

ANANDA COLLEGE

DEVAKOTTAI

B.Sc. COMPUTER SCIENCE

(IInd & IIIrd YEAR ODD SEMESTER SYLLABUS 2020-2021)

Sem	Part	Course Code	Title of the Course	Cr.	Hrs./Week	Max. Marks		
						Int.	Ext.	Total
III	I	73IT	Tamil/other languages - III	3	6	25	75	100
	II	732E	English - III	3	6	25	75	100
	III	7BCE3C1	Core - V - Data Structures and Computer Algorithms	4	5	25	75	100
		7BCE3P1	Core-VI -Data Structures and Computer Algorithms Lab (using C and C++)	4	5	40	60	100
	IV		Allied - I (Theory only) (or)	5	5	25	75	100
			Allied - I (Theory cum Practical)	4	3	15	60	75
			Allied Practical - I	-	2**	--	--	---
	IV	7NME3A/ 7NME3B/ 7NME3C	(1) Non-major Elective- II - (A) இலக்கியமும் மொழிப்பயன்பாடும். . (B) பழந்தமிழ் இலக்கியங்களும் இலக்கியவரலாறும்/ (C) Effective Employability Skills	2	1	25	75	100
(2) Skill Based Subjects - I 7SBS3A1/ 7SBS3A2/ 7SBS3A3			2	2	25	75	100	
V	7BEA3	Extension activities	1	-	10 0	--	100	
V	III	7BCE5C1	Core - IX - Operating System	4	5	25	75	100
		7BCE5C2	Core - X - Relational Database Management Systems	4	5	25	75	100
		7BCE5P1	Core - XI - Relational Database Management Systems Lab	4	6	40	60	100
		7BCEE1A / 7BCEE1B	Elective-I-A) Data Mining and Data Warehousing (or) B) WEB Design	5	5	25	75	100
		7BCEE2A / 7BCEE2B	Elective-II- A) Digital Principles and Computer Organization (or) B) Microprocessor and Microcontroller	5	5	25	75	100
	IV	7SBS5A4/ 7SBS5A5/ 7SBS5A6/ 7SBS5A7	(2) Skill Based Subjects - I	2	2	25	75	100
			(2) Skill Based Subjects - I	2	2	25	75	100

B.Sc COMPUTER SCIENCE

IInd Year-IIIrd Semester Syllabus-2020-2021

இரண்டாம் ஆண்டு - மூன்றாம் பருவம் -
பாடக்குறியீட்டு எண்: 731T

பொதுத் தமிழ் தாள் - 3 - காப்பியமும் புதினமும்

அலகு 1

- | | | |
|------------------|---|---------------------------------|
| 1. சிலப்பதிகாரம் | - | மங்கல வாழ்த்துப்பாடல். |
| 2. மணிமேகலை | - | பாத்திர மரபு கூறிய காதை. |
| 3. கம்பராமாயணம் | - | சேது பந்தனப்படலம். |
| 4. பெரியபுராணம் | - | கோச்செங்கட்சோழ நாயனார் புராணம். |
| 5. தேம்பாவணி | - | கோலியாத் படலம். |
| 6. சீறாப்புராணம் | - | மானுக்குப் பிணை நின்ற படலம் |

அலகு 2 - புதினம்

வேரில் பழுத்தபலா - சு.சமுத்திரம்.

அலகு 3 - இலக்கணம்

யாப்புயம் அணியும்

செய்யுள் உறுப்புகள், எழுத்து, அசை, சீர், தளை, அடி, தொடை ஆகியன பற்றிய விளக்கம். பாவகை, வெண்பா, ஆசிரியப்பா ஆகியவற்றின் பொது இலக்கணங்கள்.

அணி, வகைகள், உவமை, உருவகம், வேற்றுமை, பின்வருநிலை, சிலேடை அணிகள்.

அலகு 4 - இலக்கிய வரலாறு

அலகு 1, அலகு 2ல் உள்ள பாடம் தொடர்பான இலக்கிய வகைகள் தொடர்பான இலக்கிய வரலாறு.

அலகு 5 - படைப்பாற்றல்

மரபுக் கவிதை - புதுக்கவிதை படைத்தல்.



**II YEAR – III SEMESTER
COURSE CODE: 732E**

COURSE – III - ENGLISH FOR ENRICHMENT – III

Texts Prescribed

1. *Six Short Stories*, Ed. by the Board of Editors, Harrows Publications, Chennai.
2. *One Act Plays*, Ed. by the Board of Editors, Harrows Publications, Chennai.
3. *Modern English – A Book of Grammar Usage and Composition* by N.Krishnaswamy, Macmillan Publishers.
4. *English for Communication*, Ed. by the Board of Editors, Harrows Publications, Chennai.

Unit I Short Stories

1. Two Old Men – Leo Tolstoy
2. The Diamond Necklace – Guy de Maupassant
3. The Verger – Somerset Maugham
4. The Postmaster – Rabindranath Tagore.

Unit II One Act Plays

1. Riders to the Sea – J.M.Synge
2. The Rising of the Moon – Lady Gregory

Unit III One Act Plays

1. A Kind of Justice – Margaret Wood
2. The Refugee – Asif Currimbhoy

Unit IV Grammar

Tenses, Voices, Degrees of Comparison

Unit V Composition

Agenda, Minutes, Notice, Descriptive Writing

Allocation of Working Hours per week

Short Stories - 2 hours
One Act Plays - 2 hours
Grammar & - 2 hours
Composition -----
Total - 6 hours



II YEAR – III SEMESTER
COURSE CODE: 7BCE3C1

CORE COURSE-V–DATA STRUCTURES AND COMPUTER ALGORITHMS

Unit I

Introduction to data structure: The need for data Structure-Definitions-Data Structures-Arrays: Introduction, range of an array-one dimensional array-two dimensional array-special types of matrices-linked lists: Introduction - benefits and limitations of linked list-Types-singly linked lists-circular linked lists-doubly linked lists.

