

GURU NANAK COLLEGE

(AUTONOMOUS)

Guru Nanak Salai, Velachery, Chennai – 600 042

Re-Accredited at 'A - Grade' by NAAC

(Affiliated to the University of Madras)



BACHELOR OF COMMERCE (COMPUTER APPLICATIONS)

B.Com(CA)

Syllabus

(For the Candidates admitted in 2021 - 22 and thereafter)

VISION

- Transforming life through excellence in **Technical Education** to produce skilled and trained manpower of the highest quality Imbibing traditional cultural values to meet the growing Technological and Socioeconomic needs of our nation and the world at large.

MISSION

- **World class Education:** Excellence in education, grounded in ethics and critical thinking, for improvement of life.
- Serve the public through the promotion and advancement of Technical Education and vocational Training, establish the procedures for setting and maintaining standards and quality of technical education and Government on the strategic development of the sector:
- Upgrade technical courses to meet the world standard through user friendly course curricula
- Promote quality and innovation in technical education and training sector.
- Anticipate and prepare for the changing environment and the future needs in the pursuits of technological advancements.
- Manage the operations and resources to be effective and fiscally responsible.

PROGRAM OUTCOMES

PO 1: Exhibit the elementary knowledge of Business Laws.

PO 2 : Understand the Economic, Business Environment in the basic tools of Business Analysis.

PO 3 : Perform various skills of Office Management.

PO 4: Acquire professional education and business ethics.

PO 5: Develop Basic Computer Technology. Expertise in handling Computer based problem solving techniques.

PROGRAMME SPECIFIC OUTCOMES

PSO 1: Eligible for higher studies such as M.Com, MCA, MBA, ACS, CMA, CA and Employable in Educational institutions and Banking sectors.

PSO 2: Embark on new venture and initiatives with critical thinking and desire for more continuous learning focusing of life skills.

COURSE STRUCTURE
BACHELOR OF COMPUTER APPLICATION B.Com (C.A)
B. Com Computer Applications

Details of Course Structure

Sem	Part I	Part II	Part III			Part IV					Part V	
	Lang	Eng	Core	Elective	Allied	NME/ Basic Tamil/ Adv. Tamil	Soft Skill	Skill Based Elective	EVS	Value Education	Extension Service	Internship
I	1	1	1+1		1	1		1				
II	1	1	1+1		1	1		1				
III			2+2		1			1				
IV			2+2		1			1	1			
V			2+2	1						1		
VI			2+1	2							1	1
Total No. of Papers	2	2	19	3	4	2	0	4	1	1	1	1
Credit	3	3	4	5	5	2		2	2	2	1	2
Total Credits	6	6	76	15	20	4	0	8	2	2	1	2
Total Credits											142	

B.Com. (Computer Applications)
COURSE STRUCTURE 2021-24Batch

Sem.	Part	Course Component	Subject Name	Subject Code	Credits	Hours	Internal	External	Total
I	I	Language	Language – I	19UTAM121	3	6	50	50	100
	II	English	English- I	21UENG221	3	4	50	50	100
	III	Core I	Practical - Office Automation Package Lab	21UCCA302P	4	4	50	50	100
		Core II	Financial Accounting - I	21UCCA301	4	6	50	50	100
		Allied I	Business Mathematics	21UMAT333	5	6	50	50	100
	IV	1. NME/ Basic/ Advance Tamil	Basic of Retail Marketing	21UNME401B	2	2	50	50	100
		2. Soft Skill I	Soft Skill I –Introduction to Study Skills	19UGSL401	2	2	50	50	100
CREDIT TOTAL = 23									
II	I	Language	Language – II		3	6	50	50	100
	II	English	English- II		3	4	50	50	100
	III	Core III	Financial Accounting – II Practical -Tally Lab		4	6	50	50	100
		Core IV	Fundamentals of Computers and Information Technology		4	5	50	50	100
		Allied II	Indian Economy		5	5	50	50	100
	IV	1. NME/ Basic /Advance Tamil	Practical E-Commerce Lab		2	2	50	50	100
		2. Soft Skill II	Soft Skill II –Life Skills		2	2	50	50	100
CREDIT TOTAL = 23									
III	III	Core V	Corporate Accounting - I		4	6	50	50	100
		Core VI	Principles of Management		4	6	50	50	100
		Core VII	Programming in C		4	6	50	50	100
		Core VIII	Practical - Programming in C Lab		4	4	50	50	100
		Allied III	Business Statistics & Operations Research		5	6	50	50	100
	IV	Soft Skill III	Job- Oriented Skills		2	2		100	100
CREDIT TOTAL = 23									

Sem.	Part	Course	Title	Subject Code	Credits	Hours	Internal	External	Total
IV	III	Core IX	Corporate Accounting - II		4	6	50	50	100
		Core X	Business Laws		4	6	50	50	100
		Core XI	Programming in C++		4	6	50	50	100
		Core XII	Practical - Programming in C++ Lab		4	4	50	50	100
		Allied IV	Marketing Management		5	6	50	50	100
	IV	Soft Skill IV	Soft Skill IV – Quantitative Aptitude		2	2		100	100
		EVS	Environmental Studies		2			100	100
CREDIT TOTAL = 25									
V	III	Core XIII	Income Law and Practice - I		4	6	50	50	100
		Core XIV	Cost and Management Accounting		4	6	50	50	100
		Core XV	Database Management Systems		4	6	50	50	100
		Core XVI	Practical - RDBMS using VB. NET Lab		4	5	50	50	100
	Elective – I	Entrepreneurial Development / Production & Supply Chain Management/ Business Information System		5	6	50	50	100	
IV	Value Education	Value Education		2	1		100	100	
		Internship	Internship		2				
CREDIT TOTAL = 25									
VI	III	Core XVII	Income Law and Practice - II		4	6	50	50	100
		Core XVIII	Human Resource Management		4	6	50	50	100
		Core XIX	Software Engineering		4	6	50	50	100
		Elective - II	Web Technology using PHP Practical – Web Technology using PHP Lab		5	6	50	50	100
	Elective - III	Mini Project		5	6	50	50	100	
V	Extension Activity	Participation in NSS/NCC/ROTRACT etc.		1		-	-	-	
CREDIT TOTAL = 23									
OVERALL CREDIT TOTAL = 142									

Semester I

CORE I
PAPER TITLE: PRACTICAL – OFFICE AUTOMATION PACKAGE LAB

SUBJECT CODE : 21UCCA302P	PRACTICAL	MARKS : 100
SEMESTER: I	CREDITS: 4	NO. OF HOURS : 60

COURSE OBJECTIVES:

- This course gives an exposure to Various Software of Office Package

MS -WORD

1. Text Manipulations.
2. Usage of Numbering, Bullets, Footer and Headers.
3. Usage of Spell check, and Find & Replace.
4. Text Formatting.
5. Picture insertion and alignment.
6. Creation of documents, using templates.
7. Creation templates
8. Mail Merge Concepts
9. Copying Text & Pictures from Excel

MS-EXCEL

10. Cell Editing
11. Usage of Formulae and Built-in Functions
12. File Manipulations
13. Data Sorting (both number and alphabets)
14. Worksheet Preparation
15. Drawing Graphs
16. Usage of Auto Formatting

POWER POINT

17. Inserting Clip arts and Pictures
18. Frame movements of the above
19. Insertion of new slides
20. Preparation of Organisation Charts
21. Presentation using Wizards
22. Usage of design templates

CORE II
PAPER TITLE: FINANCIAL ACCOUNTING – I

SUBJECT CODE : 21UCCA301	THEORY	MARKS : 100
SEMESTER: I	CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVES:

- 1.To develop the ability in understanding the basic accounting concepts and principles of the accounting process.
- 2.To familiarize the students with methods of preparing final accounts of sole proprietorship concern.

Unit -I **(18 Hours)**

Basic Accounting concepts – Accounting process – Journals, Ledger and Preparation of Trial balance.

Unit-II **(18 Hours)**

Final Accounts of sole traders – Common adjustments in the preparation of final accounts – Adjusting and closing entries.

Unit-III **(18 Hours)**

Depreciation – Meaning, causes, types – straight line method and written down value method (Change in method excluded)

Unit-IV **(18 Hours)**

Insurance claims, claims of stock destroyed including Average Clause.

Unit-V **(18 Hours)**

Accounts from incomplete records (Single Entry) - Meaning, Features, Defects, Differences between Single Entry and Double Entry System – Statement of Affairs method – Conversation method.

Proportion of theory and problems: 20% and 80%

REFERENCE BOOKS:

1. R. L. Gupta & M. Radhaswamy – Advanced Accountancy, Sultan Chand , New Delhi.
2. R.L Gupta & V.K. Gupta – Financial Accounting – Sultan Chand Publishing, New Delhi.
3. T.S.Reddy & A. Murthy, Financial Accounting, Margum Publications, Chennai.
4. Dr.S.Manikandan ,Financial Accounting, Scitech Publications, Chennai.

