BHARATHIAR UNIVERSITY,COIMBATORE-641 046
BCA Integrated Logistics Management
(For the CCII students admitted during the academic year 2016-2017 and onwards)
SCHEME OF EXAMINATIONS (CBCS PATTERN)

Part	Course title	Ins. hrs/ week	Dur.Hrs	CIA	Marks	Total Marks	Credits
	Semester I						
I	Language – I	6	3	25	75	100	4
II	English – I	6	3	25	75	100	4
III	Core 1: Computing fundamentals and C Programming	4	3	25	75	100	4
III	Core 2 – Introduction to Information Technology	4	3	25	75	100	4
III	Core Lab 1: Programming Lab – C	3	3	30	45	75	3
III	Allied 1: Introduction to Shipping	5	3	25	75	100	4
IV	Environmental Studies #	2	3	-	50	50	2
	Semester II						
I	Language – II	6	3	25	75	100	4
II	English – II	6	3	25	75	100	4
III	Core 3: System Software & Operating System	3	3	25	75	100	4
III	Core Lab 2: Office Automation Tools	3	3	30	45	75	3
III	Core 4- Logistics Management	5	3	25	75	100	4
IV	Allied 2-Management Information System	3	3	20	55	75	3
IV	Value Education – Human Rights #	2		3	-	50	2
	Semester III						
III	Core 5: Custom House Agency	6	3	25	75	100	4
III	Core 6: C++ Programming	6	3	25	75	100	4
III	Core Lab 3: Programming Lab - C++	5	3	40	60	100	4
III	Core 7: Supply Chain Management	5	3	25	75	100	4
III	Allied 3: Computer Based Optimization Techniques	6	3	25	75	100	4
IV	Skill based Subject I – Case Tools Practical	4	3	30	45	75	3
IV	Tamil @ / Advanced Tamil# (OR) Non-major elective-1 (Yoga for Human Excellence)# / Women's Rights)#/ Constitution of India#	2	3	-	50	50	2
	Semester IV						
III	Core 8: Java Programming	6	3	25	75	100	4
III	Core Lab 4: : Programming Lab – JAVA	6	3	40	60	100	4
III	Core 9: Containerization &Allied Business	3	3	25	75	100	4
	Core Lab 5:Computerized Accounting using Tally	4	3	30	45	75	3
III	Allied 4: Port, Terminal & Cargo Logistics	5	3	25	75	100	4
IV	Skill based Subject 2 –(lab) Internet Basics	4	3	30	45	75	3
IV	Tamil @ /Advanced Tamil #(OR) Non-major elective -II (General Awareness #)	2	3	-	50	50	2

	Semester V						
III	Core 10: RDBMS & ORACLE	6	3	25	75	100	4
III	Core 11: Visual Programming – Visual Basic & Visual C++	6	3	25	75	100	4
III	Core Lab 6: Programming Lab. – V.B.,V C++ & ORACLE	6	3	40	60	100	4
III	Elective-I :Exim Management	5	3	25	75	100	4
III	Skill based Subject-3: Programming Lab –Web Programming	3	3	30	45	75	3
	Semester VI						
III	Core 12: Graphics & Multimedia	5	3	25	75	100	4
III	Core Lab 7: Programming Lab - Graphics & Multimedia	6	3	40	60	100	4
III	Elective III – E Commerce	5	3	25	75	100	4
IV	Skill based Subject-4 : Computer Application In Management using SAP - Practical	3	3	30	45	75	3
V	Project*		-	-	-	100	4
	Total					**3500**	**140**

$ Includes 25% / 40% continuous internal assessment marksfor theory and practical papers respectively.

@ No University Examinations. Only Continuous Internal Assessment (CIA)

No Continuous Internal Assessment (CIA). Only University Examinations

* Project work/Internship: For Report 80% Marks & Viva-Voce 20% Marks

SEMESTER – I

CORE 1   **COMPUTING FUNDAMENTALS AND C PROGRAMMING**

Objective: On successful completion of this subject the students have the programming ability in C Language

UNIT – I: Fundamentals of Computers : Introduction – History of Computers-Generations of Computers- Classification of Computers-Basic Anatomy of a Computer System-Input Devices-Processor-Output Devices-Memory Management – Types of Software- Overview of Operating System- Programming Languages-Translator Programs-Problem Solving Techniques - Overview of C.

UNIT – II: Overview of C - Introduction - Character set - C tokens - keyword & Identifiers - Constants - Variables - Data types - Declaration of variables - Assigning values to variables - Defining Symbolic Constants - Arithmetic, Relational, Logical, Assignment, Conditional, Bitwise, Special, Increment and Decrement operators - Arithmetic Expressions - Evaluation of expression - precedence of arithmetic operators - Type conversion in expression – operator precedence & associativity - Mathematical functions - Reading & Writing a character - Formatted input and output.

UNIT – III: Decision Making and Branching : Introduction – If , If....Else, nesting of If ...Else statements- Else If ladder – The Switch statement, The ?: Operator – The Goto Statement. Decision Making and Looping : Introduction- The While statement- the do statement – the for statement-jumps in loops. Arrays – Character Arrays and Strings

UNIT – IV: User-Defined Functions : Introduction – Need and Elements of User-Defined Functions- Definition-Return Values and their types - Function Calls – Declarations – Category of Functions- Nesting of Functions - Recursion – Passing Arrays and Strings to Functions - The Scope, Visibility and Lifetime of Variables- Multi file Programs . Structures and Unions

UNIT V: Pointers: Introduction-Understanding pointers-Accessing the address of a variable-Declaration and Initialization of pointer Variable – Accessing a variable through its pointer-Chain of pointers- Pointer Expressions – Pointer Increments and Scale factor- Pointers and Arrays- Pointers and Strings – Array of pointers – Pointers as Function Arguments-Functions returning pointers – Pointers to Functions – Pointers and Structures. File Management in C.

TEXT BOOK:
1. E Balagurusamy: ―COMPUTING FUNDAMENTALS & C PROGRAMMING‖ – Tata McGraw-Hill, Second Reprint 2008, ISBN 978-0-07-066909-3.

REFERENCE BOOK:
1. Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson Edition Publ, 2002.
2. Henry Mullish&HuubertL.Cooper: The Sprit of C, Jaico Pub. House, 1996.

CORE 2   **INTRODUCTION TO INFORMATION TECHNOLOGY**

Objectives:
After the successful completion of the course the students should have thorough knowledge about concepts and principles of information technology.

UNIT – I : Hardware and Software : computer systems, importance of computers in business, data andinformation, data processing, data storage and data retrieval capabilities, computer applicationsin various areas of business, computer related jobs in business.

UNIT –II: Typesof computer systems- Micro, mini, mainframe and super computers.Analog,digital andHybrid computers, business and Scientific computer systems, First, second, third and fourthgeneration computers, Laptop or notebook computers , data processing systems- batch, onlineand Real time system. Time sharing, multiprogramming and multiprocessing systems.Networking's: Local and wide area networks.

UNIT –III: Components of computers Input, output and storage devices, software: system software andApplication software; Programming language-machine language- assembly language, higherlevel languages. Flowchart and programme flow charts.Steps in developing computer programmers.

UNIT –IV: Operating systems: Dos, windows, UNIX, Windows NT, windows98 - E.Commerce. Internet-Extranet- Email and its uses-world wide websites-mobile computers.

