importance – Applicability – Introduction to IND AS and IFRS – Adoption and Convergence of IND AS and IFRS – IFRS vs US GAAP (Theory Only).								15
TOTAL								75	
THEORY 25% & PROBLEMS 75%									

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**

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	2	1	3	2	2	1	1
CO2	3	3	3	2	2	3	2	3	2	2
CO3	3	3	3	2	2	3	2	3	2	2
CO4	3	3	3	2	2	3	2	3	3	2
CO5	2	3	2	3	3	2	2	2	3	3
TOTAL	14	14	13	11	10	14	10	13	11	10
AVERAGE	2.8	2.8	2.6	2.2	2	2.8	2	2.6	2.2	2

3 – Strong, 2- Medium, 1- Low

Section	Theory/ Problem	Unit-I	Unit-II	Unit-III	Unit-IV	Unit-V	From any Unit	TOTAL
Section – A (2 marks) Answer any 10 out of 12	Theory	1	1	1	1	1	-	12
	Problem	1	1	1	1	1	2	
Section –B (7 marks) Answer any 5 out of 8	Theory	-	-	-	-	-	3	8
	Problem	1	1	1	1	1	-	
Section –C (15 marks) Answer any 3 out of 5	Theory	-	-	-	-	1	-	5
	Problem	1	1	1	1	-	-	
Total		4	4	4	4	4	5	25

FIRST YEAR – SEMESTER – II**CORE – IV: BUSINESS AND COMMERCIAL LAWS****COMMON TO B.COM A&F, B.COM ISM, B.COM C.A.**

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	5				5	5	40	60	100
Learning Objectives									
LO1	To understand the nature, objectives and essentials of business contracts.								
LO2	To gain knowledge on performance and discharge of contracts.								
LO3	To familiarize students with contracts of indemnity and guarantee.								
LO4	To understand the legal provisions relating to bailment and pledge.								
LO5	To develop knowledge on sale of goods and emerging commercial practices.								
Prerequisites: Should have studied Commerce in XII Std.									
Unit	Contents								No. of Hours
I	Fundamentals of Contract Law Indian Contract Act, 1872 – Meaning and Essentials of Valid Contract – Classification of Contracts – Offer and Acceptance – Consideration – Capacity to Contract – Free Consent – Legality of Object – Contingent and Void Contracts – E-Contracts and Digital Agreements								15
II	Performance and Discharge of Contracts Meaning of Performance – Offer to Perform – Joint Liabilities and Rights – Time and Place of Performance – Reciprocal Promises – Assignment of Contracts – Breach of Contract and Remedies – Termination and Discharge of Contract – Quasi Contracts – Online Contractual Transactions								15
III	Contract of Indemnity and Guarantee Meaning and Features of Indemnity and Guarantee – Rights and Liabilities of Surety – Kinds of Guarantee – Discharge of Surety – Banker and Customer Relationship – Digital Banking Guarantees and E-Surety Concepts								15
IV	Bailment and Pledge Bailment – Meaning – Essentials – Classification – Rights and Duties of Bailor and Bailee – Pledge – Meaning – Essentials of Valid Pledge – Rights and Duties of Pawner and Pawnee – Pledge and Lien – Warehouse Receipts and E-Pledge System								15
V	Sale of Goods and Modern Commercial Practices Sale of Goods Act, 1930 – Meaning and Essentials of Contract of Sale – Conditions and Warranties – Transfer of Property – Sale by Non-Owners – Rights and Duties of Buyer and Seller – Rights of an Unpaid Seller – Contracts involving Sea Routes – Consumer Protection in E-Commerce and Digital Market Transactions								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**

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	2	2	3	2	2	1	1
CO2	3	3	3	2	2	3	2	3	2	2
CO3	3	3	3	2	2	3	2	3	2	2
CO4	3	3	3	2	2	3	2	3	3	2
CO5	2	3	2	3	2	2	2	2	3	3
TOTAL	14	14	13	11	10	14	10	13	11	10
AVERAGE	2.8	2.8	2.6	2.2	2	2.8	2	2.6	2.2	2

3 – Strong, 2- Medium, 1- Low

QUESTION PAPER PATTERN

Section	Unit-I	Unit-II	Unit-III	Unit-IV	Unit-V	From any unit	TOTAL
	Theory	Theory	Theory	Theory	Theory	Theory	
Section - A (2 marks) Answer any 10 out of 12	2	2	2	2	2	2	12
Section -B (7 marks) Answer any 5 out of 8	1	1	1	1	1	3	08
Section –C (15 marks) Answer any 3 out of 5	1	1	1	1	1	-	05
Total	4	4	4	4	4	5	25

