பருவம்: முதற் பருவம் **பாடக் குறியீட்டு எண்: LTC 101S**

அலகு **பாடங்கள்**

(மரபு கவிதையும், புதுக்கவிதையும்)

1 1.1 பாரதி – பாரததேசம்
1.2 பாரதிதாசன் - உலகப்பன் பாட்டு
1.3 கண்ணதாசன் - ஊதாரிப்பிள்ளை
1.4 வைரமுத்து – புதிய ஏற்பாடு
1.5 மு. மேத்தா – தேசப்பிதாவுக்குத் தெருப்பாடகனின் அஞ்சலி

(காப்பியங்கள். சமயப்பாடல்கள், சிற்றிலக்கியம்)

2 2.1 சிலப்பதிகாரம் - கனாத்திறம் உரைத்த காதை
2.2 மணிமேகலை – ஆதிரை பிச்சையிட்ட காதை
2.3 கம்பராமாயணம் - குகப்படலம்
2.4 மாணிக்கவாசகர் - திருவாசகம்
2.5 தாயுமானவர் - பராபரக் கண்ணி (5)
2.6 குற்றாலக் குறவஞ்சி (3)

(சிறுகதைகள்)

3 1 இந்துமதி – குருத்து
2. கு.அழகிரிசாமி – அன்பளிப்பு
3. அறிஞர் அண்ணா – செவ்வாழை

(உரைநடை)

4 4. மு.வ – நல்வாழ்வு – பண்பாடு, பொதுமை ஓர் அறம், நீந்துக

(மொழி பெயர்ப்பு)

5 5 கணினித் துறைக் கலைச்சொற்கள்
6 ஆட்சித் துறைக் கலைச்சொற்கள்
7 ஆட்சித் துறை பகுதி
8 விளம்பரப் பகுதி

SEMESTER – I FOUNDATION COURSE – ENGLISH – I LEC101S

UNIT- I PROSE **[15 HRS]**

My Early Days – A.P.J. Abdul Kalam
Headache – R.K. Narayan
Six Thinking Hats – Edward de Bono

UNIT- II POETRY **[15 HRS]**

The Road not Taken – Robert Frost
The Unknown Citizen – W.H. Auden
Do not go gentle into that good night – Dylan Thomas

UNIT-III **[15 HRS]**

SPOKEN COMMUNICATION SKILLS

Agreeing and Disagreeing
Seeking and Giving permission
Sounds and Symbols in English
Word and Sentence stress
Effective use of Intonation

UNIT – IV INTERPERSONAL COMMUNICATION **[15 HRS]**

Effective Listening
- Understanding the Audience
- Perceptual Clarity
- Channel Awareness
- Role of Nonverbal Communication

Pragmatics

UNIT-V

WRITTEN COMMUNICATION SKILLS **[15 HRS]**

Note Making.
Report Writing
Letters for business correspondence

Text

1. Ravindran, Padma and M.D.V Kalyani Annie, eds. **Interface – 1**. Chennai: Foundation Books, 2007.
2. Orient Longman, **SelectedCollege Poems**, Chennai : Orient Longman Limited, 1994.
3. Bhatnagar, R.P., and Rajul Bharagava, **English for Competitive Examinations**. Chennai: Macmillan India Press, 2002.

Reference

1. Prince, Donna. **Skills for Success**, New York: CUP 1998.
2. Wallace, Michael, J. **Study Skills in English**. Kottayam: CUP, 2004.

SEM – I PROGRAMMING IN C CA101S

UNIT-I **[15 Hrs]**

C Fundamentals: Character set – Identifiers - keywords - Data types-Constants –Variables –Declarations – Expressions - Statements-Operators - Library functions.

UNIT-II **[15 Hrs]**

Control Statements: Data Input/Output functions - Simple C programs - flow of control-control structures - switch, break and continue - Go to statement-comma operator.

UNIT-III **[15 Hrs]**

Functions: Defining, accessing functions - functions prototypes-passing arguments - call by value - call by reference - Recursions-storage classes.

UNIT-IV **[15 Hrs]**

Arrays: Defining and processing – passing arrays of functions- Arrays and string – Structures - passing structures to functions - self-referential structures - unions.

UNIT-V **[15 Hrs]**

Pointers: Declarations - passing pointers to functions - operation with pointers - pointer and arrays - arrays of pointers - structure and pointers – Files and its operations.

TEXT BOOKS:

1. E. Balagurusamy -Programming in Ansi C -Tata McGraw Hill Pub
2. Byron S.Gottfied - Schaum's outline Theory and problems of programming with C. Tata McGraw Hill Pub
3. Yeshwanth Kanethkar -Let us C -.BPB Publications
4. K.R.Venugopal, S.R.Prasad -Mastering C – Tata McGraw Hill Pub

SEM – I DIGITAL LOGIC FUNDAMENTALS CA102S

UNIT-I **[12 Hrs]**

Number System: Binary number system - The Basic Gates - Boolean Algebra - Universal Gates - Boolean Laws and Theorem – Number system and its conversations.

UNIT-II **[12 Hrs]**

Simplification: Sum of products - Product of Sums - K-map simplifications - Don't care conditions-Quine Mcclausky tabulation method.

UNIT-III **[12 Hrs]**

Combinational Arithmetic Circuits: Adders-Subtractors-full adder-subtractor-BCD Adder- ROM-PLA-Designing circuits using ROM/PLA

UNIT-IV **[12 Hrs]**

Combinational Logic Circuits: Multiplexers-Demultiplexers-Decoders: 1 of 16 Decoders-seven segment decoders-Encoders.

UNIT-V **[12 Hrs]**

Sequential Logic Circuit: Flip-Flops - Its types - RS Flip flop, JK Flip flop, D Flip flop, T and Master Slave. Counters and its types - counter Design. Shift Registers and its types. -. Design of ALU.

TEXT BOOKS:

1. Thomas C.Bartee Digital Computer Fundamentals- McGraw Hill Pub.
2. Malvino & Leach- Digital principles and applications –McGraw Hill Pub.
3. S.Ramalatha - Digital Computer Fundmentals
4 . M.Morris Mano -Digital Logic and Computer Design- -PHI

SEMESTER – I MATHEMATICAL FOUNDATIONS AMTCA101

UNIT –I

Logic Operators: Conjunction, disjunction, negation, conditional and bi-conditional operators. Converse, inverse, contra-positive, logically equivalent, tautology and contradiction, arguments and validity of arguments.

Chapter 1(Pages from 1.1 to 1.50)

UNIT-II

Set theory, Relations and Functions.

Chapter2(Pages from 2.1 to 2.38)

Chapter 3(Pages from 3.1 to 3.25)

Chapter 4(Pages from 4.1 to 4.35)

UNIT –III:

Binary operations, Permutations and Combinations, Mathematical induction, Simple problems.

Chapter 6(Pages from 6.1 to 6.10)

Chapter71(Pages from 7.1 to 7.53)

UNIT –IV:

MATRICES: Types of matrices, operations on matrices, simple problems, singular and non-singular matrices, adjoint of a matrix, inverse of a matrix,symmetric and skew-symmetric, Hermitian and skew-Hermitian, orthogonal and unitary matrices, rank of a matrix.