UNIT –V: System analysis and design, computer based information system-Transaction processing officeAutomation-management information system-decision support systems-expert system

REFERENCE BOOK:
1. Computer and common sense-Roger Hunt and John Shellery
2. Using Micro Computers- Brightman and Dimsdale
3. P.c.Software made simple-R.K.Taxali
4. Introduction to computers-Alexis Leon and Mathews Leon
5. Information technology for management-Henry c.Lucas

CORE LAB 1   PROGRAMMING LAB – C

1. Write a C program to find the sum, average, standard deviation for a given set of numbers.

2. Write a C program to generate - prime numbers.

3. Write a C program to generate Fibonacci series.

4. Write a C program to print magic square of order n where n > 3 and n is odd.

5. Write a C program to sort the given set of numbers in ascending order.

6. Write a C program to check whether the given string is a palindrome or not using pointers.

7. Write a C program to count the number of Vowels in the given sentence.

8. Write a C program to find the factorial of a given number using recursive function.

9. Write a C program to print the student's Mark sheet assuming roll no, name, and marks in 5 Subjects in a structure. Create an array of structures and print the mark sheet in the University pattern.

10. Write a function using pointers to add two matrices and to return the resultant matrix to the calling function.

11. Write a C program which receives two filenames as arguments and check whether the file contents are same or not. If same delete the second file.

12. Write a program which takes a file as command line argument and copy it to another file. At the end of the second file write the total i)no of chars ii) no. of words and iii) no. of lines.

ALLIED 1   **INTRODUCTION TO SHIPPING**

Objective:
To bring awareness amongst the students about the origin of ships, the documents used every day in shipping practice and the History of shipping

UNIT-1: SHIPPING INDUSTRY
Introduction to Shipping & Logistics - Shipping and Logistics in India - India's Role in world Shipping Market – Global Shipping market – Scope & Opportunities of Shipping industry – Various facets of Shipping industry – Role of shipping for economic growth – Future trend of Shipping – Professionalism in shipping – Relevance of Training

UNIT – II: MARITIME HISTORY
Reminiscence of Maritime History - Citations from Vedas & Genesis – Time Line of Transportation and various means of transportation - Explorers of the sea - Ships in warfare - Indian Maritime History - Indian Emperors and Ocean expeditions - Trading from India - History of Shipping - Shipping Phonetics

UNIT - III: MARITIME GEOGRAPHY
Maps and Atlas - Grids and its uses - Transport Geography - Economical Geography - Tides, Current, Climate and weather - Oceans and Seas - Importance of Ocean Transport System - Canals and Rivers for Transportation – Top 10 navigable canals in the world.

UNIT - IV: SHIPS
Logs to modern Ship - Authentication – Evolution and types of Ships – origin of Documents – Ships & its positions – World's top Ship owners - Ports in India – World's top Ports – Governmental bodies connected to Shipping – Piracy in the world - Myths and wonders in the shipping world

UNIT - V: LOGISTICS IN SHIPPING
Role of Logistics in Shipping – Negligence and Omissions resulting in failure of Logistics - View on Supply Chain management – Introduction to Cold Chain and Retail Marketing – FDI's – India's role in the world trade - International Governing bodies connected to shipping and their importance – Governmental bodies connected to Shipping in India and its importance – World tonnages - General view on the legalities of shipping – Cabot-age law – Embargo and its repercussions

Text Book
1. The Spanish Armada by Robert Appleton

REFERENCE BOOKS -
1. Oxford Encyclopedia of Maritime History - War at Sea 1) Naval Warfare 2) Indian Maritime History 3) Vedas Small

SEMESTER II
CORE 3　　　　**SYSTEM SOFTWARE & OPERATING SYSTEM**

Objective: Enable the student to get sufficient knowledge on various system resources.

UNIT- I: Introduction –System Software and machine architecture-Assemblers-Basic assembler functions - Machine dependent features-program relocation-Machine independent features – literals - symbol defining statements-expressions-program blocks-control sections and program linking - Assembler design options-one pass assemblers-multi pass assemblers. Loader and Linkers: Basic Loader Functions - Machine dependent loader features – relocation – program – linking - Machine independent loader features - Automatic Library search - Loader options - Loader design options - linkage editor - dynamic linking - Bootstrap loader.

UNIT- II: Macro processor: Basic Macro processor functions - Machine independent Macroprocessor features - concatenation of macro parameter macro processor design options-recursive macro expansion - general purpose macro processor - macro processing within language translators. Text Editors: Overview of editing process - user interface - editor structure.

UNIT-III: Machine dependent compiler features - Intermediate form of the program-Machine dependent code optimization-machine independent compiler features-Compiler design options-division into passes-interpreters-p –code compilers-compiler-compilers.

UNIT - IV: Introduction: Definition of DOS – History of DOS – Definition Of Process - Process states - process states transition – Interrupt processing – interrupt classes - Storage Management Real Storage: Real storage management strategies – Contiguous versus Non-contiguous storage allocation – Single User Contiguous Storage allocation- Fixed partition multiprogramming – Variable partition multiprogramming. Virtual Storage: Virtual storage management strategies – Page replacement strategies – Working sets – Demand paging – page size.

UNIT -V: Processor Management Job and Processor Scheduling: Pre-emptiveVs Non-preemptive scheduling – Priorities – Deadline scheduling - Device and Information Management Disk Performance Optimization: Operation of moving head disk storage – Need for disk scheduling – Seek Optimization – File and Database Systems: File System – Functions – Organization – Allocating and freeing space – File descriptor – Access control matrix.

TEXT BOOK:
1. Leland –L-Beck, ―System Software-An Introduction to Systems Programming‖, Pearson Education Publishers, Third Edition-2003. 2. H. M Deitel , ― Operating Systems 2nd Edition, Perason Education Publication,2003.

REFERENCE BOOKS :
1. Achyut s Godbole , ― Operating System , TMH Publications , 2002
2. John J. Donovan , ―Systems Programming , TMH Publications , 1991
3. D.M. Dhamdhrer, ―Systems Programming and Operating Systems ―, 2nd Revised Edition

CORE LAB 2   **OFFICE AUTOMATION TOOLS**

1. Prepare a class Timetable using Ms Word
2. Prepare an application with Bio-Data using Ms Word
3. Prepare an information letter to various students about the publication of results using Mail Merge
4. Design an advertisement copy in Ms Word
5. Prepare Students mark sheet using Excel
6. Prepare Payroll for employee using Excel
7. Draw a chart using Excel with the details: Student name and marks of 3 subjects.
8. Display various departments and courses offered in our college using Power Point.
9. Create a database for employee details and generate a report for pay slip using MS Access
10. Create a database maintaining stock in a shop with fields: Serial Number (Primary Key), Name of product, Product Code, Quantity and Price.

CORE 4   **LOGISTICS MANAGEMENT**

UNIT I – LOGISTICS MANAGEMENT
Introduction to logistics Management – Definitions-Objectives of Logistics - Significance of logistics – Total Distribution concepts – Integrated Logistics- Integration Theory -Planning and Design Methodology & Techniques -Inbound and outbound Logistics -Procurement Logistics - Distribution Logistics - After Sales Logistics –Defense Logistics - Disposal Logistics - Reverse logistics - Green Logistics - Global Logistics - Domestic Logistics - Concierge Logistics - RAM Logistics - Asset Control Logistics - POS Material Logistics - Emergency Logistics - Production Logistics - Business Logistics - Scope and importance of Logistics in Industry-Highlights of Logistics solutions –Reverse Logistics-main Drivers of Logistics and their role in Logistics management

UNIT 2 – INVENTORY AND MATERIAL MANAGEMENT
Inventory Management: Role of Inventory in Logistics - Definition and components of Inventory - Importance of Inventory - Functions of Inventory and costs - Types of Inventory and their relevance- inventory control Material Management - Materials management - costs involved in MM - objectives of MM -Functions of MM division - basic principles of Materials Handling - Types of Equipment and their usage – Unitization - container handling - Unitization and palletisation- Functions of Material Management Divisions - Phases and Challenges - Departments - Functions of Purchasing cycles - Purchasing – Ethics- Value Engineering and Rating technique - Robotic delivery system - Automatic guided vehicles AGV - Industrial trucks

UNIT 3- WARE HOUSE AND ITS FUNCTIONS ANDOPERATIONS
Definition of Warehousing –Needs for good warehousing - Types of Warehouses - FTWZ – Scope and functions of FTWZ - Functions of Warehouse - costs of warehousing - Warehouse Layout and planning a warehouse - - Automation and Optimization - Modern trends - Cool warehouses and Cold storages – CFS/ICD/AFS and their relevance - Functions of CFS/ICD/AFS - Operation Centers in CFS/ICD/AFS - Benefits of CFS/ICD/AFS - Importance

of CFS/ICD/AFS - Design and layouts of CFS/ICD/AFS. **Packaging** - Types of Packaging - Packaging and labeling - Functions of Packaging-Packaging material types- Drawbacks of Packaging - new trends in packaging - labeling - functions of labeling - Classifications of labels - purpose of labeling.