<https://books.google.co.in/books?isbn=8126909935>

<https://books.google.co.in/books?isbn=9966254455>

<https://books.google.co.in/books?isbn=0470635290>

CORE II - FINANCIAL ACCOUNTING – I
GUIDELINES TO THE QUESTION PAPER SETTERS

Question Paper Pattern

Section	Question Component	Numbers	Marks	Total
A	Answer any 10 out of 12 questions (each in 50 words)	1-12	3	30
B	Answer any 5 out of 7 questions (each in 300 words)	13-19	6	30
C	Answer any 2 out of 4 questions (each in 1200 words)	20-23	20	40
TOTAL MARKS				100

Break up of questions for theory and problem

UNITS	SECTION A		SECTION B		SECTION C	
	THEORY	PROBLEM	THEORY	PROBLEM	THEORY	PROBLEM
I	2	1	1	1	-	1
II	1	1	-	1	-	1
III	1	1	-	1	-	1
IV	2	1	1	1	-	-
V	1	1	-	1	-	1
TOTAL	7	5	2	5	-	4
SECTION A - 12			SECTION B - 7		SECTION C - 4	

**COMPONENT : ALLIED – I
BUSINESS MATHEMATICS**

SUBJECT CODE : 21UMAT333	THEORY	MARKS : 100
SEMESTER: I	CREDITS: 5	NO. OF HOURS : 90

- Unit – I** (18 Hours)
Theory of Sets-Set Theory – Definition, Elements and Types of Sets, Operations on Sets, Relations and Functions of Sets
- Unit – II** (18 Hours)
Binominal Theorem, Exponential and Logarithmic Series.
- Unit – III** (18 Hours)
Limits and Continuity. Basic concepts of Differential Calculus(excluding trigonometric functions)
- Unit – IV** (18 Hours)
Algebra-Ratio, Proportion, Permutation and Combination
- Unit – V** (18 Hours)
Interest and Annuity – Banker’s Discount – Binary Number System - Matrices: Meaning and operations-matrix inversion-solution to linear equations.

REFERENCE BOOKS:

1. Business Mathematics – P.R.Vittal
2. Business Mathematics – D.C. Sancheti and V.K. Kapoor
3. Business Mathematics – B.M. Agarwal
4. Business Mathematics – R.S. Soni

Note: No Theory Questions to be asked

WEBSITES:

1. www.freetechbooks.com/mathematics-f38.html
2. www.e-booksdirectory.com
3. www.freebookcentre.net/SpecialCat/Free-Mathematics-Books-Download.html

**COMPONENT : ALLIED – I
BUSINESS MATHEMATICS**

Question Paper Pattern:

Section	Question Component	Numbers	Marks	Total
Section A	Definition / Principles / formulae Answer any 10 out of 12 questions	1 – 12	3	30
Section A	Short Answer Answer any 5 out of 7 questions	13 – 19	6	20
Section A	Essay Answer any 4 out of 6 questions	20 – 25	10	40
TOTAL				100

Distribution of Questions:

Sections	Units	No. of Questions	
		Theory	Problem
Section A	Unit – 1	1	1
	Unit – 2	-	2
	Unit – 3	-	2
	Unit – 4	-	2
	Unit – 5	1	3
Section B	Unit – 1	1	1
	Unit – 2	-	1
	Unit – 3	-	2
	Unit – 4	-	1
	Unit – 5	-	1
Section C	Unit – 1	-	1
	Unit – 2	-	1
	Unit – 3	-	1
	Unit – 4	-	1
	Unit – 5	-	2

NON MAJOR ELECTIVE
PAPER TITLE: BASICS OF RETAIL MARKETING

SUBJECT CODE : 21UNME401B	THEORY	MARKS : 100
SEMESTER: I	CREDITS: 2	NO. OF HOURS : 30

(NON – MAJOR)

COURSE OBJECTIVES:

1. To expose the students to various trend in retail business.
2. To provide the basic understanding to broad set of specialized activities and techniques in managerial retail business.
3. To motivate the students to take up retailing business as a carrier.

Unit – I **(6 Hours)**

Retailing-Definition-Retail marketing – Growth of organized retailing in India –Importance of Retailing.

Unit- II **(6 Hours)**

Functions of Retailing – Characteristics of Retailing –Types of Retailing – Store Retailing – Non store Retailing.

Unit – III **(6 Hours)**

Retail Location Factors – Branding in Retailing – Private Labelling – Franchising concept.

Unit – IV **(6 Hours)**

Communication tools used in retailing – sales promotion, E- Retailing – Window Display.

Unit – V **(6 Hours)**

Supply Chain Management – Definition – Importance – Role of information technology in Retailing.

REFERENCE BOOKS:

1. Gilbert Pearson , Retail Marketing Education Asia , 2001
2. Vedamani Gibson , Retail Marketing Jaici Publishing House New Delhi– 2000
3. Herman & Evans Retail Management Phi , New Delhi -2001
4. Michael Levy and Barton A Weitz , Retail Management Tata Mc , Graw hill, New Delhi - 2001
5. Dr. L. Natarajan , Retail Marketing , Margham Publication Chennai.

**NON MAJOR ELECTIVE
PAPER TITLE: BASICS OF RETAIL MARKETING**

Question Paper Pattern:

Section	Question Component	Numbers	Marks	Total
A	Essay Answer any 5 out of 10 questions (each in 1200 words)	1-10	20	100

Distribution of Questions:

Section	Units	No. of Questions	
		Theory	Problems
A	Unit – 1	2	
	Unit – 2	2	
	Unit – 3	2	
	Unit – 4	2	
	Unit – 5	2	

SOFT SKILLS : INTRODUCTION TO STUDY SKILLS

SUBJECT CODE : 19UGSL401	THEORY	MARKS : 100
SEMESTER: I	CREDITS: 2	NO. OF HOURS : 30

COURSE OBJECTIVES:

The following are the Course Objectives:

- to help, develop and improve the vocabulary of the learners
- to help the learners develop the skill of inference
- to help the learners to acquire writing skills in English

Use of Dictionary and Dictation

Speech Sounds in English & Right Pronunciation

Stress & Intonation

Vocabulary Building Exercises

Verbal Reasoning

Listening and Reading Comprehension

Paragraph and Essay Writing

REFERENCE BOOKS:

1. Hewings, Martin. 1999. Advanced English Grammar: A Self- study Reference and Practice Book for South Asian Students. Reprint 2003. Cambridge University Press. New Delhi.
2. Lewis Norman.1991. Word Power Made Easy.
3. Mohan, Krishna &Meenakshi Raman. 2000. Effective English Communication. Tata Mc Graw Hill Publishing Company Ltd.
4. Mohan, Krishna &Meera Banerji. 2001. Developing Communication Skills. Macmillan.
5. Syamala. 2002. Effective English Communication for You. Emerald Publishers, Chennai.
6. Harishankar, Bharathi. Ed. Essentials of Language and Communication. University of Madras.
7. Swan, Michael and Catherine Walter. 1990. The Cambridge English Course-2. Cambridge University Press.

Semester II

CORE III
PAPER TITLE: FINANCIAL ACCOUNTING - II

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: II	CREDITS: 4	NO. OF HOURS : 60

COURSE OBJECTIVES:

To impart skills in accounting for various kinds of business transactions.

Unit -I - Hire Purchase System:

(15 Hours)

Meaning & features, legal provisions of Hire Purchase Act, calculation of Interest, Journal entries in the books of Vendee and Vendor, preparation of various ledger, in the books of hire purchaser and seller.

Unit -II - Branch Account:

(15 Hours)

Inland Branches: Dependent branches only and Ascertainment of Profit by Debtors method and Stock and Debtors System.

Unit-III - Departmental Account:

(15 Hours)

Departmental Accounts need, features, Basis for Allocation of Expenses, treatment of Inter - Departmental Transfer at cost or Selling Price-Treatment of Expenses that cannot be allocated – Preparation of departmental profit and loss.

Unit-IV - Reconstitution of Partnership Firms:

(15 Hours)

Admission of a Partner, Retirement and death of a partner including treatment of goodwill.

Proportion of theory and problems: 20% and 80%

REFERENCE BOOKS:

1. R. L. Gupta & M. Radhaswamy – Advanced Accountancy, Sultan Chand , New Delhi.
2. R.L Gupta & V.K. Gupta – Financial Accounting – Sultan Chand Publishing, New Delhi.
3. T.S.Reddy & A. Murthy, Financial Accounting, Margum Publications, Chennai.
4. Dr.S.Manikandan ,Financial Accounting, Scitech Publications, Chennai.

<https://books.google.co.in/books?isbn=8126909935> <https://books.google.co.in/books?isbn=9966254455>
<https://books.google.co.in/books?isbn=0470635290>

CORE IV
PAPER TITLE: PRACTICAL - TALLY LAB

SUBJECT CODE :	PRACTICAL	MARKS : 100
SEMESTER: II	CREDITS: 4	NO. OF HOURS : 30

COURSE OBJECTIVES:

To enable the students to understand the concepts of accounting package.

1. Create a company – Alter – Display & Delete a company
2. Groups: Predefined groups – create new groups – display – Alter & Deleting a group.
3. Ledger: create a ledger – Display – Alter & Delete a ledger
4. Voucher: Meaning – Accounting vouchers - Create user defined voucher – Display – Alter & Deleting voucher.
5. Accounting Ledgers & Voucher Creation
6. Trail Balance
7. Final accounts & Its Adjustment

CORE IV

PAPER TITLE: FUNDAMENTALS OF COMPUTERS AND INFORMATION TECHNOLOGY

SUBJECT CODE :	PRACTICAL	MARKS : 100
SEMESTER: II	CREDITS: 4	NO. OF HOURS : 75

COURSE OBJECTIVES:

- To Read, understand the fundamentals of Computer and Information Technology concepts.

UNIT 1

(15 Hours)

The Computer system-their uses and components-CPU: control & logic unit -Generation of computers-Classification of Computers - PC-Laptop - Memory: Volatile, non-volatile & virtual memory-Types of Bus.