Consistency of a system of linear equations by

i) Cramer's rule
ii) Matrix inversion method.
iii) Rank method.

Chapter 8(Pages from 8.1 to 8.97)

UNIT –V:

MATRIX CONTINUED: Characteristic roots and characteristic vectors, and problems on Cayley-Hamilton theorem.

APPLICATION OF MATRICES: Matrix of linear transformation: Reflection about x axis, y axis, the line y = x, and the line y = -x, rotation about the origin through an angle θ, expression and compression, shears, translation, successive transformation.

Chapter 8(Pages from 8.971 to 8.140)

Chapter 9(Pages from 9.1 to 9.7)

Text Books:

1. Mathematical Foundations, P.R.Vittal, Margham Publications, Chennai.
2. Discrete Mathematics, B.S. Vatssa, Wishwa Prakashan

Book for Reference:

1. Discrete Mathematics, Second edition, Seymour Lipschutz & Marc Lipson, Schaum's outlines, Tata McGraw-Hill.

SEMESTER – I VALUE EDUCATION VE101

Unit I

Values-concept-definition-characteristics-division of values-important of value education

Unit II

Personal values;self concept,self esteem,self acceptance,attitude

Unit III

Youth problems;career decision and unemployment,emotional and sexual adjustment, autonomy versus dependence feeling of inferiority,marriage and family,identity of roles,vocational problems and social discrimination,suggestions to cope up with stress.

Unit IV

Social values

Relationship with (family,college,and friendship)and social responsibility

Moral values-honesty love and concern for others-truthfulness-justice.

Unit V

Religious values and cultural values - Various religious of the world - Religions tolerance - Unity in diversity – secularism - Ahimsa vs terrorism

Text Book

Value Education - P. Paul

SEM – I PRACTICAL - PROGRAMMING IN C CAP101S

1. Pascal triangle
2. Generation of prime numbers between two given numbers
3. Tower of Hanoi using recursion
4. Calculation of GCD using recursion
5. String Reverse
6. Palindrome checking
7. Matrix Addition
8. Matrix Multiplication
9. Matrix Transpose
10. Linear Search
11. Binary Search
12. Bubble Sort
13. Insertion Sort
14. Selection Sort
15. File Processing

பருவம்: இரண்டாம் பருவம் பாடக் குறியீட்டு எண்: LTC 202S

அலகு	பாடங்கள்
1	புறநானூறு – 74,192,312 அகநானூறு – 34,02,07 குறுந்தொகை – 23,30,40 நற்றிணை – 149,60,110
2	பட்டினப்பாலை (120-192) சிறுபாணாற்றுப்படை மதுரைக்காஞ்சி முல்லைப்பாட்டு
3	**திருக்குறள்** வினை செயல்வகை பொருள் செயல்வகை தெரிந்து செயல்வகை **(இலக்கிய வரலாறு)**
4	எட்டுத்தொகை, பத்துப்பாட்டு ஆற்றுப்படைகள் திருக்குறள் கீழ்க்கணக்கில் பெறுமிடம் **(மொழித்திறன்)**
5	விண்ணப்பங்கள் கடிதங்கள் சுருக்கி வரைதல் செய்திச் சேகரிப்பு நேர்காணல்

SEMESTER – II FOUNDATION COURSE – ENGLISH – II LEC202S

UNIT- I **[13 HRS]**

PROSE

The Ant and the Grasshopper – W.B. Maugham
Engine Trouble – R.K. Narayan
Concerning Dates – E.V. Lucas

UNIT-II **[13 HRS]**

ONE ACT PLAYS

Chandalika – Rabindranath Tagore

The Merchant of Venice (The Trial Scene) – William Shakespeare.

UNIT-III **[13 HRS]**

BUSINESS WRITING

Standard Business Letters
Answering Enquiries.
Handling Letters of Complaint.
Drafting E-mail for Business Correspondence.
Intra-organizational communication.
Delayed payments and Delivery of goods.
Writing short reports.
Technical Writing.
Intranet and Internet for Business writing.

UNIT-IV **[12 HRS]**

BUSINESS TRANSACTIONS OVER TELEPHONE

Telephone manners in Business situations.
Handling customer Orders and Enquiries.
Making Appointments.
Cancelling or Postponing appointments.
Handling Complaint Calls.
Handling Delivery and After-sales problems.
Asking for and Giving information.
Giving online help to customers for trouble shooting.
Explaining how to operate Equipment.
Taking part in Teleconferences.
Tele-Interviews.

UNIT-V **[12 HRS]**

JOBS AND CAREERS

Applying for jobs; Preparing Resumes.
Writing Cover Letters for Resumes.
Preparing for Interviews.
Taking Interviews.
Post-Interview Follow- up
Promotion Interviews.

UNIT-VI

WRITTEN COMMUNICATION SKILLS **[12 HRS]**

Dialogue Writing

Letter writing(Formal & Informal)

Text

1. Samson, T., and Geetha Rajeevan. **Interface-2**. Chennai: Foundation Books, 2008.
2. Bhatnagar, R.P., and Rajul Bhargava. **English for Competitive Examinations**. Chennai: Macmillan India Press, 2002.

Reference

1. Prince, Donna. **Skills for Success**, New York: CUP 1998.
2. Wallace, Michael, J. **Study Skills in English**. Kottayam: CUP, 2004.
3. Tripathy, Byot, K. **Harmony: An Anthology of Poems**. New Delhi: OUP, 1981.
4. Dahia, S.P.S., **Vision in Verse; An Anthology of Poems**. New Delhi: OUP, 1998.

SEM – II Object Oriented Programming using C++ CA203T

UNIT-I **[15 Hrs]**

Principles of Object Oriented Programming(OOP): Evolution of C++ - Programming Paradigms – Key Concepts of OOP – Advantages of OOP – Usage of OOP and C++.

UNIT-II **[15 Hrs]**

C++ fundamentals: Input and Output in C++ - Streams-Stream classes Unformatted console I/O operations-Member functions of istream class-manipulators-manipulators with parameters Introduction to C++; Tokens, Keywords, Identifiers, Variables, Operators,

UNIT-III **[15 Hrs]**

Functions and polymorphism: Expressions and Control Structures in C++; Pointers and arrays – Functions in C++ - Main Function – Function Prototyp0ing – Parameters Passing in Functions – Values Return by Functions – inline Functions – Function Overloading.

UNIT-IV **[15 Hrs]**

Inheritance: Classes and Objects: Constructors and Destructors; and Operator Overloading and Type Conversions – Type of Constructors – Inheritance: Single Inheritance – Multilevel inheritance – Multiple inheritance – Hierarchical Inheritance – Hybrid Inheritance. Pointers, Virtual Functions and Polymorphism

UNIT-V **[15 Hrs]**

Working with Files: Classes for File Stream Operations – Opening and Closing a File – End-of-File Detection – File Pointers – Updating a File – Error Handling during File Operations – Command-line Arguments.