UNIT 4- CARGO MOVEMENT MODES AND METHODS
Role of Transportation in Logistic Management - The effect of Transportation -Importance of Transportation - Transportation strategy - Parties to a Transport Contract - Factors influencing carrier and Shippers decision - Factors influencing transportation cost - Merits and de merits of different modes of transport system - Transport documents - Transport documents in land transport - Transport document in rail transport - Transport document in air transport - Transport document in sea transport - Selecting the mode of transport -The role of transportation in service quality

UNIT 5 – LOGISTICS OUTSOURCING AND CUSTOMER SERVICE
Outsourcing - key benefits of outsourcing - in sourcing - outsourcing - vertical horizontal integration - critical areas in outsourcing - managing business for successful outsourcing - Growth of 1 & 2 party logistics– 3PL logistics - advantages of 3pl logistics - Role and relevance in Cargo movement and Logistics Management -4PL Logistics services their role and function-How does 4PL create value for the organization - meeting customers expectation - Cultivating customers to improve business - benefits of sales support - Elements of customer service - Essential Elements of Great Customer Service- mantras for logistic managers - future prospects of logistics

TEXT BOOKS :
1. Lambert, Douglas M - Supply Chain Management & Processes

REFERENCE BOOKS :
1. Cooper, M.C., Lambert, D.M., &Pagh, J. Supply Chain Management and
2. The International Journal of Logistics Management–
3. CSCMP Supply Chain Management Process Standards
4. Inter-organizational theories behind Supply Chain Management

ALLIED2   **MANAGEMENT INFORMATION SYSTEM**

Objective: On successful completion of this course, the students should have understood _ Computer based information system _ MIS support for the functions of management

UNIT I
Introduction to Information Systems - definition - features - steps in implementation of MIS - need for information-information system for decision making- MIS as competitive advantages – MIS structures.

UNIT II
MIS - Strategic information system - MIS support for planning - organizing – controlling – MIS for specific functions - personnel, finance, marketing inventory production Data Base Management System Models - hierarchical -network - relational - modular.

UNIT III
Computer Hardware - Description of electronic computers – CPU operations - Classification of computers - main - mini - workstations - micro computers – Super computers - personal computers. Computer Software - types of software – data representation in computers - Introduction to client-server.

UNIT IV
Input devices - mouse - touch screens - MICR - OCR - keyboard - pen based Input – digital scanners - voice input devices - sensors. Output devices - impact printers – nonimpact printers - video display terminals - plotters - voice output devices. Secondary storage devices - magnetic disk, floppy, magnetic tape, optical disk storage – CDROM.

UNIT V
Telecommunication revolution - Introduction to Email, internet, intranet and eleconferencing, www architecture, Introduction to E-Commerce, models B_B, B_C, and EDI, EDI applications in business, electronic payment cash, smart cards, and credit cards.

REFERENCES
1. Management Information System - Murdick and Ross
2. Management Information System- A contemporary perspective - Kenneth Laudon& Jane Laudon
3. Management Information System - Gordon B Davis
4. Management Information System - James O brien Computer applications in business - Subramanian K

SEMESTER III

CORE 5 **CUSTOM HOUSE AGENCY**

Objective: The subject deals with the business transaction with the Customs and Central Excise for successfully executing a Import or Export transaction.

UNIT -I INTRODUCTION OF CUSTOMS AND THEIR ROLES
Role of Customs - Powers of Customs - Appointment of Customs Ports, Airports - Ware-housing Stations-Power to declare places to be Warehousing Stations - Prohibitions on Importation and Exportation of Goods- Power of Central Government to notify goods Precautions to be taken by persons acquiring notified Goods - Detection of illegally imported goods and Prevention of the disposal there of – Sections 11C, 11E and 11F not to apply to goods in personal use - Prevention or Detection of illegal import of Goods - Power to exempt.

UNIT - II CHA LICENSING PROCEDURES
Custom House Licensing - Certification and Qualifications to become a Custom House Agent - Rule 8 -G Card - Identity to enter Custom Houses - Custom house agents duties - Draw backs and Duties - Support of CHA to Importers and Exporters Custom House Agent - Restrictions of Custom House Agents - Customs Power to bring a ceiling on the License - Temporary and regular license - Customs Power to advise fees chargeable by Custom House Agent. Duties and Obligations - Liabilities of Custom house agents - Custom house agent and Information

Technology - ICE GATE and On line filing of Bills - Records to be maintained by Custom House Agents.

UNIT - III IMPORT & EXPORT CLEARANCE PROCEDURES
Import Bill Processing - Important Papers for filing Bill of Entry - Apprising - Open Inspection - Payment of Duties - Out of Charge - Clearance of goods - payment of duties - Duty exemption - Bonding of Cargo - Ex bonding - Export Bills - Important papers for filing Shipping Bills - Factory Stuffing - Port or CFS Stuffing - Supervision by Customs - Sealing and print out - Custom officer overtime - Importance of Shipping Bill - Comparison of Shipping Bill with Mate's Receipt and Bills of Lading.

UNIT – IV DUTY & CONVEYANCE
Levy of and exemption from Customs Duties-Dutiable goods-Duty on Pilfered goods-assessment of Duty-Interest on delayed Funds-Claim for Refund of Duty-Provisional Attachment to protect revenue in certain cases- Indicating Amount of Duty in Price of Goods - Advance Rulings-Provisions to Conveyances Carrying Imported or Exported Goods-Arrival of Vessels and Aircraft in India-Power to board Conveyances-Delivery of export manifest or export report-No Conveyance to leave without written order.

UNIT V - TRAN SHIPMENT
Goods in Transit-Transit and Tran shipment of certain goods without payment-Liability of duty on goods transited or transshipped. Warehousing-Appointing of Public Warehouses-Licensing of Private Warehouses-Clearance of Warehoused goods for home consumption and Exportation Cancellation and return of Warehousing bond. Drawback-Interest on drawback-Prohibition and regulation of drawback

TEXT BOOKS
1. Customs Act – Duties and Draw backs – Import and Export Procedures – Customs Duty
2. Customs Law Practice and Procedures,V. S. Datey, Taxmann Allied Services Pvt. Ltd., 7thEdition 2010.

REFERENCE BOOK:
1. India Customs, Trade Regulations and Procedures Handbook India Customs, Trade Regulationsand Procedures Handbook, IBP USA, International Business Publications

CORE 6   C++ PROGRAMMING

Objective: To inculcate knowledge on Object-oriented programming concepts using C++.

UNIT-I: Introduction to C++ - key concepts of Object-Oriented Programming –Advantages – Object Oriented Languages – I/O in C++ - C++ Declarations. Control Structures : - Decision Making and Statements : If .. else ,jump, goto, break, continue, Switch case statements - Loops in C++ : For,While, Do - Functions in C++ - Inline functions – Function Overloading.

UNIT-II : Classes and Objects : Declaring Objects – Defining Member Functions – Static Member variables and functions – array of objects –friend functions – Overloading member functions – Bit fields and classes – Constructor and destructor with static members.

UNIT-III : Operator Overloading: Overloading unary, binary operators – Overloading Friend functions – type conversion – Inheritance: Types of Inheritance – Single, Multilevel, Multiple, Hierarchal, Hybrid, Multi path inheritance – Virtual base Classes – Abstract Classes.