UNIT 2

(15 Hours)

Input devices: Keyboard, mouse, joystick, scanner, light pen, and touch screen -

Output devices: printers, dot-matrix printer, ink-jet printer, laser printer-monitor.

Storage devices: Magnetic tape, Hard disks, CD-ROM, Speakers

UNIT 3

(15 Hours)

Software concepts: Types of software -System software: Operation System and its types, Assembler, Compiler, Interpreter. - Application software: Word processing, Presentation tools, Electronic Spreadsheets Database system, DTP Packages, Graphic packages, Business system.

UNIT 4

(15 Hours)

Principles and Techniques of Programming: Program definition-Program lifestyle. -Flow-Chart: Definition, Symbols, Benefits, Limitations and examples.- Characteristics, Benefits, Drawbacks and Examples of Algorithms.

UNIT 5

(15 Hours)

Databases: Structure of a data table. -Internet features- E-mail

PRESCRIBED BOOKS:

1. C.S.V.Murthy, 2001, Fundamentals of Computers, 1st Edition, Himalaya publishing House.
2. LPeditorial Board, Fundamentals of Computer, 1st Edition, Law Point Publishers.

REFERENCE BOOKS:

1. V.RAJARAMAN, 2002, Fundamentals of Computers, 3rd Edition, Prentice Hall of India.
2. Marilyn W. Meyer and Roberta L. Baber, Computers in your future, 2nd Edition Prentice Hall of India

**COMPONENT: ALLIED - II
INDIAN ECONOMY**

SUBJECT CODE :	Theory	MARKS : 100
SEMESTER: II	CREDITS: 5	NO. OF HOURS : 75

COURSE OBJECTIVES:

1. To enable the students to understand the concepts and theories of Business Economics
2. To enable the students to learn how the economic principles are applied in business decision making process.

Unit – I (15 Hours)

Definition- Nature ,Scope and importance of Business Economics – Role of Business Economist – Positive and Normative Economics.

Unit – II (15 Hours)

Meaning of demand – Distinctions of demand – Law of Demand – Elasticity of demand – Supply concepts.

Unit – III (15 Hours)

Consumer Behaviour Theories- Law of Diminishing Marginal Utility - Equi- Marginal Utility- Indifference Curve- Properties

Unit – IV (15 Hours)

Production – Factors of Production - Production theories - Law of Variable Proportion, Law of Returns to Scale.- Iso Quants

Unit - V (15 Hours)

Pricing – Objectives – Factors influencing pricing – Classification of Pricing – Break Even Analysis.

REFERENCE BOOKS:

1. Business Economics – E. Dharmaraj – Scitech publications
2. S.Shankaran , Business Economics – Margham publications Ch -17
3. A.L. Ahuja , Business Economics – RBSA publishers Jaipur – 03
4. Aryasri and Murthy: Business Economics, Tata Mcgraw Hill.
5. Mithani: Fundamentals of Business Economics, Himalaya.

<https://books.google.co.in/books?isbn=0470021128> <https://books.google.co.in/books?isbn=1451602391>
<https://books.google.com/books?isbn=0333961110>

NON MAJOR ELECTIVE
PAPER TITLE: PRACTICAL - PRACTICAL E-COMMERCE LAB

SUBJECT CODE :	PRACTICAL	MARKS : 100
SEMESTER: II	CREDITS: 2	NO. OF HOURS : 30

COURSE OBJECTIVES:

- Learn how to design, develop and implement ecommerce web applications.
 - Demonstrate how businesses sell products and services on the Web
-
1. Implements basic HTML tags
 2. Implementation of Table tag
 3. Implementation of FRAMES
 4. Design a FORM in HTML(Yahoo registration form)
 5. Validation of FORM using Java Script.
 6. Implementation of CSS(All 4 Types)
 7. Develop a clock using Java Script
 8. DHTML(Layer/DIV)
 9. ASP Implement Response Object
 10. Connectivity to Database through ASP
 11. PROJECT- Develop a E-Commerce Web Site

SECOND SEMESTER: LIFE SKILLS

SUBJECT CODE :	Theory	MARKS : 100
SEMESTER: II	CREDITS: 2	NO. OF HOURS : 30

COURSE OBJECTIVES:

The following are the Course Objectives:

- To build the confidence of learners to face the challenges of a globalized society
- To sensitize learners' ethical, moral and social values in their work environment
- To help them understand how to overcome stress-related problems
- To train the learners to use their time effectively

SWOC Analysis

Etiquette

Stress Management

Time Management

Discussion of Success Stories

- i. Auto-suggestions
- ii. Problem solving
- iii. Decision Making
- iv. Presentation Skills-Oral/PPT

REFERENCE BOOKS:

1. Pease, Allen. 1998. Body Language: How to read other's thoughts by their gestures. Sudha Publications. New Delhi.
2. Powell. In Company. MacMillan
<http://www.essentiallifefskills.net//>

Semester III

CORE V
PAPER TITLE: CORPORATE ACCOUNTING - I

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: III	CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVES:

1. To enable students to understand the accounting treatment relating to issue of shares and underwriting of shares.
2. To understand the procedure for internal reconstruction and capital reduction and valuation of Good will and shares.
3. To familiarize the students with the preparation of financial statement of banking companies

Unit –I **(18 Hours)**

Issue of shares- forfeiture and re-issue of shares. Underwriting of shares-Determination of the liability of underwriters-Complete Underwriting-Partial Underwriting-Firm Underwriting.

Unit-II **(18 Hours)**

Profit prior to incorporation- Liquidation of companies- order of payment- calculation of liquidator's remuneration- Preparation of Liquidators final statement of accounts.

Unit-III **(18 Hours)**

Alteration of share capital-Internal reconstruction and reduction of capital-Valuation of Good will and shares-Methods of Valuation of Goodwill-Average profits method-Super profit method-Capitalization method-Methods of Valuation of shares-Net assets method-Yield method-Fair value method.

Unit-IV **(18 Hours)**

Financial statement of banking companies- Preparation of profit and loss account -Balance sheet.

Unit-V **(18 Hours)**

Accounting for price level changes -Social responsibility accounting-Human resource accounting-Mechanised Accounting (Theory only).

Proportion of theory and problems: 20% and 80%

REFERENCE BOOKS:

1. Corporate Accounting-T.S. Reddy & A.Murthy- Margham publishers.
2. Corporate Accounting-R.L.Gupta&Radhaswamy-Sultan chand &sons.New Delhi.
- 3.Advanced Accounting-M.C.Shukla&T.S.Grewal.
4. Advanced Accounting-S.P.Jain &K.L.Narang.Kalyani publishers.

<https://books.google.co.in/books?isbn=8131754510>

<https://books.google.co.in/books?isbn=8120346270> <https://books.google.co.in/books?isbn=8126908394>

CORE VI
PAPER TITLE: PRINCIPLES OF MANAGEMENT

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: III	CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVES:

1. To enable the students to appreciate the contribution made by management and learn towards the basic principles and functions of management.
2. To provide opportunities to apply the general function of management in day – to day managerial practice.

Unit – I

(18 Hours)

Management: Importance – Definition- Nature and Scope of Management Process – Role and Functions of a Manager – Levels of Management – Evolution of Management thoughts : Scientific Management – F.W.Taylor, Administrative Management – Henry Fayol, The Human Relationship Management School – Hawthorne Experiment .

Unit – II

(18 Hours)

Planning: Nature – Importance – Forms – Types – Steps in Planning – Objectives Policies – Procedures and Methods – Natures and Types of Policies – Decision-making Process of Decision-making – Types of Decision.

Unit- III

(18 Hours)

Organisation: Types of Organisations – Organisation Structure – Span of Control and Committees – Departmentalisation – Informal Organisation.

Unit- IV

(18 Hours)

Authority – Delegation – Decentralisation –Difference between Authority and Power – Responsibility – Recruitment – Sources, Selection, Training – Direction – Nature and purpose.

Unit- V

(18 Hours)

Co-ordination - Need, Type and Techniques and requisites for excellent Co- ordination – Controlling – Meaning and Importance – Control Process.

REFERENCE BOOKS:

1. C.B.Gupta, Management Theory & Practice -Sultan Chand & Sons - New Delhi.
2. L.M.Prasad, Principles & Practice of Management - Sultan Chand & Sons - New Delhi.
3. P.C. Tripathi & P.N Reddy, Principles of Managements - Tata Mc.Graw Hill - New Delhi.
4. Weihrich and Koontz, Management – A Global Perspective.
5. N.Premavathy, Principles of Management - Sri Vishnu Publication - Chennai.

<https://books.google.co.in/books?isbn=0070220883>

<https://books.google.co.in/books?isbn=0754619842>

<https://books.google.co.in/books?isbn=05471484>

CORE VII
PAPER TITLE: PROGRAMMING IN C

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: III	CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVES:

1. This course introduces the basic concepts of C programming
2. This course is designed to expand the knowledge of C programmers by teaching some of the more advanced features of the C language
3. The course material includes many examples. Since an understanding of the topics of this course is a basic need of every student who wants to excel in C programming, the course includes many opportunities for hands-on experience

UNIT I

(18 Hours)

Introduction to computer - Fundamental Character set - Identifier and keywords - data types - constants - Variables - Declarations - Expressions - Statements - Arithmetic, Unary, Relational and logical, Assignment and Conditional Operators - Library functions.

UNIT II

(18 Hours)

Data input output functions - Simple C programs - Flow of control - if, if-else, while, do-while, for loop, Nested control structures - Switch, break and continue, go to statements - Comma operator.