TEXT BOOKS

1. E.Balagurusamy-Object Oriented Programming with C++.TMH-1995
2. H.Schildt,C++: The Complete Reference,TMH-1998
3. Robert Lafore, Object Oriented Programming in Microsoft C++, Galgotia Publication.
4. Ashok N.Kamthane, Object Oriented Programming with ANSI & Turbo C++, Pearson Education, 2006.

SEM – II FUNDAMENTALS OF DATA STRUCTURES CA204S

UNIT-I **[12 Hrs]**

Introduction: Definition of a Data structure – primitive and composite Data Types, Arrays, Operations on Array, Ordered lists.

UNIT-II **[12 Hrs]**

Stacks and Queues: Stacks – Applications of Stack – Infix to Postfix Conversion, Recursion, Maze Problems – Queues – Operations on Queues-Queue Applications- Circular Queue.

UNIT-III **[12 Hrs]**

Linked List: Singly Linked List – Operations, Application – Representation of a Polynomial, Polynomial Addition; Doubly Linked List – Operations, Applications – Ordering Books in a Library(Alphabetical Ordering)

UNIT-IV: **[12 Hrs]**

Trees: Binary Trees –Representation- Conversion of Forest to Binary Tree– Tree Traversals

UNIT-V: **[12 Hrs]**

Graph: Definition, Types of Graphs, Representation -Graph Traversal - Shortest Path (Dijkstra's Algorithm.)

TEXT BOOKS

1. E.Horowitz and S.Shani Fundamentals of Data Structures in C++, Galgotia Pub.1999.
2. R.Kruse and N.Dale and S.C.Lily Pascal plus Data Structures Algorithms and Advanced Programming –Tata McGraw Hill-New Delhi(1990)

SEMESTER – II STATISTICAL METHODS ASCA202T

UNIT – I

Measures of Central tendency: Arithmetic Mean, Median, Mode, Harmonic Mean and Geometric Mean. Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, Standard Deviation and Coefficient of Variation.

UNIT – II

Measures of Skewness: Karl Pearson's coefficient of Skewness, Bowley's coefficient of Skewness and Kelly's coefficient of Skewness. Kurtosis

UNIT – III

Correlation analysis: Karl Pearson's coefficient of correlation, Spearman's rank correlation coefficients. Regression analysis: Simple regression equations.

UNIT – IV

Tests of Significance (small samples) based on t, F distributions with respect of Mean, Variance and Correlation coefficient. Testing of Significance based on Chi-Square test: Test for Independence of attributes.

UNIT –V

Test of Significance (large samples) based on Population Proportion, Mean, Variance and Correlation coefficient.

Text Books:

1. "Statistical Methods" (32nd edition - 2004), Gupta. S. P., Sultan Chand & Sons, New Delhi.
2. "Fundamentals of Mathematical Statistics" (11th edition – 2002), Gupta. S. C. and Kapoor. V. K., Sultan Chand & Sons, New Delhi.

Reference Books:

1. "Fundamentals of Applied Statistics" (2nd edition – 1978), Gupta. S. C. and Kapoor. V. K., Sultan Chand & Sons, New Delhi.
2. "Statistics (Theory and Practice)" (3rd edition - 1993), Pillai. R. S. N. and Bagavathi. V. Sultan Chand & Sons, New Delhi.
3. "Fundamentals of Statistics – Volume II" (6th edition - 1990), Goon. A. M., Gupta. M. K. and Dass Gupta. B, The World Press Private Ltd., Calcutta.
4. "Business Statistics" (1st edition – 2008), Bharat Jhunjhunwala, S. Chand & Company Ltd.
5. "Mathematical Statistics" (1st edition – 2002), Vittal. P. R., Margham Publications, Chennai – 17

பருவம் : இரண்டாம் பருவம் பாடக் குறியீட்டு எண் : **EBT 201**

அலகு – 1

எளிய முறையில் தமிழ் கற்றல்.

1. பட்டம் – சட்டம் – கட்டடம் – தட்டு – வட்டம் – மாமா
2. பாடம் – சட்டி – கட்டி – தட்டி – வடம் – மாமி
3. பட்டி – சடை – கடை – தடை – வடை – மாதா
4. படி – சாதம் - கார் - தார் - வான் - மாதம்
5. படை – சாவி – காவி – தாள் - வான் - அம்மா – அப்பா
6. பாப்பா –
7. பாட்டி –
8. பாட்டு –

சிறு தொடர்.

பாப்பா படி – பாட்டி கடை – கட்டடம் கட்டித்தா –
பாப்பா பாடம்படி – பாட்டி தட்டு –
பாப்பா பாட்டு படி – பாட்டி வடைத்தட்டு

பயிற்சி.

குடும்பத்தினர் (அ) நண்பருடன் பேச்சுத் தமிழில் உரையாடல்
குறில் நெடில் வேறுபாட்டால் பொருள் மாறுபடும் சொற்கள்
பரம் – பாரம் கரம் – காரம் வரம் – வாரம் சரம் – சாரம்
தரம் – தாரம்

அலகு – 2

உயிரெழுத்துக்கள், ஆய்த எழுத்து, மெய்யெழுத்துக்கள் - வகை, எண்ணிக்கையுடன் அறிதல்.

உயிர்மெய் எழுத்துகள் உருவாதலைக் கற்றல்:
(வல்லின மெய்கள்)

க் + அ – க ..... ற் + ஔ – றௌ
K + A – KA ..... RR + OU - RROU

அலகு – 3

உயிர்மெய் எழுத்துகள் மெல்லினம், இடையினம்

ங் + அ = ங ..... ன் + ஔ – னௌ
NG + A – NGA ..... N + OU – NOU

ய் + அ = ய ..... ள் + ஔ – ளௌ
Y + A – YA ..... LL + OU - LLOU

ஒலி வேறுபாட்டால் பொருள் மாற்றம் (ர-ற, ன-ண, ல-ள, ழ)
அரம் - அறம்
உன் - உண்
வால் - வாள் - வாழ்

ஒவ்வொன்றிற்கும் ஐந்து எடுத்துக்காட்டு தருக.