ELECTIVE - II: PROGRAMMING IN C++

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	3				2	3	40	60	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.								
LO3	To understand the concept of Overloading the operators								
LO4	To understand the concept of Function overriding								
LO5	To understand the concept of Exception Handling.								
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								6
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								6
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								6
IV	Function overriding - Pure virtual function – Abstract base class. Templates: Function templates – Overloading a function template – Class templates.								6
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.								6
	Total								30

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 Stroustrup, <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

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	2	2	3	2	2	1	1
CO2	3	3	3	2	2	3	2	3	2	2
CO3	3	3	3	2	2	3	2	3	2	2
CO4	3	3	3	2	2	3	2	3	3	2
CO5	2	3	2	3	2	2	2	2	3	3
TOTAL	14	14	13	11	10	14	10	13	11	10
AVERAGE	2.8	2.8	2.6	2.2	2	2.8	2	2.6	2.2	2

3 – Strong, 2- Medium, 1- Low

QUESTION PAPER PATTERN

Section	Unit-I	Unit-II	Unit-III	Unit-IV	Unit-V	From any unit	TOTAL
	Theory	Theory	Theory	Theory	Theory	Theory	
Section - A (2 marks) Answer any 10 out of 12	2	2	2	2	2	2	12
Section -B (7 marks) Answer any 5 out of 8	1	1	1	1	1	3	08
Section –C (15 marks) Answer any 3 out of 5	1	1	1	1	1	-	05
Total	4	4	4	4	4	5	25

SECOND YEAR – SEMESTER – II
ELECTIVE - III: PROGRAMMING IN JAVA

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	3				2	3	40	60	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 Packages, and Exception Handling								
LO4	To understand the concept Multithreaded Programming.								
LO5	To understand the concept of Framework.								
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								9
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								9
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 -								9
IV	Multithreaded Programming: Thread Class - Runnable interface – Synchronization – Using synchronized methods – Using synchronized statement - Interthread Communication – Deadlock.								9
V	Adapter classes - Inner classes -Java Util Package / Collections Framework: Collection & Iterator Interface- Enumeration- List and ArrayList- Vector- Comparator								9
	TOTAL								45

Course Outcomes	
CO1	Understand the basic Object-oriented concepts. Implement the basic constructs of Core Java
CO2	Implement inheritance, packages, interfaces and exception handling of Core Java.
CO3	Implement multi-threading and I/O Streams of Core Java
Textbooks	
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.	

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

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	2	2	3	2	2	1	1
CO2	3	3	3	3	2	3	2	3	2	2
CO3	3	3	3	3	2	3	2	3	2	2
CO4	2	3	3	3	2	3	2	3	3	2
CO5	2	3	2	2	2	2	2	2	3	3
TOTAL	12	14	13	13	10	14	10	13	11	10
AVERAGE	2.4	2.8	2.6	2.6	2	2.8	2	2.6	2.2	2

3 – Strong, 2- Medium, 1- Low

QUESTION PAPER PATTERN

Section	Unit-I	Unit-II	Unit-III	Unit-IV	Unit-V	From any unit	TOTAL
	Theory	Theory	Theory	Theory	Theory	Theory	
Section - A (2 marks) Answer any 10 out of 12	2	2	2	2	2	2	12
Section -B (7 marks) Answer any 5 out of 8	1	1	1	1	1	3	08
Section –C (15 marks) Answer any 3 out of 5	1	1	1	1	1	-	05
Total	4	4	4	4	4	5	25

FIRST YEAR – SEMESTER – II
Based on Elective-II Programming in C++ Lab

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
			3		2	3	40	60	100
Learning Objectives: (for teachers: what they have to do in the class/lab/field) • 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	
1.	Write a class to represent a complex number which has member functions to do the following a. Set and show the value of the complex number a. Add, subtract and multiply two complex numbers a. Multiplying the complex number with a scalar value
2.	Write a Point class that represents a 2-d point in a plane. Write member functions to a. Set and show the value of a point a. Find the distance between two points a. Check whether two points are equal or not
4.	Design and implement a class to represent a Solid object. a. Apart from data members to represent dimensions, use a data member to specify the type of solid. a. Use functions to calculate volume and surface area for different solids.
5.	Design a class representing time in hh:mm:ss. Write functions to a. Set and show the time a. Find the difference between two time objects a. Adding a given duration to a time a. Conversion of the time object to seconds
6.	Design a 3x3 matrix class and demonstrate the following: a. Addition and multiplication of two matrices using operator overloading a. Maintaining a count of the number of matrix object created
7.	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: a. Copy Constructor a. Concatenate two strings a. Find the length of the string

a. Reversing a string a. Comparing two strings
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: a. Copy Constructor a. Destructor a. Concatenate two strings a. Find the length of the string a. Reversing a string a. 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

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.