UNIT III

(18 Hours)

Functions –Definition - proto-types - Passing arguments – Recursions- Storage Classes - Automatic, External, Static, Register Variables – Multi-file programs.

UNIT IV

(18 Hours)

Arrays - Defining and Processing - Passing arrays to functions – Multi-dimension arrays - Arrays and String. Structures - User defined data types - Passing structures to functions - Self-referential structures – Unions - Bit wise operations.

UNIT V

(18 Hours)

Pointers-Declarations- Passing pointers to Functions - Operation in Pointers - Pointer and Arrays - Arrays of Pointers - Structures and Pointers – Files- Creating , Processing ,Opening and Closing a data file.

PRESCRIBED BOOKS:

i.E.Balaguruswamy, 1995,Programming in ANSI C, TMH Publishing Company Ltd.

REFERENCE BOOKS:

i.H. Schildt, 2004, The Complete Reference, 4th Edition, TMH

ii Gottfried,B.S, 1996, Programming with C, Second Edition, TMH Pub. Co. Ltd.,
New Delhi .

iii.Kanetkar Y,1999, Let us C, BPB Publications., New Delhi.

iv. Kamthane,2002,Programming with ANSI & Turbo C , First Edition,Pearson
Education , New Delhi

CORE VIII
PAPER TITLE: Practical - PROGRAMMING IN C LAB

SUBJECT CODE :	PRACTICAL	MARKS : 100
SEMESTER: III	CREDITS: 4	NO. OF HOURS : 60

COURSE OBJECTIVES:

- To Read, understand, develop and trace the execution of programs written in C language.
1. Write a program to add, subtract, multiply and divide two numbers using menu driven program.(Arithmetic operation)
 2. Write a program to check if a number is even or odd(if-else)
 3. Write a program to find the largest of three numbers.(using if-else, logical and)
 4. Write a program to find the maximum and minimum of n numbers (using for- statement)
 5. Write a program to check for prime number(do while loop)
 6. Write a program to check for Armstrong number(while loop)
 7. Write a program to accept day number and print the day of the week.(switch)
 8. Write a program for counting the number of vowels, consonants, words, white spaces in a line of text (switch)
 9. Write a program to arrange a set of numbers in ascending order.(1D Array)
 10. Write a program to implement linear search.(1D Array)
 11. Write a program to implement binary search. (1D Array).
 12. Write a program to add two matrices (2D Arrays)
 13. Write a program to check whether a string is a palindrome or not. (String)
 14. Write a program to print Fibonacci series using function.
 15. Write a program to find factorial of a number using recursive function.

**COMPONENT: ALLIED MATHEMATICS - III
BUSINESS STATISTICS & OPERATIONS RESEARCH**

SUBJECT CODE :	PRACTICAL	MARKS : 100
SEMESTER: III	CREDITS: 5	NO. OF HOURS : 90

COURSE OBJECTIVES:

To provide knowledge in statistics methods and applications and to offer expertise in statistics analysis

Unit- I: (18 Hours)

Introduction: Statistics - Definitions; Variables - Quantitative and Qualitative data – Primary and Secondary - Collection of data - Census method - Sampling methods - Precautions while using secondary data.

Unit -II: (18 Hours)

Classification and Presentation of data - Tabulation - Frequency Distribution – Diagrammatic and Graphical representation of data – Bar diagram – Pie Diagram – Frequency Curve - Ogive Curves – Histogram – Polygon – Lorenz Curve.

Unit -III: (18 Hours)

Measures of Central Tendency - Mean, Median and Mode, – Measures of Variation – Range, Quartile Deviation, Standard Deviation, Mean Deviation and Coefficients - their characteristics – uses and limitations.

Unit- IV: (18 Hours)

Basics of Operations Research (OR): Characteristics of O.R - Necessity of O.R in Industry -OR and Decision making - Role of computers in O.R. Linear programming: Formulations and Graphical solution (of 2 variables) canonical & standard terms of Linear programming problem. Algebraic solution: Simplex method.

Unit-V : (18 Hours)

Transportation model – Assignment model- formulation and solution of Assignment model - variations of Assignment problem. Sequencing problem: Processing each of n jobs through m machines - processing n jobs through 2 machines - processing n jobs through 3 machines - processing 2 jobs through m machines - processing n jobs through m machines - travelling salesman problem. Game Theory: Characteristics of games - Criteria of optimality - Dominance property - algebraic and graphical method of solution of solving 2 x 2 games.

Proportion of theory and problems: 20% and 80%

REFERENCE BOOKS:

1. Statistical Methods – S.P. Gupta, Sultan 2000.
2. Introduction to Operations Research – Dr. P.R. Vittal, Margham Publications
3. Statistics - Elhance
4. Operations Research – Hira and Gupta, S. Chand.
5. Operations Research – Handy and A. Taha, Macmillan Publishers.
6. Statistical methods- Dr.S.GuruSwamy

SOFT SKILLS : JOB-ORIENTED SKILLS

SUBJECT CODE :	Theory	MARKS : 100
SEMESTER: III	CREDITS: 2	NO. OF HOURS : 30

COURSE OBJECTIVES:

- To prepare the students to be job-ready.
- To help learners use English Language appropriately to the role or situation.
- To develop confidence in them to face Interviews.
- To train them to prepare their own CV/Resume

Different kinds of Interviews

Letter of Application and CV

Technical Writing - Circulars, Memos, Agenda and Minutes

Group Discussion

Review

i. Books

ii. Films

REFERENCE BOOKS:

1. Harishankar, Bharathi. ed. Essentials of Spoken and Presentation Skills. University of Madras.
2. John, Seely. 1998. The Oxford Guide to writing and speaking. Oxford U P, 1998, Delhi.
3. The Princeton Language Institute and Lanny Laskowski. 2001. 10 days to more confident Public Speaking. Warner Books.
4. <http://jobsearch.about.com/cs/curriculumvitae.html//>
5. <http://www.cvtips.com//>

QUESTION PAPER PATTERN

UG - SOFT SKILLS

TIME – 3 HRS

MAXIMUM MARKS – 50

PART – A (5X2=10)

Answer any FIVE from the questions given below from Q.No.1 to Q.No.7 (5 out of 7)

PART – B (4X5=20)

Answer any FOUR from the questions given below from Q.No.8 to Q.No.13 (4 out of 6)

PART – C (2X10=20)

Answer TWO questions only choosing one each from Q.No.14 &Q.No.15 (Internal Choice)

Semester IV

CORE IX
PAPER TITLE: CORPORATE ACCOUNTING – II

SUBJECT CODE :	PRACTICAL	MARKS : 100
SEMESTER: IV	CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVES:

1. To enable students to understand the accounting treatment relating to amalgamation, absorption and external reconstruction
2. To understand the accounting procedure relating to holding companies and subsidiary companies.
3. To familiarize the students with the preparation of life insurance and general insurance company accounts.

Unit – (18 Hours)

Amalgamation, Absorption and External reconstruction-Computation of purchase consideration- Pooling of interest method-Purchase method-Accounting treatment- Journal entries-Preparation of Balance sheet.

Unit-II (18 Hours)

Consolidated final statement of Holding companies and Subsidiary companies (Intercompany holdings excluded)

Unit-III (18 Hours)

Accounts of life insurance companies-Life insurance revenue account-Balance sheet- Ascertaining correct Life assurance fund-Preparation of valuation of Balance sheet- Determination of amount due to policy holders.

Unit-IV (18 Hours)

Accounts of general insurance companies-Calculation of Reserve for unexpired risk- Preparation of Revenue account –Profit& loss account and Balance sheet.

Unit-V (18 Hours)

Accounting standards-Meaning-Need for Accounting standards-Significance of Accounting standards-Provision of Accounting standards(AS)-1, AS-2,AS-3, AS-6 AS-14 and AS-21

Proportion of theory and problems: 20% and 80%

REFERENCE BOOKS:

1. Corporate Accounting-T.S. Reddy & A.Murthy- Margham publishers.
2. Corporate Accounting-R.L.Gupta&Radhaswamy-Sultan chand &sons.New Delhi.
3. Advanced Accounting-M.C.Shukla&T.S.Grewal
4. Advanced Accounting-S.P.Jain &K.L.Narang.Kalyani publishers.

<https://books.google.co.in/books?isbn=8131754510>

<https://books.google.co.in/books?isbn=8120346270>

<https://books.google.co.in/books?isbn=8126908394>

CORE X

PAPER TITLE: BUSINESS LAWS

SUBJECT CODE :	Theory	MARKS : 100
SEMESTER: IV	CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVES:

To make the students understand the significant provisions of General Contract and Special Contracts.

Unit-I (18 Hours)

Indian Contract Act – Formation – Terms of contract – Forms of Contract – Offer and acceptance – Consideration.

Unit-II (18 Hours)

Persons Incompetent to contract – Free Consent – Agreements with unlawful object – Wagering agreements and Contingent contracts.

Unit-III (18 Hours)

Performance of contract – Discharge – Remedies for breach of contract – Quasi contract.

Unit-IV (18 Hours)

Sale of Goods Act-Formation of contract of sale-Passing of property in goods- Performance of contract of sale.

Unit-V (18 Hours)

Conditions and warranties – Rights of unpaid seller.

REFERENCE BOOKS:

1. Business Laws- N.D. Kapoor , Sultan Chand and Sons
2. Business Laws – M.R. Sreenivasan , Margam Publications
3. Business Laws – M.V. Dhandapani, Sultan Chand ad Sons
4. Mercantile Law – S. Badre Alam and P. Saravanel
5. Business Law – R.S.N. Pillai – S. Chand
6. Mercantile Law – Gogna, S. Chand.