அலகு – 4
சொல்-வகை
ஓரெழுத்து ஒருமொழி
பெயர்:
ஆ, பூ, தீ, தை, கா (சோலை)
வினை:
வா, போ, ஈ (கொடு)
தா, கா (காத்தால்)
ஈரெழுத்து ஒருமொழி:
பெயர்:
கனி, பனி, வான், காடு, வீடு
வினை:
நில், படி, பார், காண், எழு
தொடர்மொழி: பெயர்:
கபிலர், வெள்ளிவீதியார், திருவள்ளுவர், ஆண்டாள், கம்பர், பாரதியார்
முக்கனி, முத்தமிழ், மூவேந்தர், நாற்றிசை, ஐம்பொறி - இவற்றிற்கு விளக்கம் தருக.
முறைப்பெயர் (உறவுப்பெயர்) அம்மா, அப்பா, மாமா, ...
அலகு – 5
உடலுறுப்புப் பெயர்கள்:
தலை முதல் அடி வரை உள்ள உறுப்புகள்

முதலெழுத்து மாற்றத்தால் பொருள் மாற்றம் பெறும் உடலுறுப்புகள் சான்றாக:

உதயம் – இதயம்	ஊக்கு – மூக்கு
பண், மண் – கண்	படி – அடி
மரம், வரம் – கால்	கல் – பல்
ஆல், பால் – கால்	கொடை – தொடை
அலை, இலை – தலை	மாது – காது
பாக்கு, வாக்கு – நாக்கு	கிழி – விழி
எழுத்து – கழுத்து	

பறவைப் பெயர்கள்:
மயில், அன்னம், கிளி, புறா, குயில்
வீட்டு விலங்குகள்:
பசு, ஆடு, குதிரை, நாய், பூனை
மலர்கள்:
தாமரை, மல்லிகை, முல்லை, செண்பகம், அல்லி
நிறங்கள்:
வானவில்லின் வண்ணங்கள் - அறிதல்
எண்கள்:
ஒன்று முதல் ஐம்பது வரை எழுத்தால் எழுதுதல்

சிறுகதை:
“புலியை ஏமாற்றிய நரி” தமிழ் - நான்காம் வகுப்பு, தமிழ் நாட்டுப் பாடநூல் கழகம், சென்னை.

SEMESTER – II PERSONALITY DEVELOPMENT EPD201

Unit I

Personality

Meaning-definition-major determinants of personality genetic determinants, social determinants, cultural determinants, psychological determinants, theories Jung's typology trait theory psychoanalytical theory importance of personality development guidance to improve personality.

Unit II

Mental health

Meaning-concept-definition-characteristics - influential factors - biological factors - psychological factors - socio-economic and cultural factors

Unit III

Stress and its management

Meaning,definition causes of stress, major life changes and environmental events - conquence of stress,stress manangement techniques.

Unit IV

Part-a

Anger and its manangement;

Meaning, definition, nature-causes-symtoms and consequence of anger - physiological effects and psychological effects ,techniques to control anger.

Part-b

Suicidal prevention

Unit V

Soft skills development - Presentation skill - Interpersonal skill - Body language

Text Book;

Mental health of rural youth

Reference;

Personality development-Elizabeth .B.Hurlock

SEM – II OBJECT ORIENTED PROGRAMMING IN C++ PRACTICAL CAP202S

1. Program using Classes and Objects
2. Program using Constructor and destructor
3. Program using Function overloading and Inline functions
4. Program using Operator Overloading
5. Program using Inheritance
6. Program using friend functions

Programs using Data Structure Concepts

7. Implement PUSH, POP Operators of Stack using Arrays.
8. Implement add, delete Operators of a queue using Arrays.
9. Conversion of infix to postfix using stack Operations.
10. Binary tree traversals using recursion

SEMESTER – III Programming using Sun Micros Tech-Java CA305Q

UNIT – I **[18 Hrs]**

Introduction to Java: Features of Java – Data Types – Variables – Arrays – Operators - Control Statements.

UNIT – II **[18 Hrs]**

Classes and Objects: Constructors –Inheritance- Overloading method– Overriding methods – Using super – Abstract class.

UNIT – III **[18 Hrs]**

Packages and Interfaces: Packages-Creating Packages –Importing Packages– Interfaces**. Exception Handling:** Try, Catch, Throws, Throw and Finally.

UNIT –IV **[18 Hrs]**

Thread: Introduction to Thread-Multithread-implementation of multithread application using synchronization.

Streams: Simple Input Streams-Simple Output Streams – File Streams-

UNIT – V **[18 Hrs]**

Strings: String classes-String Buffer classes.

Predefined Classes: Vector class, Random class, Calendar class, Date Class.

TEXT BOOKS:

1. Cray S. Horstman, Gray Cornell – Core Java 2 Vol. I and Vol. II – 7th Ed. PHI, 2000.
2. H. Schildt – Java2 (The Complete Reference] – Fourth Edition, TMH 1999.

REFERENCE BOOK:

Wesley, K. Arnold and J. Gosling – The Java Programming Language – Third Edition Addison – Wesley, 2000.

SEMESTER– III COMPUTER GRAPHICS CA306S

UNIT –I

Introduction to computer Graphics: Video display devices – Raster scan system – Random Scan System – Interactive input Devices – Hard copy devices – Graphics software – Output primitives – line drawing algorithms – initializing lines – Line function – circle Generating algorithms.

UNIT – II

Output Primitives: Attributes of output Primitives – line attributes – Color and Grayscale style – Area filing algorithms – Character attributes Inquiry functions – Two dimensional transformations – Basic transformation – composite transformation – Matrix representation –Other transformations.

UNIT – III

2D Concepts: Two – dimensional viewing – window – to view port co-ordinate transformation – clipping algorithms – interactive input methods – Physical Input devices – logical classification of input devices – interactive picture construction methods.

UNIT- IV

3D Concepts: Three – dimensional concepts – Three dimensional display methods – parallel Projection –Perspective projection – Depth Cueing – Visible line and surface identification.

UNIT – V

Transformations: Three dimensional transformations -Three dimensional viewing – Projection – Viewing transformation – implementation of viewing operations.

TEXT BOOK:

1. D. Hearn and M.P. Basker – Computer Graphics [C Version] – Person Education.

REFERENCE BOOK:

1. W.M. Newman and RF. Sproull – Principle of Interactive Computer Graphics – McGraw Hill International Edition -1979.

SEMESTER III FINANCIAL ACCOUNTING ACMCA301

Unit-I

Accounting- meaning- definition- need- book keeping- objectives- advantages- limitation – Accounting Concepts and Conventions- Journal – ledger- subsidiary books – Trail balance.

Unit –II

Final account – Trading – Profit and Loss account – Balance sheet – adjustments – Bank Reconciliation statements.

Unit –III

Single Entry System – meaning – definition – Net worth Method –conversion method – Distinction between balance sheet and statement of affairs.

Unit- IV

Branch accounts – meaning – Dependent Branches – Debtors system – Stock and Debtors System – Final Account System – Wholesale Branch System.

Unit - V

Departmental accounting – meaning – need – advantages – distinction between department and branches – Inter – departmental transfers excluded.

TEXT BOOKS:-

1. Financial Accounting, T.S. Reddy& Murth, Margham Publications, Chennai-5, 2007
2. Financial Accounting R. L. Gupta & V. K. Gupta, Sultan Chand, New Delhi, 2005.

REFERENCE BOOK:

1. Advance accountancy – I, M. C. Skukla & T. S. Grewal, Sultan Chand & Sons, New Delhi, 2005.
2. Advance Accountancy – I, Jain & NArang, Kalyani Publications, New Delhi, 2003
3. Advanced Accountancy – I, Arulandam & Raman, Himalaya Publications, New Delhi, 2003
4. Financial Accounting, P. C. Thulsian, Tata McGraw Hill, New Delhi, 2005
5. www.icai.org (1st Unit)

SEMESTER – III NUMERICAL METHODS AMTCA302

UNIT- I: FINITE DIFFERENCES

First and higher order differences-forward differences and Back ward differences-Properties of operators-Differences of a Polynomial-Factorial Polynomials – Operator E, Relation between Δ, ∇ and E – Interpolation – Newton – Gregory forward & backward formulae for interpolation.