MAPPING WITH PROGRAMME OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	2	2	3	2	2	1	1
CO2	3	3	3	3	2	3	2	3	2	2
CO3	3	3	3	3	2	3	2	3	2	2
CO4	2	3	3	3	2	3	2	3	3	2
CO5	2	3	2	2	2	2	2	2	3	3
TOTAL	12	14	13	13	10	14	10	13	11	10
AVERAGE	2.4	2.8	2.6	2.6	2	2.8	2	2.6	2.2	2

QUESTION PAPER PATTERN

Answer any Two Questions out of 3 (2 X 40=80 Marks)

Record note Book=20Marks

Sl. No.	Title	Marks
1	AIM and Procedure	10
2	Program writing	10
3	Program Execution	10
4	Output and result	10
	Total	40 Marks

FIRST YEAR – SEMESTER – II
Based on Elective II Java Programming Lab

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
			3		2	3	40	60	100
Learning Objectives: (for teachers: what they have to do in the class/lab/field) - 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
- Write a Java program that prompts the user for an integer and then prints out all the prime numbers up to that Integer? - Write a Java program to multiply two given matrices. - Write a Java program that displays the number of characters, lines and words in a text? - Generate random numbers between two given limits using Random class and print messages according to the range of the value generated. - Write a program to do String Manipulation using Character Array and perform the following string operations: - String length - Finding a character at a particular position - Concatenating two strings - Write a program to perform the following string operations using String class: - String Concatenation - Search a substring - To extract substring from given string - Write a program to perform string operations using StringBuffer class: - Length of a string - Reverse a string - Delete a substring from the given string - 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	

MAPPING WITH PROGRAMME OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	2	2	3	2	2	1	1
CO2	3	3	3	3	2	3	2	3	2	2
CO3	3	3	2	3	2	3	2	3	2	2
CO4	2	3	2	3	2	3	2	3	3	2
CO5	2	3	3	2	2	2	2	2	3	3
TOTAL	12	14	12	13	10	14	10	13	11	10
AVERAGE	2.4	2.8	2.4	2.6	2	2.8	2	2.6	2.2	2

3 - Strong, 2 - Medium , 1- Low

QUESTION PAPER PATTERN

Answer any Two Questions out of 3 (2 X 40=80 Marks)

Record note Book=20Marks

Sl. No.	Title	Marks
1	AIM and Procedure	10
2	Program writing	10
3	Program Execution	10
4	Output and result	10
	Total	40 Marks

(Common to B.Com-AF, CA & G)

Subject Code	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
	2				2	2	40	60	100
Unit	Contents								No. of Hours
Unit I	Introduction to Interview Skills: Definition – meaning – concept of interview – Purpose – Objectives of interview – Characteristic features of job interviews.								6 Hours
Unit II	Types of Interview: Traditional one-on-one job interview – Panel interview – Behavioral interview – Group interview – Phone Interview – Preliminary Interview – Patterned Interview – Depth Interview – Stress Interview – Exit Interview – Interview through tele and video conferencing.								6 Hours
Unit III	Interviews: Techniques and Strategies: Preparing for the Interview Process – Before the interview – During the interview – After the interview – Tips to ace an interview – Commonly asked questions in interview – Do's and Don'ts of interview – Reasons for rejections.								6 Hours
Unit IV	Preparing Biodata/CV/Resume: Essential characteristics of a job Application – Difference between Biodata – CV – Resume – Covering letter – Tips to draft an application.								6 Hours
Unit V	Leveraging Employability Skills: Personality Development – Organizational skills – Time Management – Stress Management – Effective Communication Skills – Reasoning Ability – Verbal Ability – Group Discussion – Technical skills – Presentation skills.								6 Ho
	Total								30
	Reference Books								
1	Higgins, Jessica JD (2018)10 Skills for Effective Business Communication: Practical Strategies from the World's Greatest Leaders.								
2	Nicholas, Sonji (2023) Interviewing: Preparation, Types, Techniques, and Questions, Pressbooks.								
3	Storey, James (2016) The Art of The Interview: The Perfect Answers to Every Interview Question								
	Recommended Text Books								
1	Monipally, Matthukutty M. (2017) Business Communication: From Principles to Practice								
2	Peter, Francis. (2012) Soft Skills and Professional Communication. New Delhi: Tata McGraw Hill.								
Web Links									
1.	https://careermobilityoffice.cs.ny.gov/cmo/documents/Resume%20&%20Interviewing								
2.	https://edu.gcfglobal.org/en/interviewingskills/interview-etiquette/1/								
3.	https://findjobhub.com/en/types-of-interviews								
4.	https://egyankosh.ac.in/bitstream/123456789/23411/1/Unit-2.pdf								
5.	https://bharatskills.gov.in/pdf/E_Books/CTS/ES/English/ES_Part_1_62%20hour_English.pdf								
6.	https://bharatskills.gov.in/pdf/E_Books/CTS/ES/English/ES_Part2_58hour_English.pdf								