<https://books.google.co.in/books?isbn=0764142402>

<https://books.google.co.in/books?isbn=0748766472>

<https://books.google.co.in/books?isbn=0748766774>

CORE IX
PAPER TITLE: PRACTICAL – PROGRAMMING IN C++

SUBJECT CODE :	Practical	MARKS : 100
SEMESTER: IV	CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVES:

1. This course introduces the basic concepts of C++ programming
2. Acquire an understanding of basic object oriented concepts and the issues involved in effective class design
3. In order to write C++ programs that use object oriented concepts such as information hiding, constructors, destructors, inheritance etc.

UNIT I

(18 hours)

Principles of Object Oriented Programming (OOP): Basic Concepts of OOP, Benefits of OOP, Application of OOP. Tokens, Keywords, Identifiers and Constants, C++ data types, Variables, Operators in C++ : Scope resolution operator, Member de-referencing Operators, Memory Management Operators, Manipulators, Type cast operators, Expressions and Control Structures.

UNIT II

(18 hours)

Class and Objects: Introduction, Specifying a Class, Defining member Functions, C++ Program with Class, Nesting of Member functions, Private member functions, Memory Allocation for Objects, Static Data members, Static Member Functions, Arrays within a Class, Arrays of Objects, Objects as Function Arguments, Friendly Functions, Returning Objects.

Pointers: Declaration and initializing, Manipulation of pointers, pointers Expression and Pointer Arithmetic, Pointer with Arrays, Arrays of Pointers, Pointers to objects, this pointers, Arrays of Pointers to Objects

Constructors and Destructors: Constructors, Parameterized Constructors, Multiple Constructors in a class, Copy constructor, Destructors. Operator overloading Defining Operator Overloading, Overloading Unary Operators, Overloading Binary Operators, Type Conversions.

UNIT III

(18 hours)

Inheritance and Polymorphism:

Introduction, Defining Derived Classes, Single inheritance, Multiple inheritance, Hierarchical inheritance, Multilevel inheritance, Hybrid inheritance, Virtual Base Classes, Polymorphism, static and dynamic binding, Constructor in Derived Classes, Pointers to Derived Classes, Virtual Functions, Pure Virtual Functions.

UNIT IV

(18 hours)

I/O Operations and Files: C++ Stream Classes, Unformatted I/O Operations, Formatted I/O operations, Classes for File Streams, Opening and Closing a File : open() and close() functions, Manipulators of File Pointers : seekg(), seekp(), tellg(), tellp() functions, Sequential Input and output Operations : put (), get(), write(), read() functions, Error handling File Operations : eof(), fail(), bad(), good() .

UNIT V

(18 hours)

Class templates: Using a class template, function templates, Class template specialization, Template with parameters. **Standard Template library:** Containers, iterators and application of container classes.

Exception handling: Throwing an exception, catching an exception: The try block, Exception handlers.

PRESCRIBED BOOKS:

1. E. Balagurusamy, 1995, Object Oriented Programming with C++, Tata McGraw-Hill Publishing Company Ltd.

2. REFERENCE BOOKS:

- i. Robert Lafore, Object Oriented Programming in Microsoft C++, Galgotia publication.
- ii. H.Schildt, C++, 1998, The Complete Reference-1998-TMH Edition, 1998
- iii. Barbara Johnston, C++ Programming today, Pearson education/Prentice-Hall of India, ISBN81-317-1079-3, 2007.
- iv. Steve Oualline, Practical C++ programming, O'Reilly/Shroff publishers & distributors, ISBN81-7366-682-2.

CORE XII
PAPER TITLE: PRACTICAL - PROGRAMMING IN C++ LAB

SUBJECT CODE :	Theory	MARKS : 100
SEMESTER: IV	CREDITS: 4	NO. OF HOURS : 60

COURSE OBJECTIVES:

This course train the students to solve the problems using C++ language

Simple Programs

1. Program to print average of n integers.
2. Program to illustrate call by value & call by reference.
3. Program to multiply two matrices.

Class

4. Student Mark Sheet preparation using Class
5. Class and Object Implementation : to display item and cost

Constructor and Destructor

6. Constructor and Destructor implementation

Inline function and friend function

7. To multiply and divide two floating point numbers using inline function
8. To swap private data of two classes using friend function

Polymorphism

9. Function Overloading
10. Overloading unary minus
11. Overloading binary operators - Complex number addition

Inheritance

12. Single inheritance
13. Multilevel inheritance

Streams

14. Program to implement Formatted I/O operations.
15. Reading and writing a class object using file

**COMPONENT : ALLIED - IV
MARKETING MANAGEMENT**

SUBJECT CODE :	Theory	MARKS : 100
SEMESTER: IV	CREDITS: 5	NO. OF HOURS : 90

COURSE OBJECTIVES:

- To expose students to the importance of marketing in the business world.
- To enable students to understand the various aspects in marketing.

Unit-I

(18 hours)

Marketing- Introduction – Meanings – Definition – Functions – Role and importance – Kinds of Market – Marketing Managements – Marketing Process – Marketing Management orientation marketing Plan – Marketing Mix.

Unit –II

(18 hours)

Marketing Environment – Managing Marketing information – Consumer Markets – Consumer Buying Decision Process – Business Markets – Business Buyer Behaviour Process – Market Segmentation.

Unit –III

(18 hours)

Product – Types of Products – Product Mix – New Product Development – Product Life Cycle Strategy, Pricing – Pricing Objectives – Kinds of Pricing – Factors Affecting Pricing – Pricing Strategies.

Unit – IV

(18 hours)

Marketing Channels – Functions – Types – Event Management –Channel design management channel behaviour; Marketing Communication Mix – Communication Process – Steps in Developing Effective Marketing Communication – Setting Promotion Budget and Mix

Unit – V

(18 hours)

Competitor Analysis and Strategies – Social Responsibility and Ethics –Recent Trends in Marketing : A Basic understanding of E-Marketing , Consumerism , Market Research , MIS and Marketing Regulations.

PRESCRIBED BOOKS:

Prescribed Texts:

1. Marketing Management by Sontakki C.N; Kalyani Publishers; 2009
2. R.S.N. Pillai and Bagavathi, Modern Marketing, S.Chand& Co, New Delhi.
3. Jayasankar, Marketing, Margham publications, Chennai.

REFERENCE BOOKS:

1. Philip Kotler, 2003, Marketing Management, 11th edition, Pearson Education (Singapore) Pt Ltd, New Delhi.
2. Crrain field, Marketing Management, Palgrave Macmillan

<https://books.google.co.in/books?isbn=0764112775>

<https://books.google.co.in/books?isbn=0324591098>

<https://books.google.co.in/books?isbn=0415380804>

COMPONENT: SOFT SKILLS

QUANTITATIVE APTITUDE

SUBJECT CODE :	Theory	MARKS : 100
SEMESTER: IV	CREDITS: 2	NO. OF HOURS : 30

COURSE OBJECTIVES:

- To develop knowledge on Aptitude Concepts

Unit I

(6 hours)

Divisibility – HCF and LCM – Decimal Fractions – Square roots and Cube Roots – Logarithms – Antilogarithms.

Unit II

(6 hours)

Averages – Percentage – Profit and Loss - Ratio and Proposition – Partnership – Alligation and mixture.

Unit III

(6 hours)

Time and work – Pipes and Cistern – Time and Distance – Boats and Streams.

Unit IV

(6 hours)

Simple Interest – Compound Interest – Stocks and Shares – True Discount – Banker's discount.

Unit V

(6 hours)

Area – Volume and surface Areas – Heights and Distances – Data Interpretation : Tabulation – Bar Graphs – Pie Charts
Line Graphs.

REFERENCE BOOKS:

1. R.S. Aggarwal, Objective Arithmetic , S. Chand & Company, New Delhi , 2005
2. Govind Prasad Singh and Rakesh Kumar, Text Book of Quickest Mathematics (for all Competitive Examinations), Kiran Prakashan, 2012
3. R.S. Aggarwal, Quantitative Aptitude, S. Chand & Company, New Delhi, 2012

ENVIRONMENTAL STUDIES

SUBJECT CODE:19UEVS401	THEORY	MARKS 100
SEMESTER: IV	CREDITS: 2	TOTAL HOURS: 30

COURSE OBJECTIVES:

- To explore, understand, appreciate and value their environment and solve environmental problems.

Unit-1:

(6 Hours)

Multidisciplinary nature of environmental studies Definition, scope and importance.

Unit-2:

(6 Hours)

Natural Resources : Renewable and non-renewable resources :Natural resources and associated problems. - Forest resources : Use and over-exploitation, deforestation, case studies. - Timber extraction, mining, dams and their effects on forest and tribal people. - Water resources : Use and over-utilization of surface and ground water - floods, drought, conflicts over water, dams- benefits and problems. - Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies. - Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies. Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification. Role of an individual in conservation of natural resources. Equitable use of resources for sustainable lifestyles.

Unit-3:

(6 Hours)

Ecosystems - Concept of an ecosystem. -Structure and function of an ecosystem. - Producers, consumers and decomposers. - Energy flow in the ecosystem. - Ecological succession. - Food chains, food webs and ecological pyramids. - Introduction, types, characteristic features, structure and function of the following ecosystem :- . Forest ecosystem, Grassland ecosystem ,. Desert ecosystem,. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit-4:**(6 Hours)****Biodiversity and its conservation**

- Introduction – Definition : genetic, species and ecosystem diversity. – Bio geographical classification of India - Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic- and option values - Biodiversity at global, National and local levels. - India as a mega-diversity nation - Hot-spots of biodiversity.
- Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts.
- Endangered and endemic species of India
- Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.