UNIT-II: CENTRAL DIFFERENCES

Central difference Operators – Central differences formulae: Gauss Forward and Backward formulae – Sterling's formula – Bessel's formula.

UNIT – III: INTERPOLATING FOR UNEQUAL INTERVALS AND INVERSE INTERPOLATION

Divided differences – Newton's divided differences formula and Lagrange's formula – Estimating the Missing terms [with one or more missing values] - Lagrange's method and Reversion of series method [Using Newton's forward formula only]..

UNIT – IV: SOLUTION OF SIMULTANEOUS EQUATION

Gauss elimination method – matrix inversion method – Gauss – Jordan Method, Gauss – Seidal method – Crout's method [Three unknowns only].

UNIT – V: SOLUTION OF DIFFERENTIAL EQUATION

Solving second order differential equation, Rung kutta metod, Euler's modified method, Euler's method, Adam's method.

Text Books:

1. A.Singaravelu [2004]. Numerical Methods Meenakshi Agency, Chennai
2. M.K.Venkataraman.(1992) Numerical methods for Science and Engineering National Publishing Company., Chennai.

Reference Books :

1. S.Arumugham.[2003] Numerical Methods, New Gamma Publishing, Palamkottai.
2. H.C.Saxena.[1991] Finite differences and Numerical analysis S.Chand & Co. Delhi
3. B.D.Gupta.(2001) Numerical Analysis, Konark Pub. Ltd., Delhi
4. P.Kandasamy, K.Thilagavathy [2003] Calculus of Finite difference & Numerical Analysis, S.Chand & Company Ltd., New Delhi-55.

SEMESTER– III Programming using Sun Micros Tech-Java –PRACTICAL CAP303Q

1. Finding area and Perimeter of a circle. Use Buffered Reader class.
2. Determining the order of numbers generated randomly using Random class.
3. Implementing and importing packages for simple application.
4. Implementing Interfaces-Arithmetic Manipulations.
5. Exception Handling.
6. Multithreading.
7. String Manipulation using String/StringBuffer class.
8. Usage of Calendar Class and manipulation
9. Application using File streams(Sequential File)
10. Application using File Streams(Random File)

SEMESTER – III ENVIRONMENTAL STUDIES EVS301

Unit I : Environmental studies and Natural resources (20 Hrs)

Definition, scope and importance of environmental studies – forest resources: deforestation, mining, dams – water resources: over – utilization, floods, drought – mineral resources: exdploitation, extraction and usage – food resources: food problems, overgrazing, pesticide problems, water logging, salinity – energy resources: energy needs, renewable and non renewable energy – land resources: land degradation, landslides, soil erosion and desertification – conserving natural resources.

Unit II: Ecosystems : (20 Hrs)

Concept, structure and function of an ecosystem – producers, consumers and decomposers – energy flow – ecological succession – food chains, food webs and ecological pyramids – types, characteristics, structure and function of forest ecosystem, grassland ecosystem, desert ecosystem and aquatic ecosystem –

Unit III: Biodiversity: (20 Hrs)

Definition of biodiversity – genetic, species and ecosystem diversity – value of biodiversity – India as a mega diversity nation – hot spots – threats to biodiversity – endangered and endemic species of India – In-situ and Ex-situ conservation of biodiversity.

Unit IV: Environmental Pollution: (20 Hrs)

Cause, effects and control measures of air pollution, water pollution, soil pollution, marine pollution, noise pollution, thermal pollution and nuclear hazards – solid waste management: causes, effects, control measures and disposal of wastes – disaster management: floods, earthquakes, cyclone, land slides and tsunami.

Unit V: Social Issues, Human population and the Environment: (20 Hrs)

Water conservation, rain water harvesting, watershed management – environmental ethics: issues and possible solution – climate change, global warming, acid rain, ozone depletion, nuclear accidents and holocaust – wasteland reclamation – Environment protection Act – Wildlife protection Act – Forest Conservation Act – public awareness – Population explosion – Environment and human health – Role of Information Technology in Environment and human health.

Field work: (20 Hrs)

1. Visit to a local area to document environmental assets – river / forest / grassland/mangrove.
2. Visit to a local polluted site – urban / rural / industrial / agricultural.
3. Study of common plants, insects, birds.
4. Study of simple ecosystems – pond, river, forest, etc.,
5. Practical work

Reference Books:

1. Joseph C.Daniel,2004. Principles of Environmental Science. Brightson's Publications,Chennai.
2. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.
3. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad - 380 013, India, Email:mapin@icenet.net
4. Jadhav, H & Bhosale, V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi
5. Miller T.G. Jr. Environmental Science, Wadsworth Publishing Co.
6. Odum, E.P. 1971. Fundamentals of Ecology. W.B. Saunders Co. USA,
7. Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut
8. Trivedi R.K., Hand book of Environmental Laws, Rules Guidelines, Compliances and Standards. Vol I and II, Enviro Media9.Wanger K.D., 1998. Environmental Management. W.B. Saunders Co. Philadelphia, USA

SEMESTER– IV COMPUTER ALGORITHMS CA407S

UNIT-I

Introduction: Algorithm-PSEUDO – How to analyze algorithms-Time and Space complexity. **Divide and Conquer:** General method- Complexity analysis-Strassen's Matrix Multiplication-Quick sort-Merge sort.

UNIT-II

Dynamic Programming: General method-multistage graph-Traveling salesman problem

UNIT-III

Traversal Techniques: Back Tracking- General method-Depth first search- Breadth first search.

UNIT-IV

Greedy method: General method- Shortest path-Algorithm-problems-0/1 Knapsack problem

UNIT-V

Lower bound theory: Comparison trees-Basic concepts of Np-Hard and Np-Complete.

TEXT BOOKS:

1. E.Horowitz.S.Sahni and S.Rajasekaran, Computer Algorithms Galgotia-1999.
2. G.Brassard and Brately- Fundamentals of Algorithmics, PHI 1996.

REFERENCE BOOK:

1. Goodman, S.E. and Hedentnelemi- Introduction to the Design and Analysis of Algorithms-McGrawHill publication.

SEMESTER – IV Advanced Java Programming CA408T

UNIT I **[18 Hrs]**

AWT Overview: Components,Container-AWT classes: Button, TextField, Checkbox-Layouts-Simple example using AWT. **Applet**: Introduction to Applet-Life Cycle of Applet.-Simple example using applet.

UNIT II **[18 Hrs]**

Networks:Network Basics-socket overview-Internet Addressing-DNS-TCP/IP-URL-Example using network concepts.

UNIT III **[18 Hrs]**

DataBase: JDBC-ODBC Driver-Connection class-Command class-ResultSet class-Example using database (msaccess).