UNIT-IV: Pointers – Declaration – Pointer to Class , Object – this pointer – Pointers to derived classes and Base classes – Arrays – Characteristics – array of classes – Memory models – new and delete operators – dynamic object – Binding , Polymorphism and Virtual Functions.

UNIT-V: Files – File stream classes – file modes – Sequential Read / Write operations – Binary and ASCII Files – Random Access Operation – Templates – Exception Handling - String – Declaring and Initializing string objects – String Attributes – Miscellaneous functions .

TEXT BOOKS :
1. Ashok N Kamthane , OBJECT-ORIENTED PROGRAMMING WITH ANSI AND TURBOC C++, Pearson Education publication. 2003.

REFERENCE BOOKS:
1.E. Balagurusamy, OBJECT-ORIENTED PROGRAMMING WITH C++, Tata Mc-GrawhillPupblication, 1998.
2. Maria Litvin&GrayLitvin , C++ for you, Vikas publication, 2002.
3. John R Hubbard, Programming with C, 2nd Edition, TMH publication, 2002.

CORE LAB 3   **PROGRAMMING LAB – C++**

1. Write a C++ Program to create a class to implement the Data Structure STACK. Write a constructor to initialize the TOP of the STACK. Write a member function PUSH() to insert an element and member function POP() to delete an element check for overflow and underflow conditions..

2. Write a C++ Program to create a class ARITHMETIC which consists of a FLOAT and an INTEGER variable. Write a Member function ADD (), SUB(),MUL(),DIV() to perform addition, subtraction, multiplication, division respectively. Write a member function to get and display values.

3. Write a C++ Program to read an integer number and find the sum of all the digits until it reduces to a single digit using constructors, destructors and inline member functions.

4. Write a C++ Program to create a class FLOAT that contains one float data member. Overload all the four Arithmetic operators so that they operate on the object FLOAT.

5. Write a C++ Program to create a class STRING. Write a Member Function to initialize ,get and display stings. Overload the Operator —+‖ to Concatenate two Strings, —= =‖ to Compare two strings

6. Write a C++ Program to create class, which consists of EMPLOYEE Detail like E_Number, E_Name, Department, Basic, Salary, Grade. Write a member function to get and display them. Derive a class PAY from the above class and write a member function to calculate DA, HRA and PF depending on the grade.

7. Write a C++ Program to create a class SHAPE which consists of two VIRTUAL FUNCTIONS Calculate_Area() and Calculate_Perimeter() to calculate area and perimeter of various figures. Derive three classes SQUARE, RECTANGLE, TRIANGE from class Shape and Calculate Area and Perimeter of each class separately and display the result.

8. Write a C++ Program to create two classes each class consists of two private variables, a integer and a float variable. Write member functions to get and display them. Write a FRIEND Function common to both classes, which takes the object of above two classes as arguments and the integer and float values of both objects separately and display the result.

9. Write a C++ Program using Function Overloading to read two Matrices of different Data Types such as integers and floating point numbers. Find out the sum of the above two matrices separately and display the sum of these arrays individually.

10. Write a C++ Program to check whether the given string is a palindrome or not using Pointers.
11. Write a C++ Program to create a File and to display the contents of that file with line numbers.
12. Write a C++ Program to merge two files into a single file.

CORE 7   **SUPPLY CHAIN MANAGEMENT**

Objective
To study and understand Supply Chain management that deals with a set of approaches used by companies to efficiently integrate Suppliers

Unit I - INTRODUCTION
Introduction to Supply Chain Management- Definitions and Objectives of SCM- Structure and Flows in SCM-Importance and Scope of SCM in Industry- Evolution and historical developments-First-Second and Third Generation revolutions in SCM-Major movements in SCM-Creation Era-Integration Era-Globalization Era-Specialization Era and SCM- Achieving Strategic Fit and Scope Supply Chain Drivers and Metrics- Demand Forecasting in a Supply Chain- Aggregate Planning in a Supply Chain -Managing Predictable Variability - Managing Economies of Scale in a Supply Chain: Cycle Inventory- Managing Uncertainty in a Supply Chain: Safety Inventory

Unit II- SUPPLY CHAIN PROCESS
Processes of SCM-Macro processes of SCM-Decision phases in SCM-Logistics Versus Supply Chain management- Role of Drivers in SCM – Facilities – Inventory-Transportation-Information –Sourcing – Pricing-Supply Chain Strategies – Push-Pull–PushPull

Unit III - DISTRIBUTION TECHNIQUES

Role of Distribution in Supply Chain-Designing a supply chain Distribution Channel-Distribution Networks-Factors influencing Distribution network Decision-An Analysis of the Standard Distribution models designed by companies etc-Designing Distribution Networks and Applications to e-Business-- Network Design in an Uncertain Environment-Sourcing Decisions in a Supply Chain

Unit IV - SUPPLY CHAIN TRANSPORT SUPPORT

Role of Transportation in Supply Chain-Transportation principles – Modes – performance-Costs and Value measures-Factors driving Transportation costs-Categories of Transportation costs-Transport routing Decisions-Milk Runs and Cross Docking-Transport Intelligent Management systems-Advanced Vehicle Location System and Advanced Fleet Management System-Intermodal Transport and Technology - Determining the Optimal Level of Product Availability - Transportation Decisions in a Supply Chain

Unit V SUPPLY CHAIN MANAGEMENT

Role of Information Technology in Supply Chain management-Features of a good IT system for SCM Major IT decisions- Use of information in various stages in SCM-Benefits of IT in Supply Chain-Future of IT in SCM-Tracking of Shipments-The Supply chain IT Frame work CRM-ISCM –SRM- Electronic data Interchange-Benefits of EDI

TEXT BOOK:
1. Logistical Management: DonaldBowersocks& David Closs, TMG
REFERENCE BOOKS:
1. Logistical Management: DonaldBowersocks& David Closs, TMG
 2.Logistics Supply Chain Management Text and Cases: AnuragSaxena and KaushikSircar

ALLIED 3   COMPUTER BASED OPTIMIZATION TECHNIQUES

Objective: On successful completion of this subject the students should have:
 • Understanding various mathematical applications in industries.
 • Decision making for real time environment.

UNIT-I: Linear Programming - Mathematical Model assumption of linear Programming – Graphical method - Principles of Simplex method, Big-M Method ,Duality, Dual simplex method.

UNIT-II: Transportation and assignment problem - Integer Programming Branch and Round Techniques - Assignment and Traveling Salesman Problem.

UNIT-III: Game Theory - Concept of Pure and Mixed Strategies – Solving 2 x 2 matrixes with and without saddle point - n x 2 - 2 x m games. Replacement models - Elementary replacement models - present value - rate of return - depreciation - Individual replacement – Group replacement.

UNIT-IV: (Derivations not included) Queuing Theory - definition of waiting line model - Queue discipline - traffic intensity - poison arrival – Birth death process - Problem from single server: finite and infinite population model – Problems from multi server: finite and infinite population model.

UNIT-V: PERT & CPM - Network representation - backward pass - Forward pass - computation - Pert Network - Probability factor – updating and Crashing.

TEXT BOOKS :

1. **OPERATIONS RESEARCH -** Manmohan, P.K. Gupta, Kanthiswarup, S. CHAND & SONS - 1997.

REFERENCE BOOKS :

1. **OPERATIONS RESEARCH** - **Hamdy A Taha**, Pearson Education, 7th edition, 2002
2. **PROBLEMS IN OPERATIONS RESEARCH** – **P.K. Gupta, D.S. Hira,** S. Chand Pub

Skill based subject I   CASE TOOLS –Lab

1. To design an ATM transfer system using UML diagram and to generate VB code.
2. To design a student mark analysis using UML diagram and to generate VB code.
3. To design a platform assignment system using UML diagram and to generate VB code.
4. To design a railway reservation system using UML diagram and to generate VB code.
5. To design an expert system for medicine field using UML diagram and to generate VB code.
6. To design a stock maintenance system using UML diagram and to generate VB code.
7. To design a quizzing system using UML diagram and to generate VB code.
8. To design a remote computer monitoring system using UML diagram and to generate VBcode.
9. To design an online ticket reservation system using UML diagram and to generate VB code.
10. To design an E-mail client server system using
11. UML diagram and to generate VB code.