Unit-5 :**(6 Hours)****Environmental Pollution**

Definition

- Cause, effects and control measures of :-
 - a. Air pollution
 - b. Water pollution
 - c. Soil pollution
 - d. Marine pollution
 - e. Noise pollution
 - f. Thermal pollution
 - g. Nuclear hazards
- Solid waste Management : Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Pollution case studies.
- Disaster management : floods, earthquake, cyclone and landslides.

PRESCRIBED BOOKS:

1. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.

REFERENCE BOOKS:

1. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmental Encyclopedia, Jaico Publ. House, Mumbai, 1196p.

Semester V

CORE XIII
PAPER TITLE: INCOME LAW AND PRACTICE - I

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: V	CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVES:

To understand the basic concepts of Income Tax and to acquaint knowledge with provisions relating to Salary, House Property, Business or Professional Income and Filing of Returns.

Unit-I **(18 Hours)**

Meaning and features of income- Important definitions under the Income Tax Act- Residential Status – Scope of Total income – Incomes exempt from tax.

Unit-II **(18 Hours)**

Heads of income – Salaries – Allowances – Perquisites and their valuations – Deductions from salary – Gratuity – Pension – Commutation of pension – Leave salary – Profits-in-lieu of salary – Provident funds – Deductions under section 80C.

Unit-III **(18 Hours)**

Income from House property – Definition of Annual value – Computation of Income under different circumstances.

Unit-IV **(18 Hours)**

Income from Business or Profession- Allowable and not allowable expenses – General deductions – Provisions relating to depreciation – Deemed business profits- Compulsory maintenance of books of accounts – Audit of accounts of certain persons – Special provision for computing incomes on estimated basis – computation of income from business or profession.

Unit-V **(18 Hours)**

Tax Rates of Individual Assessee – Filing of Return – Various Return Forms – Permanent Account Number (PAN) – Advance payment of Tax – Meaning of Due date – Meaning of Deduction of Tax at Source.

Proportion of theory and problems: 20% and 80%

REFERENCE BOOKS:

1. Students Guide to Income Tax – Dr. Vinod K. Singhanian, Taxman Publications Pvt. Ltd.
2. Income Tax Law & Accounts, Dr. Mehrotra & Goyal Sahitya Bhavan Publications.
3. Income Tax Law & Practice V.P. Gaur & D.B. Narang Kalyani Publishers.
4. Income Tax Theory, Law & Practice – T.S. Reddy and Y Hariprasad Reddy Margham Publications.

<https://books.google.com/books?isbn=1584773855>

<https://books.google.com/books?id=iiQKAAAAMAAJ>

<https://books.google.com/books?isbn=813172191>

CORE XIV
PAPER TITLE: COST AND MANAGEMENT ACCOUNTING

SUBJECT CODE :		THEORY	MARKS : 100
SEMESTER: V		CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVES:

- This course introduces the concepts of Cost and Management Accounting

UNIT I

(18 Hours)

Cost Accounting: Definition, Meaning and objectives - Distinction between Cost and Financial Accounting - Elements of cost and preparation of cost sheets - Management Accounting – Definition and objectives – Distinction between management and financial accounting.

UNIT II

(18 Hours)

Stores Records - Purchase Order - Goods Received Note - Bin Card - Stores Ledger - Purchase, Receipt and Inspection - Inventory Control - Economic Ordering Quantity - Methods of Pricing Issued. (FIFO-LIFO-Weighted Average Method Only)

UNIT III

(18 Hours)

Labour Cost: Meaning – Types of Labour – objectives – Labour Turnover - Time Rate System – Piece Wage system – Taylor’s differential Piece Rate System – Premium and Bonus Plans – The Halsey Premium Plan – Rowan Plan. (Simple problems only)

UNIT IV

(18 Hours)

Budgetary Control: Meaning – Definition – Advantages and Limitations – Essentials of a good budgetary control system - Classification of Budgets – Problems on sales Budget , Production Budget, Cash budget, Fixed budget and Flexible Budget only.

UNIT V

(18 Hours)

Marginal Costing: The Concept - Break Even Analysis - Break - Even Chart - Importance and assumptions - Application of Profit Volumes Ratio - Different types of simple problems only.

REFERENCE BOOKS:

1. Wheldon A.J., Cost Accounting and Costing Methods.
2. Iyengar S.P., Cost Accounting : Principles and Practice.
3. Bhar B.K., Cost Accounting : Methods and problems.
4. Bigg W.W., Cost Accounts.
5. Prasad N.K, Cost Accounting : Principles and Problems.
6. Jain S.P. and Narang K.L., Advanced Cost Accounting.
7. Agarwal M., Theory and Practices of Cost Accounting
8. Robert Anthony : Management Accounting : Text and cases.
9. Maheswari S.N., Principles of Management Accounting.

<https://books.google.co.in/books?isbn=0070402248>

<https://books.google.co.in/books?isbn=8189781502>

<https://books.google.co.in/books?isbn=9380901666>

CORE XV

PAPER TITLE: DATABASE MANAGEMENT SYSTEMS

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: V	CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVE :

This course introduces the basic concepts of database management systems

Unit-1: (18 Hours)

Advantages and Components of a Database Management Systems – Feasibility Study – Class Diagrams – Data Types – Events – Normal Forms – Integrity – Converting Class Diagrams to Normalized Tables – Data Dictionary.

Unit-2: (18 Hours)

Query Basics – Computation Using Queries – Subtotals and GROUP BY Command – Queries with Multiple Tables – Subqueries – Joins – DDL & DML – Testing Queries

Unit-3: (18 Hours)

Effective Design of Forms and Reports – Form Layout – Creating Forms – Graphical Objects – Reports – Procedural Languages – Data on Forms – Programs to Retrieve and Save Data – Error Handling.

Unit-4: (18 Hours)

Power of Application Structure – User Interface Features – Transaction – Forms Events – Custom Reports – Distributing Application – Table Operations – Data Storage Methods – Storing Data Columns – Data Clustering and Partitioning.

Unit-5 : (18 Hours)

Database Administration – Development Stages – Application Types – Backup and Recovery – Security and Privacy – Distributed Databases – Client/Server Databases – Web as a Client/Server System – Objects – Object Oriented Databases – Integrated Applications.

PRESCRIBED BOOKS:

1.G. V. Post – Database Management Systems Designing and Building Business Application – McGraw Hill International edition – 1999.

REFERENCE BOOKS:

1.Raghu Ramakrishnan – Database Management Systems – WCB/McGraw Hill – 1998.
2.C.J. Date – An Introduction to Database Systems – 7th Edition – Addison Wesley - 2000.

CORE XVI
PAPER TITLE: PRACTICAL - RDBMS USING VB. NET LAB

SUBJECT CODE :	PRACTICAL	MARKS : 100
SEMESTER: V	CREDITS: 4	NO. OF HOURS : 75

COURSE OBJECTIVES:

Understand Internet Technology to develop dynamic webpages using web technology.

1. Create a button-click option to display a Welcome message
2. Create mouse move over to change button color
3. Create a program to perform all arithmetic operations.
4. Create an application to change the forecolor of a label box to Red, Green and Blue colors using RadioButton control.
5. Create an application to format label box text into bold, italic and underline using checkbox control
Create a VB.NET program for Feedback form
6. Create a VB.NET for displaying the images with clear option
7. Creating a file holding variables, hyperlinks with lock & unlock methods

MS-Access

For the following programs, create a database and perform the required operations given below:

Use a Menu / Button for the following operations

- a. Navigation of records
 - b. Insertion
 - c. Deletion
 - d. Modification
 - e. Generate simple reports using queries.
10. Telephone directory maintenance.
 11. Payroll.
 12. Invoice System.
 13. Mark sheet Processing.
 14. Inventory System.
 15. Library information system

ELECTIVE I
PAPER TITLE: ENTREPRENEURIAL DEVELOPMENT

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: V	CREDITS: 5	NO. OF HOURS : 90

COURSE OBJECTIVES:

- 1) To build and enable the students to inculcate values of entrepreneurship and develop entrepreneurial qualities.
- 2) To motivate them to become successful entrepreneurs.

Unit- I **(18 Hours)**

Concept of Entrepreneurship

Entrepreneurship – Meaning – Types – Qualities of an Entrepreneur – Classification of Entrepreneurs – Factors influencing Entrepreneurship – Functions of Entrepreneurs- Role of Entrepreneur in Economic development.

Unit -II **(18 Hours)**

Entrepreneurial Development Agencies. Commercial Banks – District Industries Centre – National Small Industries Corporation – Small Industries Development Organization – Small Industries Service Institute. All India Financial Institutions – IDBI – IFCI – ICICI – IRDBI

Unit -III **(18 Hours)**

Small Scale Industries- SSI- Tiny industries, Ancillary Industries, Cottage industries- meaning- product range- capital investment- importance and role played by SSI in the development of Indian Economy- Problems faced by SSI's- Steps taken to solve the problems- policies governing SSI's.

Unit- IV **(18 Hours)**

Project Management

Business idea generation techniques – Identification of Business opportunities – Feasibility study – Marketing, Finance, Technology & Legal Formalities -Preparation of Project Report – Tools of Appraisal.