UNIT IV **[18 Hrs]**

RMI: Introduction to RMI-Architecture of RMI-A complete example using RMI.

UNIT V **[18 Hrs]**

Servlet: Servlet overview – your first servlet – servlet chaining – session management in servlet: Session Tracking-simple database program using Servlet.

TEXT BOOKS:

1. Cray S. Horstman, Gray Cornell – Core Java 2 Vol. I and Vol. II – 7th Ed. PHI, 2000.
2. H. Schildt – Java2 (The Complete Reference] – Fourth Edition, TMH 1999.

REFERENCE BOOK:

Wesley, K. Arnold and J. Gosling – The Java Programming Language – Third Edition
Addison – Wesley, 2000.

SEMESTER – IV COST AND MANAGEMENT ACCOUNTING ACMCA402

Unit – I

Cost accounting – definition of cost, costing – scope and objectives of cost accounting – cost sheet – tender and quotation.

Unit – II

Management accounting – meaning – nature – limitation – financial statement analysis – Tools for Analysis – Common Size Financial Statement – Comparative Statement – Trend Analysis.

Unit – III

Ratio Analysis – Meaning – Definition – Objectives – Types – Advantages and Limitations – calculation of ratios – preparation of Balance Sheet.

Unit – IV

Marginal Costing – decision making problems – key factor – make or buy decisions – product mix or sales mix.

Unit – V

Capital budgeting – meaning – definition – kinds of capital investment proposals – methods of capital budgeting.

References:

1. Management Accounting – Pillai & Bagavathi
2. Principles of Management of Accounting – 1997, S. N. Maheswari. Sultan Chand, New Delhi
3. Cost Accounting, S. P. Jain & Narang
4. Cost & Management Accounting, 2002, Y. S. Reddy & Y. Hari Prasad Reddy, Margham Publications', Chennai

SEMESTER – IV RESOURCE MANAGEMENT TECHNIQUES AMTCA403

Unit –I

Definitions of OR-Linear programming problem-Graphical solution -Simplex method – Artificial variables techniques – Big M method and Two phase method**.** **(15 Hrs)**

Unit-II

Transportation model: Definition , Formulation of Transportation-North-west corner method – Matrix minima method- Vogel's Approximation method –solution of Transportation-modi's method

Assignment models: Definition of Assignment models- Formulation and solution of Assignment models-Special cases of Assignment problems – Travelling salesman problem. **(15 Hrs)**

Unit-III

Sequencing problem:Basic term used in sequencing-Processing n jobs through two machines-Processing n jobs through three machines- Processing two jobs through k machines –problems and algorithm. **(15 Hrs)**

Unit –IV

Game theory: Two person zero sum game-Basic terms –Maxi min and Mini max principle-Games without saddle point –Mixed stratergies– graphical solution of 2xn and mx2 games -Dominance property-Arithmetic method for nxn games. **(15 Hrs)**

Unit –V

PERT/CPM Networks: Introduction –Network and basic component –Logical sequencing -Fulkerson's rule of the Network construction –Critical path Analysis –Probability consideration in PERT-Distinction between PERT and CPM .

Text Books:

1. Kanti Swaru, Gupta P. K. and Manmohan,[1999], Operations Research, Sulthan Chand & Sons., Delhi.

Reference Books

1. Gupta P. K and Hira D. S. [2000] Problems in Operations Research, Sulthan Chand & Sons., Delhi.
2. J. K. Sharma, [2001] Operations Research Theory and Applications, Macmillan, Delhi
3. Taha H. A.[2003] Operations Research , Macmillan Publishing Company, New York.
4. P.R. Vittal [2003] Operations Research , Margham Publications, Chennai.

SEMESTER-IV Soft Skills Syllabus A0SS401

Unit-I:

Healthcare: Family Ethics-Health hazards-Importance of Carbohydrates-Proteins-Fats-Vitamins-Types-Fat soluble-Water soluble-Daily Requirements-Functions and Deficiency.

Unit-II:

Communication Skills: Communication-Barriers of Communication-Types of Communication-Types of Letter Writing-Common Errors in Grammar-Telephone Communication.

Unit-III:

Aptitude Techniques: Logical and Abstract reasoning-Analytical reasoning-Verbal ability-Intellectual Skills-Perceptual Skills-Book keeping and Office Skills.

Unit-IV:

Case study on Report Writing-Newspaper Reading-Group Discussion-Interviews-Mock Interviews-Decision making-Human Resource Management-Time Management.

Unit-V:

Personality Development: Ice Breaking-Motivation-Leadership qualities-Stress Management-Decision making in critical situation-Role play-Anger Management-Dress code.

SEMESTER– IV ADVANCED JAVA PROGAMMING-PRACTICAL CAP404T

.

1. To implement Bio-Data Information using Frame class with various controls.
2. Display different graphical symbols using Applet class.
3. To implement for sending a string from one system to another using TCP/IP.
4. Chatting Application using TCP/IP.
5. To develop an application for telephone directory using data base(msaccess).
6. To implement student mark list using AWT classes with data base (msaccess).
7. To develop a program for prime number using RMI.
8. To develop a program for Arithmetic Operation using Servlets.
9. To develop an application for simple EB Bill using Servlets with database.

SEMESTER – V Relational Database Management System s CA509S

Objective :
To make the students aware of Normalization concepts related to Database and Some Basic SQL Commands.

UNIT – I **[18 hrs]**
Database management system: Definition – purpose of database systems – data abstraction – data models – instances and schemes – data independence – database manager – database administrator – database users – overall system structure.

UNIT II **[18 hrs]**
Entity – Relationship Model: Entities and entity sets – relationships and relationship sets – attributes – mapping constraints – keys –E-R diagram – reducing E-R diagrams to tables – generalization – aggregation.

UNIT – III **[18 hrs]**
Normal Forms: First Normal Form – Second Normal Form – Third Normal Form – Boyce – Codd normal form - Fourth Normal Form.

UNIT – IV **[18 hrs]**
Introduction to SQL:DDL,DML,DCL operations – integrity constraints – string functions – number functions – date functions-aggregate functions – selecting distinct values – working with null values –pseudo columns – grouping and ordering data – sub queries – joins – union ,intersect & minus – indexes – clusters – views-snapshots – sequences – synonym – users, roles and privileges – grant and revoke permission – locks.

UNIT – V **[18 hrs]**
Introduction to PL/SQL: PL/SQL overview-Declarations section-Executable commands section-Exception handling section-Procedures-Functions-Packages-Triggers-Cursor Management.

TEXT BOOKS:
1. Henry F.Korth & Abraham Silberschatz “Database System concepts”- TMH-1998.
2. A.J.Page “Relational database concepts selection and implementation”
3. ORACLE DATABASE 10g-The complete reference- **KEVIN LONELY**, Tata McGraw-Hill Publishing Company Ltd 2004

REFERENCE BOOKS:
1. ”Introduction to Oracle”, Oracle Corporation Press.
2. ”Introduction to PL/SQL”, Oracle Corporation Press.