<div align="center">

SEMESTER IV

</div>

CORE 8   **JAVA PROGRAMMING**

Objective: To inculcate knowledge on Java Programming concepts.

UNIT-I: Fundamentals of Object-Oriented Programming: Object-Oriented Paradigm – Basic Concepts of Object-Oriented Programming – Benefits of Object-Oriented Programming – Application of Object-Oriented Programming. Java Evolution: History – Features – How Java differs from C and C++ – Java and Internet – Java and www –Web Browsers. Overview of Java: simple Java program – Structure – Java Tokens – Statements – Java Virtual Machine.

UNIT-II: Constants, Variables, Data Types - Operators and Expressions – Decision Making

and Branching: if, if ..else, nested if, switch, ? : Operator - Decision Making and Looping: while, do, for – Jumps in Loops - Labeled Loops – Classes, Objects and Methods.

UNIT-III: Arrays, Strings and Vectors – Interfaces: Multiple Inheritance – Packages: Putting Classes together – Multithreaded Programming.

UNIT-IV: Managing Errors and Exceptions – Applet Programming – Graphics Programming.

UNIT-V: Managing Input / Output Files in Java : Concepts of Streams- Stream Classes – Byte Stream classes – Character stream classes – Using streams – I/O Classes – File Class – I/O exceptions – Creation of files – Reading / Writing characters, Byte-Handling Primitive data Types – Random Access Files.

TEXTBOOKS:

1. PROGRAMMING WITH JAVA – A PRIMER - E. Balagurusamy, 3 rd Edition, TMH.

REFERENCE BOOKS:

1. THE COMPLETE REFERENCE JAVA 2 - Patrick Naughton& Hebert Schildt, 3rd ed,TMH
2. PROGRAMMING WITH JAVA – John R. Hubbard, 2nd Edition, TMH.

CORE LAB 4 **PROGRAMMING LAB- JAVA**

1. Write a Java Applications to extract a portion of a character string and print the extracted string.
2. Write a Java Program to implement the concept of multiple inheritance using Interfaces.
3. Write a Java Program to create an Exception called payout-of-bounds and throw the exception.
4. Write a Java Program to implement the concept of multithreading with the use of any three multiplication tables and assign three different priorities to them.
5. Write a Java Program to draw several shapes in the created windows.
6. Write a Java Program to create a frame with four text fields name, street, city and pin code with suitable tables. Also add a button called ─my details‖, When the button is clicked its corresponding values are to be appeared in the text fields.
7. Write a Java Program to demonstrate the Multiple Selection List-box.
8. Write a Java Program to create a frame with three text fields for name, age and qualification and a text field for multiple line for address
9. Write a Java Program to create Menu Bars and pull down menus.
10. Write a Java Program to create frames which respond to the mouse clicks. For each events with mouse such as mouse up, mouse down, etc., the corresponding message to be displayed.
11. Write a Java Program to draw circle, square, ellipse and rectangle at the mouse click positions.
12.Write a Java Program which open an existing file and append text to that file.

CORE 9   **CONTAINERIZATION & ALLIED BUSINESS**

Objective:The concept of containerization is a world renowned mode of transport system and is being practiced globally. The subject exposes the student to the latest trend in shipping business and its allied subjects thereby giving him the opportunity to get an employment in a Container operating ship owner's office

UNIT - I: Natures Contribution to Containerization - Ancient use of Containers - Commercial Containers – Malcolm MacLean's contribution - Initial Types of Containers & Standardization of containers - Contribution to shipping fraternity - Containerization Vs Break Bulk Shipping. - Types of Containers - Construction of Containers - Technical Aspects of Containers - Certification and revalidation -IICL Inspectors and their duties - Prefix and Suffix and their importance- Choice of Containers - Flex bags the new concept in containerization - - - Cellular Ships

UNIT – II : physical component or hardware - non physical component or software - inventory control - periodical inspection and maintenance - precautions before and after stuffing a container - ratio of container strength - planning and procurement - relay port - hub port - Anera - box and box rate - consortiums - container flow management - container slot management - common feeder service – types of liner services - mother vessels - land bridge - roll over's – EIR

UNIT – III: Consolidation - Reason for consolidation - Facilities to shippers by consolidation - Consolidation technique - Calculation and planning - Broken space and freighting - Units packets and its benefits - re-working of Console at Hub port - Direct box - Role of Measurement and Weight of cargo.

UNIT –IV: Origin of Forwarders - Role of Forwarders - Freight Brokers and Freight Forwarder - Role of Forwarders in Europe - Commencement of Forwarders Association - Difference between a Freight forwarder and a Agent - House Bill of Lading - Liner Bill of Lading - Endorsing Bill of Lading - Surrendering Bill of Lading - Multimodal Transport Bill of Lading - Forwarding note for Delivering goods - Forwarder as a logistician – Road Service in the Hinterlands of Europe – Rate Fixation by a Forwarder - Global Service Contracts - Closed sector Service Contracts - MQC (Minimum Quantity Contract) - Advantage of a Service Contract - Noncompliance of a Service Contract - Penalty for noncompliance

UNIT – V: Definition of NVOCC - NVOCC PRACTICE - - repositioning - How a NVOCC Helps a Shipper -Procurement and building up of Inventories - Agency networking and agreements - Spot purchase of slots - Underwriting of Slots - Multi dipping purchase - NVOCC Bills of Lading - Trans Siberian Railways - Matrix of NVOCC on a SINGLE ROUTE - Matrix of a NVOCC on a round trip - Why a Liner dislikes a NVOCC - Why NVOCC cannot survive Long Hauls and in countries like Europe.
Reference books
1."The Containership Revolution - Malcom McLean's 1956, The Transportation
   Research Board of the U.S. National Academies of Sciences published
2. Innovation Goes Global" by Brian Cudahy in 2006.
3.Mark Levinson's "THE BOX - How the Shipping Container Made the World Smaller
   and the World Economy Bigger"

SEMESTER IV

CORE LAB 5   COMPUTERIZED ACCOUNTING USING TALLY

OBJECTIVE:
The objectives of the Paper are to familiarize the students with accounting skills using tally software

1. Create a Company using Tally with inventory management.
2. Pass Journal entries in the book of Company
3. Show the ledger account in the book of Company.
4. Prepare the Voucher entry and alteration of voucher entry for the company
5. Show group voucher with stock items, units of measures and quantity of Stocks.
6. Show the Inventory Information – stock summary
7. Show the Cash Book & Bank Book of the company.
8. Show the purchase book, sales book, purchase return book and purchase return book.
9. Show the VAT Computation report of the above company.
10. Show the Trial Balance and Balance Sheet of the company.
11. Prepare the Bill wise statement for the company
12. Prepare Bank Reconciliation Statement.

ALLIED 4:   PORT, TERMINAL& CARGO LOGISTICS

Objective:
The student would learn in detail to coordinate with the Port authorities to bring the ship in the right suitable berth according to the cargo the ship has been booked for and additionally learns the techniques of loading and unloading the ship with caution and safety.