Unit -V **(18 Hours)**

Entrepreneurial Development Programmes (EDP) – Role, relevance and achievements – Role of Government in organizing EDPs – Critical evaluation-Women entrepreneurship- problems – steps taken by government- participation of women in SSI sector.

REFERENCE BOOKS:

1. Srinivasan N.P. – Entrepreneurial Development
2. Saravanavel – Entrepreneurial Development
3. Jayashree Suresh – Entrepreneurial development
4. J.S. Saini & S.I. Dhameja – Entrepreneurship and small business.
5. Vasant Desai, Appannaiah, Reddy, Gopala Krishna- Entrepreneurship Development programme- Himalaya Publication House
6. Dr. C.B. Gupta & Dr. S.S. Khanka – Entrepreneurship and Small Business.

<https://books.google.co.in/books?isbn=8122414346>

<https://books.google.co.in/books?isbn=8170991153>

<https://books.google.co.in/books?isbn=8121918014>

ELECTIVE I
PAPER TITLE: PRODUCTION & SUPPLY CHAIN MANAGEMENT

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: V	CREDITS: 5	NO. OF HOURS : 90

COURSE OBJECTIVES:

UNIT I PRODUCTION MANAGEMENT 4 (18 Hours)

Introduction, objectives, importance of production management, meaning and types of Production System; plant location; factors affecting locations, plant layout; meaning, objectives, types.

UNIT II PRODUCTION PLANNING AND CONTROL 4 (18 Hours)

Meaning, Objectives, Scope, Importance & Procedure of Production Planning, Routing scheduling, factors affecting scheduling, Dispatch&Follow up, Production Control-Meaning, objectives, Factors affecting Production Control.

UNIT III PRODUCTIVITY & MAINTENANCE 4 (18 Hours)

Productivity Meaning, Importance, Factors affecting Productivity, Quality Control meaning, objectives, control charts(mean chart, range chart only) Maintenance-meaning, objectives, types.

UNIT IV SUPPLY CHAIN MANAGEMENT 4 (18 Hours)

Meaning and definition- Objectives of SCM- components of SCM, SCM process, Factors driving the SCM –supply chain planning, push/pull strategy, bullwhip effect.

UNIT V LOGISTICS MANAGEMENT 4 (18 Hours)

Meaning and definition – significant of logistics –concepts of logistics management – objectives of logistics management – elements of logistics management – logistics management v/s supply chain management.

PRESCRIBED BOOKS:

1. S.Shankaran, “ Managerial Economics”, Margham Economics, Chennai,2008.
2. R.Cauvery & Others – Managerial Economics. S. Chand And Company, New Delhi, 2015.

REFERENCE BOOKS:

1. S.Mukherjee, “Business And Managerial Economics in global Context”, New Central Bank Agency (P) Ltd, Kolkatta, 2009.
2. William F. Samuelson and Stephen G. Marks, “Managerial Economics”, Johny Wiley & Sons, Reprint – 2015

ELECTIVE I
PAPER TITLE: BUSINESS INFORMATION SYSTEM

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: V	CREDITS: 5	NO. OF HOURS : 90

COURSE OBJECTIVES:

Unit I Introduction To Information Systems (18 Hours)

Introduction to organisation- decision levels- managerial roles- information needs of managements- information system- decision- features- systems concepts- framework for information systems- strategic uses of management information systems- future of IS in an organization – business process reengineering.

Unit Ii Information System Components (18 Hours)

Hardware- input and output devices- n computer memory (primary, secondary & cache)- memory access time- file structures- network components.-software- operating system software application software- groupware- multiprogramming- multi tasking. Database- definition- data capture- data integrity- components of database management systems.

Unit Iii Integration Of Information Systems (18 Hours)

Distributed processing- centralized data processing – decentralized data processing distributed- database- client server computing- internet- intranet- electronic conferencing transaction processing systems- office automation systems- knowledge management systems decision support systems (features, components & tools)- group decision support systems expert systems (components & advantages) – case studies.

Unit Iv Application Of Information Systems In Business Areas (18 Hours)

Application of information systems at the operational, tactical & strategic levels in the areas of accounting & finance, marketing, human resources and production.

Unit V Management Of Information Systems (18 Hours)

Information systems security- risks threats- protection of information systems. Role & responsibility of IS professionals- ethical issues.

PRESCRIBED BOOKS:

1. Robert Schulthesis, Mary Summer, “Management Information Systems- The Managers View”, Tata Mc Graw hill Publication.
2. SystemsGera v Post David, L Anderson, “Management Information”, Tata Mc Graw hill.

REFERENCE BOOKS:

1. Jaiswal. S, “Management Information Systems”, Tata Mc Graw hill Publication..
2. O Brien, “Management Information Systems”, Tata Mc Graw hill.

PAPER TITLE: VALUE EDUCATION

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: V	CREDITS: 2	NO. OF HOURS : 15

COURSE OBJECTIVES: Values are socially accepted norms to evaluate objects, persons, and situations that form part and parcel of sociality. A value system is a set of consistent values and measures. Knowledge of the values are inculcated through education. It contributes in forming true human being, who are able to face life and make it meaningful. There are different kinds of values like, ethical or moral values, doctrinal or ideological values, social values and aesthetic values. Values can be defined as broad preferences concerning appropriate courses of action or outcomes. As such, values reflect a person's sense of right and wrong or what "ought" to be. There are representative values like, "Equal rights for all", "Excellence deserves admiration". "People should be treated with respect and dignity". Values tend to influence attitudes and behavior and help to solve common human problems. Values are related to the norms of a culture.

Unit I: **(3 Hours)**

Value education-its purpose and significance in the present world – Value system – The role of culture and civilization-Holistic living – Balancing the outer and inner – Body, Mind and Intellectual level- Duties and responsibilities.

Unit II : **(3 Hours)**

Salient values for life- Truth, commitment, honesty and integrity, forgiveness and love, empathy and ability to sacrifice, care, unity , and inclusiveness, Self esteem and self confidence, punctuality – Time, task and resource management – Problem solving and decision making skills- Interpersonal and Intra personal relationship – Team work – Positive and creative thinking

Unit III : **(3 Hours)**

Human Rights – Universal Declaration of Human Rights – Human Rights violations – National Integration – Peace and non-violence – Dr. A P J Kalam's ten points for enlightened citizenship – Social Values and Welfare of the citizen – The role of media in value building.

Unit IV: **(3 Hours)**

Environment and Ecological balance – interdependence of all beings – living and non-living. The binding of man and nature – Environment conservation and enrichment.

Unit V : **(3 Hours)**

Social Evils – Corruption, Cyber crime, Terrorism – Alcoholism, Drug addiction – Dowry – Domestic violence – untouchability – female infanticide – atrocities against women How to tackle them.

REFERENCE BOOKS:

1. M.G.Chitakra: Education and Human Values, A.P.H.Publishing Corporation, New Delhi, 2003
2. Chakravarthy, S.K. : Values and ethics for Organizations: Theory and Practice, Oxford University Press, New Delhi , 1999.
3. Satchidananda, M.K.: Ethics, Education, Indian Unity and Culture, Ajantha Publications, Delhi, 1991
4. Das, M.S. & Gupta, V.K. : Social Values among Young adults: A changing Scenario, M.D. Publications, New Delhi, 1995

Semester VI

CORE XVII
PAPER TITLE: INCOME LAW AND PRACTICE - II

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: VI	CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVES:

To acquaint knowledge with provisions relating to Capital gains, Income from Other Sources, Deductions, Assessment of Individuals and Powers of Income Tax Authorities.

Unit- I **(18 Hours)**

Income under Capital Gains – Short term, Long term Capital gains – Certain transactions not included as transfer – Cost of Improvement – Indexation of Cost – Exempted Capital Gains- Computation of Capital Gains.

Unit-II **(18 Hours)**

Income from other sources – Grossing up – Deductions in computing income under the head Income from other sources.

Unit-III **(18 Hours)**

Clubbing of income – Deemed incomes – Provisions of the Act relating to clubbing of income – Set off – Carry forward and set off of losses.

Unit-IV **(18 Hours)**

Permissible deductions from gross total income – Sec. 80C, 80CCC, 80CCD, 80D, 80DD, 80DDB, 80E, 80G, 80GGC, 80GG, 80TTA, 80GGA, 80QQB, 80RRB, 80U, – Assessment of individual- Computation of Tax.

Unit-V **(18 Hours)**

Income Tax Authorities – Powers of the Central Board of Direct Taxes (CBDT) , Commissioners of Income Tax and Income Tax Officers – Self Assessment – Best Judgement Assessment – Income Escaping Assessment (Re assessment).

Proportion of theory and problems: 20% and 80%

REFERENCE BOOKS:

1. Students Guide to Income Tax – Dr. Vinod K. Singhania, Taxman Publications Pvt. Ltd.
2. Income Tax Law & Accounts, Dr. Mehrotra & Goyal Sahitya Bhavan Publications.
3. Income Tax Law & Practice V.P. Gaur & D.B. Narang Kalyani Publishers.
4. Income Tax Theory, Law & Practice – T.S. Reddy and Y Hariprasad Reddy Margham Publications.

<https://books.google.com/books?isbn=1584773855>

<https://books.google.com/books?id=iiQKAAAAMAAJ>

<https://books.google.com/books?isbn=8131721914>

CORE XVIII
PAPER TITLE: HUMAN RESOURCE MANAGEMENT

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: VI	CREDITS: 4	NO. OF HOURS : 90

COURSE OBJECTIVES:

1. To provide knowledge on understanding managing human resources in organizations.
2. To offer exposure on human resources practices in organizations.