SEMESTER – V PROGRAMMING USING MICROSOFT TECHNOLOGY (C#.NET) CA510T

Objective:

To make the student get exposed with the latest programming concept Dot net and to equip them with skills related to c# programming.

UNIT-I **[15 hrs]**

Introductin to Dot Net:- Dot Net Framework –CLR-MSIL-JIT-Managed Code-Benefits of Dot Net.

UNIT -II: **[15 hrs]**

C#.Net: Data types-Variables-Arrays-Properties-Namespace-Methods-Interface-Delegation.

UNIT-III: **[15 hrs]**

Asp.net: Difference between Asp and Asp.net-Architecture of Asp.net-Execution model-Difference between Code Behind and aspx file-Implementation of simple web application.

UNIT-IV: **[15 hrs]**

Controls in C#: Button-Textbox-Timer-PictureBox-RadioButton-Menu. **Web Controls**: AdRotator-Validation-Calendar .

UNIT –V: **[15 hrs]**

ADO.NET: ADO.Net Objects Model – Architecture of ADO.NET-Working with Grid control-Working with Crystal Report Viewer control.

TEXT BOOKS:

1. Harvey M.Deitel & Paul J.Deitel- c# Programmers- Second Edition-Pearson Edition.
2. Yashavant Kanetkar, 2004 C#.Net. Motilal Books of India.
3. Peter Drayton , Ben Albahari, Ted Neward. C# in an nutshell. O'Reilley Publication.
4. E.Balaguruswamy. Programming with C# - 1- Edition. Tata McGraw – Hill Publication.

REFERENCE BOOKS

1. Herbert Schlitz. 2002 C# - A Beginner's Guide. Osborne/ McGraw – Hill Publication.
2. Burton Harvey, Simon Robinson, julian Templeman and Karli Waston, 'C# Programming with the Public Bata', Shroff Publishers & Distributors Pvt. Ltd(SPD) Mumbai, April 2001.
3. Ben Albahart, Peter Drayton and Brad Merrill, 'c# Essentials', SPD, Mumbai March 2001.
4. Thamari Selvei, A text Book on C#: A Systematic Approach to OOP, Pearson Ed.

SEMESTER – V DATA COMMUNICATION NETWORKS ECA511

UNIT I **[18 hrs]**

Introduction: Networks – protocols and standard – line configuration – topology – transmission mode – categories of networks – inter networks.

UNIT II **[18 hrs]**

OSI model: functions of the layers – TCP/IP protocol suite – signals – analog and digital signal – periodic and a periodic signals – analog signals – digital signal – data transmission – data terminal equipment – data circuit terminals equipment – modems.

UNIT III **[18 hrs]**

Transmission media: guided media – unguided media – transmission impairments – media comparison. Multiplexing – FDM – TDM – WDM. Error detection and correction – types of errors–detection – vertical redundancy check (VRC) – longitudinal redundancy check (LRC) – cyclic redundancy check (CRC) – check sum – error correction.

UNIT IV **[18 hrs]**

Switching Techniques: circuit switching – packet switching – message switching – networking and internetworking devices – repeaters – bridges – routers – gateways.

UNIT V **[18 hrs]**

Routing algorithms: distance vector routing – link state routing – data link control – line discipline – flow control – error control.

TEXT BOOKS:

1. Behrouz A Forouzan, "Data Communications and Networks" – Second Edition, Tata McGraw Hill, 2002.
2. Andrew S. Tanenbaum, " Computer Networks", 3third Edition,

REFERENCE BOOK:

1. William Stallings, "Data & Computer Communications", Sixth Edition,Pearson Education, 2001.
2. Fred Halsall, "Data Communications, Computer Networks and Open Systems", Addison Wessley, 1995.

SEMESTER – V ELECTRONIC COMMERCE ECA512

.

UNIT I: **[15 hrs]**

Introduction: Electronic commerce environment and opportunities- Background – the electronic commerce environment – electronic marketplace technologies.

UNIT II: **[15 hrs]**

Models of electronic commerce: Overview – electronic data interchange – migration to open EDI – electronic commerce with WWW/Internet – Commerce Net Advocacy – Web commerce going forward.

UNIT III: **[15 hrs]**

Approaches to safe electronic commerce: Overview – secure transport protocols – secure transactions – secure electronic payment protocol (SEPP) – Secure electronic transaction (SET) – certificates for authentication – security and enterprises networks – electronic cash and electronic payment schemes: Internet monetary payment and security requirements – payment and purchase order process – on-line electronic cash.

UNIT IV: **[15 hrs]**

Internet/Internet security issues and solutions: The need for computer security – specific intruder approaches – security strategies – security tools – encryption – enterprise networking and access to the internet – anti virus programs – security teams.

UNIT V: **[15 hrs]**

Master card/visa secure electronic transaction: Introduction – business requirements – concepts – payment processing – E-mail and secure E-mail technologies for electronic commerce: Introduction – The means of distribution A Model for message handling – how does E-mail work? – MIME: Multipurpose Internet mail extensions – S/MINE: Secure multipurpose internet mail extensions – MOSS: Message object. Security services – Comparisons of security methods – MIME and related facilities for EDI over the Internet.

TEXT BOOKS:

1. Daniel Minoli & Emma Minoli", Web Commerce Technology Handbook",Tata McGraw Hill Publishng Company Ltd., New Delhi :1999.
2. R.Kalakota and A.B.Whinston , "Frontiers of Electronic Commerce", Addison Wesley,2000.

REFERENCE BOOKS:

1. R.Kalakota and A.B.Whinston, "Readings in Electronic Commerce", Addison Wesley,1997.
2. Pete Loshin & Paul A.Murphy , "ElectronicCommerce",2nd ed, Jaico Publishing House,2000.
3. David Kosiur, "Understanding Electronic Commerce", Microsoft Press,1997.

SEMESTER – V PROG. USING MS TECH.
(ASP.NET USING C#) PRACTICAL
CAP505T

Objective:
To improve the programming skills of the students with respect to C# and also to develop web application using asp.net and to make the students to know the latest programming concepts.

WINDOWS APPLICATION:
1. To develop simple student bio data
2. Create a color chooser using standard control.
4. To develop Notepad Application.
5. Login Form Creation using Ms Access.

WEB APPLICATION:
6. Create an application to sending a request from one page to another using session.
7. Create a simple website for an organization using Master Page.
8. To develop database application for student mark list processing using validation control (Oracle) 9. To develop database Application for Telephone Directory to store phone number, Customer name and Customer address and display it with Grid View control.(SQL server)

SEMESTER – V RDBMS -ORACLE-PRACTICAL CAP506T

SQL

1. Simple Queries using DDL,DML and DCL
2. SQL In-Built Functions
3. SET Operations
4. Views and Snapshots
5. Joins
6. Sub Queries

PL/SQL

7. PL/SQL Block
8. Procedures
9. Functions
10. Packages
11. Triggers
12. Cursors

SEMESTER – VI Computer Architecture CA613S

UNIT- I **[15 Hrs]**

Central processing unit : General register and stack organization - Instruction formats - Addressing modes – Data Transfer and Manipulation.