UNIT -I: PORTS AND ITS FUNCTIONS
 Major and Minor Ports – Ports in India - Ports of the World – Top 10 Ports that handles the maximum volume of bulk cargo and containerized cargo –Artificial and Natural Harbors - New Ports to be developed in India - Major Port Trust Act – Role of Port with regard to cargo - - Transit sheds – Tank Farms – Various berths in a Port – Facilities in a berth - Hierarchy in a Port – Different Departments - Functions and Responsibilities - Port equipment's and damage - Extra services - Major - Port Tariff - Pilots and their duties - Tugs and its usage - Night navigations - Light Dues - Tariff Authorities of Major Port - Revision of rates - Port Trustees - Safety Procedures - Introduction of ISPS - Compensation and confiscation of cargo to adjust dues - Topography of Chennai Port

UNIT –II: TERMINALS AND ITS FUNCTIONS
Container Terminals - Privatizations of Terminals - Reason for Privatizations - Major Terminal Operators in India - Terminal Operators of the world – privatization the need of an hour - Agreement between and existing Port Terminal and new operator - Import Cycle - Export Cycle - Positions and Places in a Terminal - Facilities in a Terminal - Container Monitoring and stacking - CFS inside a Terminal - Reasons for Congestion of a terminal - de-congesting the terminal - Window system in a terminal – Reefer bays – Dangerous Cargo stacking area – LCL working sheds.

UNIT III: STEVEDORE AND HIS DUTIES

Importance of a Stevedore - A good Stevedore - Knowledge of a Stevedore - Danger of employing a wrong stevedore - Co-ordination with Port - Co-ordination with Ships officers - Planning and Execution - Emphasizing the quick turn round of the ship - Various types of services provided by a Stevedore - Stevedore license and work force - Deployment of the right men and machinery - Using Ships equipment- Using Port equipment - Direct shore side delivery - Arranging trucks for Direct Delivery - Daily working sheet - Interaction with Cargo officer for Discharged or Loaded quantity

UNIT- IV: CARGO HANDLINGTECHNIQUES

Grain and Bale Capacity - Stowage Factor - Cargo by Measurement and Weight - Proper and Improper Stowage - Broken space and its disadvantages - Maintaining Trim and balance of Vessel - Planning and coordination - Importance of Dunnage - Importance of Sheathing - Importance of lashing - Working in Twin Decks - Working Bulk Ships - Working General Cargo ships - Working Project cargo ships - Working Container ships - high stacking and feeding - Daily Loaded or Discharged quantity log - types of grabs - buckets - conveyors - double banking discharge - evacuators for Grain discharge.

UNIT V – DAMAGE AND CLAIM SETTLEMENT BY STEVEDORES

Liabilities of Stevedore - Limitation of Damage liabilities - Settlement of Damages on ship during Cargo work - Dock Safety regulations and Cargo Gear Certificate - Annual validation of Cargo gear Certificate - Obligation of stevedore to his principals i.e. agents and owners. – P&I intervention in case of a damage – DANGER GOODS HANDLING, STACKING AND LOADING PROCEDURES – Reefer Cargo Loading Procedures – Liquid Cargo

TEXT BOOK:

1. Guide to Port Entry P&O Terminal STANDARD OPERATION PROCEDURES Cargo Work By David J House Cargo Work By KEMP AND YOUNG
2. Stowage Factor By Robinson Safety Of Ships Gears By LLYODS

SKILL BASED SUBJECT 2   INTERNET BASICS

1. To create an email-id.
2. To compose and send a mail.
3. To forward a mail and to reply for a mail.
4. To send a mail with an attachment.
5. To download the attached document of a mail received.
6. To send a mail to a large number of recipients using cc and bcc options.
7. To search a thing using a search engine.
8. To open and read newspaper sites, TV program schedules using Internet.
9. To verify a university /college details by opening their websites.
10. To upload your resume with any one job portal.

SEMESTER V

CORE 10   **RDBMS & ORACLE**

Objective: To inculcate knowledge on RDBMS concepts and Programming with Oracle.

UNIT-I: Database Concepts: A Relational approach: Database – Relationships – DBMS – Relational Data Model – Integrity Rules – Theoretical Relational Languages. Database Design: Data Modelling and Normalization: Data Modelling – Dependency – Database Design – Normal forms – Dependency Diagrams – De -normalization – Another Example of Normalization.

UNIT-II: Oracle9*i*: Overview: Personal Databases – Client/Server Databases – Oracle9i an introduction – SQL *Plus Environment – SQL – Logging into SQL *Plus - SQL *Plus Commands – Errors & Help – Alternate Text Editors - SQL *Plus Worksheet - *i*SQL *Plus. Oracle Tables: DDL: Naming Rules and conventions – Data Types – Constraints – Creating Oracle Table – Displaying Table Information – Altering an Existing Table – Dropping, Renaming, Truncating Table – Table Types – Spooling – Error codes.

UNIT-III: Working with Table: Data Management and Retrieval: DML – adding a new Row/Record – Customized Prompts – Updating and Deleting an Existing Rows/Records – retrieving Data from Table – Arithmetic Operations – restricting Data with WHERE clause – Sorting – Revisiting Substitution Variables – DEFINE command – CASE structure. Functions and Grouping: Built-in functions –Grouping Data. Multiple Tables: Joins and Set operations: Join – Set operations.

UNIT-IV: PL/SQL: A Programming Language: History – Fundamentals – Block Structure – Comments – Data Types – Other Data Types – Declaration – Assignment operation – Bind variables – Substitution Variables – Printing – Arithmetic Operators. Control Structures and Embedded SQL: Control Structures – Nested Blocks – SQ L in PL/SQL – Data Manipulation – Transaction Control statements. PL/SQL Cursors and Exceptions: Cursors – Implicit & Explicit Cursors and Attributes – Cursor FOR loops – SELECT-FOR UPDATE – WHERE CURRENT OF clause – Cursor with Parameters – Cursor Variables – Exceptions – Types of Exceptions.

UNIT-V: PL/SQL Composite Data Types: Records – Tables – arrays. Named Blocks: Procedures – Functions – Packages –Triggers –Data Dictionary Views.

TEXTBOOKS:

DATABASE SYSTEMS USING ORCLE – Nilesh Shah, 2nd edition, PHI.
(UNIT-I: Chapters 1 & 2 UNIT-II: Chapters 3 & 4 UNIT III: Chapters 5 & 6 UNIT-IV: Chapters 10 & 11 UNIT-V: Chapters 12,13 & 14)

REFERENCE BOOKS:
1. DATABASE MANAGEMENT SYSTEMS – Arun Majumdar&Pritimoy Bhattacharya, 2007, TMH.
2. DATABASE MANAGEMENT SYSTEMS – Gerald V. Post, 3rd edition, TMH.

CORE 11   Visual Programming – Visual Basic & Visual C++

UNIT-I: Introducing Visual Basic: What is VB? – Event and Event Procedures – Object related concepts –VB program Development Process- Logical Program Organization -VB Program Components – VB environment – Opening, Saving, Running a VB Project –Visual Basic Fundamentals: constants – Variables – Data Types and Declarations – Operators and Expressions – Program Comments. Branching and Looping: Relational operators and Logical Expressions – Branching with If-Then, If-Then-Else blocks – Selection Select Case – Looping with For-Next, Do-Loop, While-Wend – Stop statement.

UNIT-II: Visual Basic control Fundamentals: Control tools – Control tool Categories – Working with Controls – Naming Forms and Controls – Assigning Property values to Forms and Controls – Executing commands – Displaying Output – Entering Input Data – Selecting Multiple Features, Exclusive Alternatives, Form from a List - Assigning Properties collectively – Generating Error Messages – Creating timed Events – Scroll Bars. Menus and Dialog Boxes: Building Drop-Down Menus – Accessing Menu from Keyboard – Menu Enhancements – Submenus – Pop-Up Menus – Dialog Boxes – more about MsgBox Function – The Input Box function.

UNIT-III: Procedures: Modules and Procedures – Sub Procedures – Event Procedures – Function Procedures – Scope – Optional Arguments. Arrays: Characteristics – Declarations – Processing – Passing Arrays to Procedures – Dynamic Arrays – Array-related Functions – Control Arrays – Looping with for Each-Next. Data Files : Sequential Data Files – Random-Access Data files– Binary files.