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

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	2	2	3	2	2	1	1
CO2	3	3	3	3	2	3	2	3	2	2
CO3	3	3	2	3	2	3	2	3	2	2
CO4	2	3	2	3	2	3	2	3	3	2
CO5	2	3	3	2	2	2	2	2	3	3
TOTAL	12	14	12	13	10	14	10	13	11	10
AVERAGE	2.4	2.8	2.4	2.6	2	2.8	2	2.6	2.2	2

3 – Strong, 2- Medium, 1- Low

QUESTION PAPER PATTERN

Section	Unit-I	Unit-II	Unit-III	Unit-IV	Unit-V	From any unit	TOTAL
	Theory	Theory	Theory	Theory	Theory	Theory	
Section - A (2 marks) Answer any 10 out of 12	2	2	2	2	2	2	12
Section -B (7 marks) Answer any 5 out of 8	1	1	1	1	1	3	08
Section –C (15 marks) Answer any 3 out of 5	1	1	1	1	1	-	05
Total	4	4	4	4	4	5	25

SKILL ENHANCEMENT COURSE III-Accounting using Excel Practical

Category	L	T	P	S	Credits	Inst. Hours	Marks		
							CIA	External	Total
Skill Enhance Course I			2		2	2	40	60	100
Learning Objectives									
LO1	To develop practical skills in preparing accounting records, including journals, ledgers, trial balances, and financial statements using Excel.								
LO2	To enable students to apply Excel formulas, functions, charts, and data analysis tools for accounting and business decision-making.								
LO3	To train students in creating automated accounting worksheets using cell references, functions, and templates.								
LO4	To enhance students' efficiency in organizing, analyzing, and presenting financial information using Excel.								
LO5	To prepare students for industry requirements by developing spreadsheet-based accounting and reporting skills.								
Unit	Contents								No. of Hours
I	Using Financial Functions (Part 1) ACCRINT function - Returns the accrued interest for a security that pays periodic interest ACCRINTM function - Returns the accrued interest for a security that pays interest at maturity AMORDEGRC function - Returns the depreciation for each accounting period by using a depreciation coefficient AMORLINC function - Returns the depreciation for each accounting period COUPDAYBS function - Returns the number of days from the beginning of the coupon period to the settlement date COUPDAYS function - Returns the number of days in the coupon period that contains the settlement date COUPDAYSNC function - Returns the number of days from the settlement date to the next coupon date COUPNCD function - Returns the next coupon date after the settlement date COUPNUM function - Returns the number of coupons payable between the settlement date and maturity date COUPPCD function - Returns the previous coupon date before the settlement date								6

	CUMIPMT function - Returns the cumulative interest paid between two periods CUMPRINC function - Returns the cumulative principal paid on a loan between two periods.	
II	Using Financial Functions (Part 2) DB function - Returns the depreciation of an asset for a specified period by using the fixed-declining balance method DDB function - Returns the depreciation of an asset for a specified period by using the double-declining balance method or some other method that you specify DISC function - Returns the discount rate for a security DOLLARDE function - Converts a dollar price, expressed as a fraction, into a dollar price, expressed as a decimal number DOLLARFR function - Converts a dollar price, expressed as a decimal number, into a dollar price, expressed as a fraction DURATION function - Returns the annual duration of a security with periodic interest payments EFFECT function - Returns the effective annual interest rate FV function - Returns the future value of an investment FVSCHEDULE function - Returns the future value of an initial principal after applying a series of compound interest rates	6
III	Using Financial Functions (Part 3) INTRATE function - Returns the interest rate for a fully invested security IPMT function - Returns the interest payment for an investment for a given period IRR function - Returns the internal rate of return for a series of cash flows ISPMT function - Calculates the interest paid during a specific period of an investment MDURATION function - Returns the Macaulay modified duration for a security with an assumed par value of \$100 MIRR function - Returns the internal rate of return where positive and negative cash flows are financed at different rates NOMINAL function - Returns the annual nominal interest rate NPER function - Returns the number of periods for an investment NPV function - Returns the net present value of an investment based on a series of periodic cash flows and a discount rate ODDFPRICE function - Returns the price per \$100 face value of a security with an odd first period ODDFYIELD function - Returns the yield of a security with an odd first period ODDLPRICE function - Returns the price per \$100 face value of a security with an odd last period ODDLYIELD function - Returns the yield of a security with an odd last period	6
IV	Using Financial Functions (Part 4) PDURATION function (Excel 2013) - Returns the number of periods required by an investment to reach a specified value PMT function - Returns the periodic payment for an annuity PPMT function - Returns the payment on the principal for an investment for a given period PRICE function - Returns the price per \$100 face value of a security that pays periodic interest	6