UNIT- II **[15 Hrs]**

Pipelining : Arithmetic, instruction and RISC pipelining - Vector Processing.

UNIT- III **[15 Hrs]**

Computer Arithmetic : Addition and subtraction - Multiplication and Division Algorithms - Floating point and Decimal arithmetic operations.

UNIT – IV **[15 Hrs]**

Input-Output organization : Peripheral Devices - I/O Interface - Asynchronous data transfer - Modes of transfer - Priority interrupt - Direct memory access - I/O processor.

UNIT- V **[15 Hrs]**

Memory Organisation : Memory hierarchy - Main memory - Auxiliary memory - Associative, Cache and Virtual memory .

Text Book:

M.Morris mano, “computer system architecture”,PHI.

Reference Book:

1.V.Carl Hamacher,uonko G.Vranesic, safwat G.Zaky, “Computer Organization”, McGraw Hill

2.John,P.Hayes, “Computer system Architecture”,McGraw Hill.

SEMESTER – VI CA614T OPEN SOURCE TECHNOLOGIES - PHP

Objective:
To impart basic knowledge of PHP and MySQL.

UNIT-I **[15 Hrs]**
ESSENTIAL PHP: Creating your Development Environment – Mixing HTML and PHP – Command - Line PHP – Working with Variables – Creating Constants – Understanding PHP's Internal Data types – Operators and Flow Control.

UNIT-II **[15 Hrs]**
STRINGS AND ARRAYS: String Functions- Converting to and from Strings - Formatting Text String -Modifying Data in an Array-Deleting Array Elements- Arrays with Loops - PHP Array Functions-Sorting Arrays.

UNIT-III **[15 Hrs]**
CREATING FUNCTIONS: Passing Functions-Passing Arrays to Functions- Passing by Reference-Using Default Arguments- Returning Data from functions- Nesting Functions.
CONTROL STATEMENTS: Data Input/Output functions - flow of control-control structures - switch, break and continue - Go to statement-comma operator.

UNIT-IV **[15 Hrs]**
READING DATA IN WEB PAGES: Setting up web pages to communication with PHP- Handling Text Fields-Checkbox-Radio buttons-Password Controls- List boxes-Buttons – Hidden Control – File Upload.

UNIT-V **[15 Hrs]**
WORKING WITH DATABASES: Creating a MYSOL Database-Creating a New Table-Putting Data into the New Database-Accessing the Databases in PHP-Updating Databases-Inserting New Data Items into a Database- Deleting Records-Creating New Tables-Creating a New Database-Sorting your Data.

TEXT BOOK
Steven Holzner, "The Complete Reference PHP", Tata McGraw Hill Pvt.Ltd., 2008.

BOOK FOR REFERENCE
Leon Atkinson, "Core PHP programming", Pearson Education, 2004.

SEMESTER – VI OPERATING SYSTEMS ECA615

UNIT-I **[18 hrs]**

Introduction: History of Operating system - Operating system functions – File system.

UNIT-II **[18 hrs]**

Process Management: Inter-process communication - Dead Lock - Dead Lock prerequisites - Dead Lock Strategies

UNIT-III **[18 hrs]**

Memory Management: - Single Contiguous – Fixed Partitioned – Variable Partitions – Non-Contiguous allocations - Paging – Segmentation - Virtual Memory Management Systems.

UNIT-IV **[18 hrs]**

GUI: – Components of GUI – Requirements of Windows based GUI –Security Protection: Threats – Attacks – Worms – Virus - Design principles – Authentication – Protection mechanisms – Encryption.

UNIT-V **[18 hrs]**

Unix OS: Architecture of Unix-File System of Unix- Basic commands in UNIX.

TEXT BOOKS:

1. A.S.Godbole-Operating Systems-TMH-1999.
2. A.Silberschatz and P.B.Galvin- Operating system concepts-Addision-Wesley Publishing company, Fifth Edition, 1998.

REFERENCE BOOKS :

1. Andrew S.Tannenbaum, “Operating Systems: Design and Implementation”, 3/e, PHI,2006.
2. Charles Crowley, ”Operating Systems-A design Oriented Approach”, Tata McGraw Hill , 1998.
3. William Stallings, “Operating Systems”,5/e PHI/Pearson Education , 1997.

SEMESTER – VI SOFTWARE ENGINERRING ECA616S

UNIT - I: **[18 hrs]**

Introduction: Evolving Role of Software-Characteristics of Software-Software Myths-Process Models: Waterfall Model- Evolutionary Process Models.

UNIT –II : **[18 hrs]**

Requirement Engineering: Tasks - Initiating the Requirements Engineering Process- Eliciting Requirements.

UNIT III: **[18 hrs]**

Building Analysis Model: Requirement Analysis - Data Modeling – Flow Oriented Modeling – Class Based Modeling – Creating a Behavioral Model.

UNIT –IV: **[18 hrs]**

Testing: Software Testing Methods - Software Testing strategies –White Box Testing – Basic Path-Control Structure – Black Box Testing.

UNIT –V: **[18 hrs]**

Project Management: Management Spectrum - Formal Technical Reviews.

TEXT BOOKS :

1. R.S.Pressman – Software Engineering –Sixth Edition McGraw Hill International edition – 1997.
2. Richard Fairley – Software Engineering – (Design, Reliability and Management) – Tata McGraw Hill edition –1983.

REFERENCE BOOKS

1. Software Engineering Programs Documentation Operating procedures
2. Carlo Ghezzi, Mehdi Jazayasi, Dino Mandrioloi," Fundamentals of Software Engineering " Phi Pvt. Ltd., 1991.

SEMESTER – VI CAP607T PRACTICAL – OPEN SOURCE TECHNOLOGIES – PHP

Objective:
To enable the student to build applications in PHP.

1. Simple Programs
2. String Functions
3. Arrays
4. Functions
5. Create a Home Page using PHP
6. Form creation using POST method
7. Database Operations
8. Login form
9. Student mark list creation
10. Electricity bill preparation.

SEMESTER – VI EU601 EXTENSION ACTIVITIES

SEMESTER – VI Mini-Project JCA601

Mini-Project on Multimedia/ Web design/I Phone Applications.

FORMAT FOR PREPARING MINI PROJECT REPORT

Arrangement of contents

1. Title Page
2. Bonafide Certificate
3. Acknowledgement
4. Table of contents
5. Abstract
6. Chapters of the Report
7. References
8. Appendices, if any

Appendices should be named as

APPENDIX – A
APPENDIX - B

BINDING SPECIFICATION

Report should be found using flexible cove of thick white art paper.
The Spine for the bound volume should be 2cms width.
The Cover should be printed in block letters.

MARGIN SPECIFICATION

Top : 4 cms
Bottom : 3 cms
Left : 4.5 cms
Top : 2.5 cms

PAGE NUMBERING

All Page numbers should be typed without punctuation on the bottom-center portion of the page. The Preliminary pages(table of contents and abstract) should be numbered in lowercase roman literals. Papers of main text, starting with chapter-1, Should be consecutively numbered using Arabic numerals.