UNIT IV: Visual C++: Programming: MFC and Windows – MFC Fundamentals – MFS Class Hierarchy – MFC Member & Global Functions – Various Object Properties – Cobject, CArchive, CWinApp, CWnd, CFile, CGD, Object, CExcept, CDialog, CString, CEdit, CList – Resources: Menus – Accelerators, Dialogs, Icons, Bitmaps, Versions – Message Maps – Document/View Architecture.

UNIT V VC++ (Contd): connecting to Data Source – DAO – ODBC – Thread – Based Multitaksing – Visual C++ APPWIZARD and class Wizard.

TEXTBOOKS:
1.VISUAL BASIC – Byron S. Gottfried, Schaum's Outline series, TMH. Eric A Smith, ValorWhisher, Hank Marquis, ―Visual Basic 6 Programming Bible.
2.Herbert Schildt, ―MFC Programming From the Ground up‖ Second Edition , Tata McGrawHill.

REFERENCE BOOKS
1. MSDN Visual studio Library.
2. Cornell, ―Visual Basic 6 From the Ground Up, Tata McGraw – Hill Company Ltd
3. Mveller, ―Visual C++ from the Ground up‖, TMCH.
4. Viktor Toth, ―Visual C++6 Unleashed, Second Edition, Techmedia

CORE LAB 6   Visual Programming:VB, VC++ & ORACLE
(One Program either from VB or VC++ and one from ORACLE)

VISUAL BASIC

1. Write a simple VB program to accept a number as input and convert them into a. Binary b. octal c. Hex-decimal.

2. Write a simple VB program to add the items to list box with user input and move the selected item to combo box one by one.

3. Write a simple VB program to develop a calculator with basic operation.

4. Design a form using common dialog control to display the font, save and open dialog box without using the action control property.

5. Write a simple program to prepare a Questionnaire.

6. Write a VB Program to develop a menu driven program Add a MDI window in the form and arrange them in the cascading/horizontal style using menus (Create a menu to add form, arrange) (Menu Item 1). Also change the form color using the menu in another menu item (Menu Item 2).

VISUAL C++

1. Write a VC++ Program to display Toolbar and Status bar

2. Write a VC++ Program to add, delete string in a list box

3. Write a VC++ Program to perform menu Editor

4. Write a VC++ Program to perform Free Hand Drawing

5. Write a VC++ Program to perform serialization-SDI

6. Write a VC++ Program to perform serialization-MDI

ORACLE
Data Definition Basics

1. Create the following table *(PK - Primary Key, FK – Foreign Key)* cat_head, route_head,place_head, route_detail, ticket_detail, ticket_head with the mapping given below: cat_headroute_head*(cat_code PK) (cat_code FK)* route_headroute_detail*(route_id PK) (route_id FK)* ticket_headticket_detail*(tick_no PK) (tick_no FK)* place_headroute_detail*(place_id PK) (place_id FK)* (i) Alter the table ticket_header to add a check constraint on ticket_no to accept values between 1 and 500 (ii) Alter table route_header to add a column with data type as long. Data Manipulation Basics

2. (a) Insert values to above tables (b) Display only those routes that originate in madras and terminate at cochin (c) Display only distinct category code from the table route_header in descending manner. (d) Update the table route_header to set the distance between madras and Coimbatore as 500

Queries

3. a. Select rows from ticket_details such that ticket number greater than any ticket_number in Ticket_header. B. Select rows from route header such that the route_idare greater than all route_id in route_detail where place id is ―100‖. C. Create view tick from ticket_header with Ticket_no, Origin, Destination, route_id

Report

1. Generate a report from the table ticket_detail for the particular ticket_no

    PL/SQL

2. Write a PL/SQL block to update the bus_station to be ―ERODE‖ where place_id is '01' or ‗05' [place header] b. Write a PL/SQL block to satisfy the following condition by accepting the route_id as user input. If the distance is less than 500 than update the fare to be 200 c. Write a Database trigger before insert for each row on the table route detail not allowing transaction on Saturday / Sunday d. Write a Database trigger before delete for each row not allowing deletion and give the appropriate message on the table route details

    PROJECT

3. Develop a Simple Project for Student Database Management System using VB as front end and ORACLE as back end.

ELECTIVE I   EXIM MANAGEMENT

Objective
The subject deals with the Export and Import Policies sales negotiations Execution of the sale and provides knowledge on the various aspects connected with Banking, Foreign Buyers and Sellers.

UNIT -I:
Introduction of Import and Export Trade - Earlier stages of Trading - Supply and Demand role in IMPEX - Stage by stage development of IMPEX Practice - Trade Pattern - Products and supplies - Export and Import of Principal Commodities in India.

UNIT - II:
Export Procedures - Documentation Procedures - Cargo Insurance - Negotiation and Finalization - Selection of Carriers - Export Benefits - Role of Logistic in Export - Economics of Packing - Numbering and Marking.

UNIT - III:
Import Procedures - Import Documentation - Cargo Insurance - Types of Imports - Import Licenses - Role of Logistics in Import - Application of Strategy for reducing cost in Imports (Direct Clearance / Hook Point Delivery etc).

UNIT – IV :
Overview of various export promotion schemes - Duty Drawback- Advance License - Remission Scheme - (i) DEPB Scheme - Export Promotion Capital Goods Scheme - Diamond &Jewellery - Agricultural & Pharmaceutical product exports promotion scheme - SEZ, EHTP,STP & EOU's - Types of Export Houses.

UNIT – V:
Study of Import control and Import Policy - Import control order and its provisions – Current Import Policy – Scheme of control – Licenses, Customs Clearances, Permits, Open general licenses, - Different types validity, Conditions, limiting factors –Contraventions- Prohibitions, Restrictions, Savings – License Issuing authorities – Registration of Licenses – Supplementary Licenses, Letters of authority – Release advices – Recommending authorities, sponsoring Authorities - Contraventions and punishments under Import - Control Act/order - Post Import obligations – Provisions for imports of Gifts, Samples. - Goods sent for repairs, baggage, post Parcels - Import policy for Exporters – (D.E.E.C. Scheme, Import Export pass book Scheme) – 100% Export Oriented Exporters – Free Trade Zones

TEXT BOOK:
New Import Export Policy - Nabhi Publications

REFERENCE BOOKS :
1. EXIM Policy & Handbook of EXIM Procedure – VOL I & II
2. A Guide on Export Policy Procedure & Documentation– Mahajan
 3. How to Export – Nabhi Publications
4. Export Management – D.C. Kapo

SKILL BASED SUBJECT 3   Programming Lab –Web Programming

1. Develop a HTML document which displays you name as **<h1>**heading and displays any four of your friends. Each of your friend's names must appear as hot text. When you click your friend's name, it must open another HTML document, which tells about your friend.
2. Write names of several countries in a paragraph and store it as an HTML document, *world.html*. Each country name must be a hot text. When you click India (for example), it must open *india.html* and it should provide a brief introduction about India.
3. Design a HTML document describing you. Assign a suitable background design and background color and a text color.
 4. Develop a HTML document to print the following:

Who can use the solar heaters? Anybody with a regular hot water demand.
*   In houses for domestic purposes (cooking, bathing and washing).
*   For engineering / chemical industries, dairies and textile/leather process plants, to – preheat boiler feed water.
*   For hostels, hospitals, guest houses and industrial canteens.
*   For food-processing plants and for process applications.