	PRICEDISC function - Returns the price per \$100 face value of a discounted security PRICEMAT function - Returns the price per \$100 face value of a security that pays interest at maturity PV function - Returns the present value of an investment RATE function - Returns the interest rate per period of an annuity RECEIVED function - Returns the amount received at maturity for a fully invested security RRI function (Excel 2013) - Returns an equivalent interest rate for the growth of an investment	
V	Using Financial Functions (Part 5) SLN function - Returns the straight-line depreciation of an asset for one period SYD function - Returns the sum-of-years' digits depreciation of an asset for a specified period TBILLEQ function - Returns the bond-equivalent yield for a Treasury bill TBILLPRICE function - Returns the price per \$100 face value for a Treasury bill TBILLYIELD function - Returns the yield for a Treasury bill VDB function - Returns the depreciation of an asset for a specified or partial period by using a declining balance method XIRR function - Returns the internal rate of return for a schedule of cash flows that is not necessarily periodic XNPV function - Returns the net present value for a schedule of cash flows that is not necessarily periodic YIELD function - Returns the yield on a security that pays periodic interest YIELDDISC function - Returns the annual yield for a discounted security; for example, a Treasury bill YIELDMAT function - Returns the annual yield of a security that pays interest at maturity	6
	TOTAL	30
CO	Course Outcomes	
CO1	Demonstrate proficiency in using Microsoft Excel for accounting data entry, formatting, and worksheet management.	
CO2	Prepare accounting records such as journals, ledgers, trial balances, and financial statements using Excel.	
CO3	Apply Excel formulas and functions (e.g., SUM, IF, VLOOKUP/XLOOKUP, COUNTIF, PMT) to perform accounting calculations and automate financial reports.	
CO4	Analyze and summarize accounting data using sorting, filtering, charts, PivotTables, and other data analysis tools to support business decision-making.	
CO5	Design and maintain spreadsheet-based accounting templates for budgeting, payroll, inventory, and financial reporting with accuracy and efficiency.	
	Textbooks	
1	Conrad Carlberg(2011), "Excel for Accountants", Second Edition, CPA911 PUBLISHING.	
2	George J. Wright(2023),"EXCEL 2023: The Beginners Guide to Master"	

Reference Books	
1	L. Murphy Smith, Lawrence C. Smith, and Katherine T. Smith. 2002. "Microsoft Excel for Accounting: Managerial and Cost (1st. ed.)". Prentice Hall Professional Technical Reference.
2	Lalwani, L. (2019). Excel 2019 All-in-One: Master the New Features of Excel 2019 /Office 365. India: BPB Publications.
Web Resources	
1	Udemy : https://www.udemy.com/course/financial-accounting-in-excel-new-business/
2	https://www.youtube.com/watch?v=RsDFonVtKGM
3	Ms Excel functions: https://youtu.be/ShBTJrdioLo

MAPPING WITH PROGRAMME OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

COs	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	2	2	3	2	2	1	1
CO2	3	3	3	3	2	3	2	3	2	2
CO3	3	3	2	3	2	3	2	3	2	2
CO4	3	3	2	3	2	3	2	3	3	2
CO5	2	3	3	2	2	2	2	2	3	3
TOTAL	13	14	12	13	10	14	10	13	11	10
AVERAGE	2.6	2.8	2.4	2.6	2	2.8	2	2.6	2.2	2

3 - Strong, 2 - Medium , 1- Low

QUESTION PAPER PATTERN

Answer any Two Questions out of 3 (2 X 40=80 Marks)

Record note Book=20Marks

Sl. No.	Title	Marks
1	AIM and Procedure	10
2	Program writing	10
3	Program Execution	10
4	Output and result	10
	Total	40 Marks