Unit- I **(18 Hours)**
Nature and scope of Human Resources Management – Differences between personnel management and HRM – Environment of HRM – Human resource planning – Recruitment – Selection – Methods of Selection – Uses of various tests – interview techniques in selection and placement.

Unit- II **(18 Hours)**
Induction – Training – Methods – Techniques – Identification of the training needs – Training and Development – Performance appraisal – Transfer – Promotion and termination of services – Career development.

Unit- III **(18 Hours)**
Remuneration – Components of remuneration – Incentives – Benefits – Motivation –
Welfare and social security measures.

Unit- IV **(18 Hours)**
Labour Relation – Functions of Trade Unions – Forms of collective bargaining- Workers' participation in management – Types and effectiveness – Industrial Disputes and Settlements (laws excluded)

Unit- V **(18 Hours)**
Human Resource Audit – Nature – Benefits – Scope – Approaches- Human Resource Information System (HRIS)- Need- Benefits- Designing of HRIS- Computerized HRIS.

REFERENCE BOOKS:

1. Human Resource Management – V S P Rao
2. Human Resource Management – Ashwathappa
3. Human Resource Management – C.B.Gupta
4. Human Resource Management – L M Prasad
5. Human Resource Management – Tripathi.
6. Human Resource Management- S.S.Khanka

<https://books.google.co.in/books?isbn=0749446315>
<https://books.google.co.in/books?isbn=1285974859>
<https://books.google.co.in/books?isbn=813175426X>

CORE XIX
PAPER TITLE: SOFTWARE ENGINEERING

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: V	CREDITS: 5	NO. OF HOURS : 90

COURSE OBJECTIVES:

- Understand the key information's on Software Engineering and its associated knowledge with Real time Implementation Issues.

UNIT I: (18 Hours)

Introduction to Software Engineering Some definition – Some size factors – Quality and productivity factors – Managerial issue. Planning a Software Project: Defining the problem – Developing a solution strategy – planning the development process – planning an organization structure – other planning activities.

UNIT II: (18Hours)

Software Cost Estimation: Software – Cost factors – Software cost estimation techniques – specification techniques – level estimation – estimating software maintenance costs. The software requirements specification – formal specification techniques - languages and processors for requirements specification.

UNIT III: (18Hours)

Software Design: Fundamental Design concepts – Modules and modularizing Criteria – Design Notations – Design Techniques – Detailed Design Consideration – Real time and distributed system design – Test plan – Mile stones walk through and inspection.

UNIT IV: (18 Hours)

Implementation issues: Structured Coding techniques – coding style – standards and guidelines – documentation guidelines – type checking – scoping rules – concurrency mechanisms.

UNIT V: (18 Hours)

Quality assurance – walk through and inspection - Static analysis – symbolic exception – Unit testing and Debugging – System testing – Formal verification: Enhancing maintainability during development – Managerial aspects of software maintenance – Configuration management – source code metrics – other maintenance tools and techniques.

PRESCRIBED BOOKS:

1. Richard E.Fairly - Software Engineering Concepts, 5th Edition - Tata McGraw-Hill book Company.

REFERENCE BOOKS:

1. Richard E.Fairly,Software Engineering Concepts,McGraw-Hill,1985
2. Ian Sommerville,Software Engineering-9th Edition,Darling Kindersley,2011
3. Roger S.Pressman,Software Engineering A Practitioner's Approach-6th Edition, McGraw-Hill,2005
4. R.S.Pressman, 1997, Software Engineering – 1997 - Fourth Ed., McGraw Hill.
5. RajibMall ,2004,Fundamentals of Software Engineering,2nd Edition, PHI.

Websites:

1. <http://people.cs.missouri.edu/~duanye/cs4320/lectures.htm>
2. <http://iiscs.wssu.edu/drupal/node/4566>

ELECTIVE -II
PAPER TITLE: WEB TECHNOLOGY USING PHP

SUBJECT CODE :	THEORY	MARKS : 100
SEMESTER: VI	CREDITS: 5	NO. OF HOURS : 60

COURSE OBJECTIVES:

1. This course introduces the basic concepts of PHP Scripting Language.
2. To develop web applications using basic PHP elements such as delimiters, control structures, operators, variables, arrays, and functions.
3. To manipulate dates and strings using built-in PHP functions and regular expressions.
4. To create dynamic web forms using internet tools such as input, environment, and server variables, HTTP headers, and query strings.
5. To read, write, manage, and download files through PHP-based web applications.
6. To track user information using cookies and sessions.

UNIT I

(15 Hours)

Introduction to PHP:- Installation of PHP, PHP configuration in IIS & Apache Web Server and features of PHP, Writing PHP: - How PHP code is parsed, Embedding PHP and HTML, Executing PHP and viewing in Browser, Data types, Operators, PHP variables: static and global variables, Comments in PHP

UNIT II

(15 Hours)

Control Structures:- Condition statements, Loops, Exit, Die, Return, Arrays in PHP, Working With Data:- FORM element, INPUT elements, Validating the user input, Passing variables between pages-Passing variables through a GET, POST, REQUEST.

UNIT III

(15 Hours)

Functions:-

Built-in functions, String Functions, Math Functions, Array Functions, File Handling Functions, Miscellaneous Functions, User Defined Functions.

UNIT IV

(15 Hours)

Handling sessions and cookies:- Concept of Session, Starting session, Modifying session variables, Unregistering and deleting session variable, Concept of Cookies, Handling of Cookies, How to upload files.

UNIT V

(15 Hours)

Ajax Overview:-Understanding java scripts for AJAX, AJAX web application model, AJAX –PHP framework, Performing AJAX validation, Handling XML data using PHP and AJAX, Connecting database using PHP and AJAX.

Exercise:

1. Create a simple HTML form and accept the user name and display the name through PHP echo statement.
2. Write a PHP script to count number of lines in a file.

3. Write a PHP function to test whether a number is greater than 30, 20 OR 10 using Ternary operator.
4. Write a PHP program to remove duplicates from a sorted list.
5. Write a PHP program to compute the sum of the digits of a number.
6. Write a function to calculate the factorial of a number (a non-negative integer). The function accepts the number as an argument.
7. Write a PHP function that checks whether a passed string is a palindrome or not?
8. Write a PHP function to change the following array's all values to upper or lower case.
9. Write a PHP program to check if an integer is the power of another integer.
Input: 16, 2
Example: For x = 16 and y = 2 the answer is "true", and for x = 12 and y = 2 "false"
10. Write the PHP script to get the Client IP Address.

REFERENCE BOOKS:

1. Core PHP Programming by Leon Atkinson : Pearson publishers
2. The complete Reference PHP by Stever Holzner : McGraw Hill
3. PHP – A beginners Guide By: Ashok Appu Publisher: Wiley
4. PHP web sevice - Wrox publication

ELECTIVE -II
PAPER TITLE: PRACTICAL –PYTHON PROGRAMMING LAB

SUBJECT CODE :	PRACTICAL	MARKS : 100
SEMESTER: VI	CREDITS: 5	NO. OF HOURS : 30

COURSE OBJECTIVES:

- To learn how to design and program complex and numeric Python applications.

Python Programming Lab

1. Write a menu driven program to convert the given temperature from Fahrenheit to Celsius and vice versa depending upon users choice.
2. WAP to calculate total marks, percentage and grade of a student. Marks obtained in each of the three subjects are to be input by the 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

3. Write a menu-driven program, using user-defined functions to find the area of rectangle, square, circle and triangle by accepting suitable input paramters from user.
4. WAP to find factorial of the given number.
5. WAP to find sum of the following series for n terms: $1 - 2/2! + 3/3! - \dots - n/n!$
6. Write a program that reads an integer value and prints —leap year| or —not a leap year|.
7. Write a program that takes a positive integer n and then produces n lines of output shown as follows.

For example enter a size: 5

```
*
**
***
****
*****
```

8. Write a function that takes an integer input and calculates the factorial of that number.
9. Write a function that takes a string input and checks if it's a palindrome or not.
10. Write a list function to convert a string into a list, as in list (`'_abc'`) gives [a, b, c].
11. Write a program to generate Fibonacci series.
12. Write a program to check whether the input number is even or odd.
13. Write a program to compare three numbers and print the largest one.

ELECTIVE -II

PAPER TITLE: PRACTICAL – R PROGRAMMING LAB

SUBJECT CODE :	Practical	MARKS : 100
SEMESTER: IV	CREDITS: 5	NO. OF HOURS : 90

COURSE OBJECTIVES:

- Understand R Programming Environment and to explore Mathematical and Statistical Functions.

S.No	Program Description
1.	History of R
2.	Installing R and packages in R.
3.	Programs on data types in R.
4.	Built-in Functions in R
5.	Creating and manipulating a vector in R.
6.	Creating matrix and manipulating matrix in R.
7.	Creating and operations on Factors in R.
8.	Viva Voice Questions and Answers – Cycle -I
9.	Operations on Data Frames in R.
10.	Operations on Lists in R.
11.	Programs on Operators in R.
12.	Comparison of Matrices and Vectors in R.
13.	Programs on If – else statements in R.
14.	Programs on For Loops in R.
15.	Programs on While Loops in R.
16.	Customizing and Saving to Graphs in R.
17.	Viva Voice Questions and Answers – Cycle -II
Additional Experiments	
1.	PLOT Function in R to customize graphs.
2.	3D PLOT in R to customize graphs.