5. Write a HTML document to print the following:

The family has the following facilities:

1. Own House
   - Living area 2400 square feet
   - Separate bungalow
   - Car shed
2. Car
   - Maruti Esteem
   - Registration Number TN 38 A 9650
   - 1996 Model
3. Farm
   - 35 acres Coconut Groves
   - 10 acres Mango Groves

6. Write a HTML document to print your class Time Table.

7. Develop a Complete Web Page using Frames and Framesets which gives the Information about a Hospital using HTML.

8. Write a HTML document to print your Bio-Data in the following format:
   NAME Religion Community Street Town District State Address PIN Code Office Phone Residence Mobile Educational Qualification Degree University/Institute Month& year Grade / Mark

9. Develop complete set of web pages to describe you skills in various areas using HTML.

10. Develop a web site to publish your family and the details of each member using HTML.

11. Develop a HTML document to display a Registration Form for an inter-collegiate function.

12. Develop a HTML document to design Alumni Registration form of your college.

SEMESTER VI

CORE 12   **Graphics & Multimedia**

Objective: To inculcate knowledge on Graphics & Multimedia concepts. **(GRAPHICS – UNITS I & II) (MULTIMEDIA – UNITS III, IV &V)**

UNIT-I: Output Primitives: Points and Lines – Line-Drawing algorithms – Loading frame Buffer – Line function – Circle-Generating algorithms – Ellipse-generating algorithms. Attributes of Output Primitives: Line Attributes – Curve attributes – Color and Grayscale Levels – Area-fill attributes – Character Attributes.

UNIT-II: 2D Geometric Transformations: Basic Transformations – Matrix Representations – Composite Transformations – Other Transformations. 2D Viewing: The Viewing Pipeline – Viewing Co-ordinate Reference Frame – Window-to-Viewport Co-ordinate Transformation - 2D Viewing Functions – Clipping Operations.

UNIT-III:Text: Types of Text – Unicode Standard – Font – Insertion of Text – Text compression – File formats. Image: Image Types – Seeing Color – Color Models – Basic Steps for Image Processing – Scanner – Digital Camera – Interface Standards – Specification of Digital Images – CMS – Device Independent Color Models – Image Processing software – File Formats – Image Output on Monitor and Printer.

UNIT-IV: **Audio:** Introduction – Acoustics – Nature of Sound Waves – Fundamental Characteristics of Sound – Microphone – Amplifier – Loudspeaker – Audio Mixer – Digital Audio – Synthesizers – MIDI – Basics of Staff Notation – Sound Card – Audio Transmission – Audio File formats and CODECs – Audio Recording Systems – Audio and Multimedia – Voice Recognition and Response - Audio Processing Software.

UNIT-V:Video: Analog Video Camera – Transmission of Video Signals – Video Signal Formats – Television Broadcasting Standards – PC Video – Video File Formats and CODECs – Video Editing – Video Editing Software. Animation: Types of Animation – Computer Assisted Animation – Creating Movement – Principles of Animation – Some Techniques of Animation – Animation on the Web – Special Effects – Rendering Algorithms. Compression: MPEG-1 Audio – MPEG-1 Video - MPEG-2Audio – MPEG-2 Video.

TEXTBOOKS:
1. COMPUTER GRAPHICS – Donald Hearn, M.Pauline Baker, 2nd edition, PHI. (UNIT-I: 3.1-3.6,4.1-4.5 & UNIT-II: 5.1-5.4,6.1-6.5)
2. PRINCIPLES OF MULTIMEDIA – Ranjan Parekh, 2007, TMH. (UNIT III: 4.1-4.7,5.1-5.16 UNIT-IV: 7.1-7.3,7.8-7.14,7.18-7.20,7.22,7.24,7.26-28 UNIT-V: 9.5-9.10,9.13,9.15,10.10-10.13)

REFERENCE BOOKS:
1. COMPUTER GRAPHICS – Amarendra N Sinha, Arun D Udai, TMH.
2. MULTIMEDIA: Making it Work – Tay Vaughan, 7th edition, TMH.

CORE LAB 7   PROGRAMMING LAB- GRAPHICS & MULTIMEDIA

MULTIMEDIA:

1. Create Sun Flower using Photoshop.

2. Animate Plane flying in the Clouds using Photoshop.

3. Create Plastic Surgery for the Nose using Photoshop.

4. Create See-through text using Photoshop.

5. Create a Web Page using Photoshop.

6. Convert Black and White Photo to Color Photo using Photoshop.

GRAPHICS:

1. Write a program to rotate an image.

2. Write a program to drop each word of a sentence one by one from the top.

 3. Write a program to drop a line using DDA Algorithm.

4. Write a program to move a car with sound effect.

5. Write a program to bounce a ball an move it with sound effect.

6. Write a program to test whether a given pixel is inside or outside or on a polygon.

ELECTIVE –II   **E- COMMERCE**

UNIT- I E-commerce – Definition – classification – concepts – features - scope and evolution - advantages and significance in modern business - E-commerce practices v/s traditionalpractices, limitations of e-commerce. Elements of Ecommerce- website promotion - online catalog - purchase delivery support - Types of electronic commerce - Value chains in electronic commerce - Internet, World Wide Web - Web based tools for electronic commerce- intranet - Business Applications on Intranet Electronic data interchange - forces behind E-commerce industry frame work

UNIT – II Types of Ecommerce- B2B, B2C and intra business. Retail Ecommerce – Retailing through internet, Direct Online Sales model, online advertising sales model, online commission model, Product Selections. Business Models for e commerce- meaning definition importance. E business models based on the relationships of transaction types- manufacture model, advertising model, value chain model, brokerage Model Marketing on the web, marketing strategies, creating web presence, advertising, customer service and support, web branding strategies, web selling models

UNIT - III Setting up a online store. Digital certificates, online transactions providing, shopping cart software , internet merchant bank account, payment gateways, safety precautions forsellers and buyers, logistics of Ecommerce business, Web hosting. Business Models& Revenue Models over internet, emerging trends in e- business, e-governance, digital commerce, mobile commerce, and strategies for business over Web, internet based Business Models.

UNIT – IV Electronic Payment system, types of electronic payment systems, smart cards and Infrastructure issues in EPS, Electronic Fund Transfer, Digital Token based Electronics payment system, credit card/ debit card based EPS, Emerging financial instruments, home banking, online banking. Digital Signatures – Legal positions of digital signatures, how digital signature technology Works. Ebanking- introduction concepts & meaning, Electronic CRMC, Need for electronic CRM, CRM Areas – CRM Components, CRM architecture. Electronic CRM Applications

UNIT – V E-security- introduction, Need for security , security concepts, Attacking methods – Cybercrimes, Cryptology, hacker, encryption, ecommerce security solutions- E locking - Net Scape security solutions Risks & e payment system- Data protection, risk from mistakes & disputes – consumer protection, management information privacy, managing credit risk EDA,EDI Application in Business, Legal requirement in E- Commerce Information technology Act, Cyber laws relating to E- Commerce, Security Overview, Electronic Commerce Threats, Encryption, Cryptography, Public Key and private key cryptography, digital signatures, digital certificates, security protocols over public networks HTTP ,SSL, Firewall as security control. Virtual Private Network (VPM) implementation management issues.

TEXT BOOK:
1. Whitley, David (2000). E-commerce strategy, tech. and Applications.TataMcgraw Hill.

REFERENCE BOOKS :
1. Greenstein and Feinman, :E-Commerce, TMH

SKILL BASED SUBJECT 4

COMPUTER APPLICATION IN MANAGEMENT USING SAP - PRACTICAL

1. **TALLY**
   Introduction and Installation,
   Required Hardware,
   Preparation for installation of Tally software installation,

2. **WORKING IN TALLY**
   Opening new company, Safety of Accounts or Password, Characteristics, Making Ledger Accounts, Writing voucher, voucher entry, Making different types of vouchers, Correcting sundry debtors and sundry creditors accounts, Preparation of Trial Balance, Books of Accounts, Cash Book, Bank Books, Ledger Accounts, Group summary, Sales Register and Purchase Register, Journal Register, Statement of Accounts & Balance Sheet.

3. **ERP & SAP**
   Introduction – Need for ERP – Advantages – Major ERP Packages – SAP: Features – ABAP: Logon to SAP Environment – ABAP Dictionary – Functions – Objects – Managing SAP Application Practical's: Simple problems to be done in WORD, EXCEL and POWERPOINT using all the above mentioned topics.

4. **WMS**

5. **CHA**

Practical's: Simple problems to be done in using all the above mentioned topics.