Unit II

Stack: Introduction- ADT stack - implementation of stack- application of stack -
Queue: Introduction - implementation of basic operations on array based and linked list based queue -circular Queues.

Unit III

Trees:Introduction–binary Trees-representation of binary trees-Binary tree Traversals -Recursive procedures of traversal methods-Expression Trees-Threaded Trees-Application of Trees.

Unit IV

Algorithms: Introduction: What is an Algorithm? – Algorithm Specification – Performance Analysis – Divide and Conquer: General method – Binary Search – Finding the maximum and minimum – Merge Sort – Quick Sort – Selection –Strassen’s Matrix Multiplication.

Unit V

The Greedy Method: General Method – Knapsack problem – Job Sequencing with deadlines – Optimal Storage on tapes – Optimal merge patterns

Minimum cost spanning trees: Prim’s Algorithm – Kruskal Algorithm –
Dynamic Problem: All pairs of shortest path – single source shortest path-Travelling salesman problem.

Graph:Graph terminology-connected graph-graph traversal techniques-

Text Books:

1. Data Structures, A. Chitra, P. T. Rajan, Vijay Nicol Imprints Pvt Ltd, 2006, McGrawHillEducation of India Pvt Ltd.
UNIT I – Chapter 1, 3 (Except Multi-dimensional Arrays) and 4 (Except Simple Algorithms on linked lists, Circular doubly linked lists, multiple linked lists, applications, polynomial representation, polynomial addition, representation of polynomials)
UNIT II – Chapters 5, 6 (Except Tower of Hanoi, Dequeue)
UNIT III – Chapters (Except Priority Queues)
2. Fundamentals of Computer Algorithms, Ellis Horowitz, SaratajSahni, Galgottia Publications Pvt Ltd, New Delhi
UNIT IV – Chapter 1 (Except 1.4), Chapter 3 (Except 3.2, 3.9)
UNIT V – Chapter 4 (Except 4.2, 4.6.3)

Books for Reference:

1. Data Structure and Algorithm Analysis in C – Mark Allen Weiss – Second Edition, Addison Wesley publishing company, 1997.
2. C and C++ Programming concepts and Data Structures, P.S.Subramanyam, BS Publications, 2013.
3. Data Structures and Algorithms, Alfred V.Aho, John E.Hopcraft and Jeffrey D.Ullman, Pearson Education, Fourteenth Impression, 2013.

II YEAR – III SEMESTER

COURSE CODE: 7BCE3P1

**CORE COURSE-VI-DATA STRUCTURES AND COMPUTER ALGORITHMS LAB
(Using C and C++)**

Group A

(Programs from Data Structures Using C)

1. Implementing Stack as an array.
2. Implementing Stack as a linked list.
3. Convert Infix expression to Postfix expression using stack.
4. Convert Infix expression to Prefix expression using Stack.
5. Implementing Queue as an Array.
6. Implement Queue as a linked list.
7. Binary tree traversals.
8. Implement Binary Search Tree.

Group B

(Programs from Computer Algorithms Using C++)

1. Linear Search
2. Binary Search
3. Bubble Sort
4. Insertion Sort
5. Merge Sort
6. Quick Sort
7. Selection Sort

Books for Reference:

1. C and C++ Programming concepts and Data Structures, P.S.Subramanyam, BS Publications,2013.

Note:

One Question from Group A and another one Question from Group B is compulsory for University Examination.



PART IV (I) - (C)

NON - MAJOR ELECTIVE - COURSE II

II YEAR - III SEMESTER

COURSE CODE: 7NME3C

COURSE II - EFFECTIVE EMPLOYABILITY SKILLS

Unit I Curriculum Vitae & Facing the Interview

Applying for jobs, Preparing the curriculum Different formats vita, Facing the interviews, Frequently Asked Questions (FAQs).

Unit II Interpersonal Communication

One to one Communication

One to group Communication

Unit III Group Discussion

Listening, Ice-breaking, Leader - Member Moderates his role responsibility, Conflict, Management, Consensus, Steps involved

Unit IV Team Work

Qualities Selection constant & comfort, Orientation Review Tea, Review of the team work

Unit V Motivation

Leadership & Motivation, Behaviour, Motives Managerial Skills

Books for Reference:

1. E.H.McGrath, S.J., "Basic Managerial Skills For All", Prentice-Hall of India Private Limited, New Delhi 110 001. ISBN-0-87692-498-4.
2. D.K.Sarma, "You & Your Career", Wheeler Publishing, 755, Anna Salai, Chennai 600002. ISBN 81-7544-170-4. -1999
3. Indian Jaycees, "Skills" Series, published by Indian Jaycees.
4. S.P.Sachdeva, "Interview In A Nutshell", Sudha Publications (P) Ltd., B-5, Prabhat Kiran, Rajendra Place, New Delhi 110 008.



PART IV (2) – SKILL BASED SUBJECTS (SBS)

GROUP I – SET I

II YEAR – III SEMESTER

COURSE CODE: 7SBS3A1

COURSE I – COMPETITIVE EXAMINATION SKILLS

Objectives:

- To build a sense of awareness among students through proper guidance about various competitive examinations in order to motivate students for prospective career in government and corporate sector.
- To intensively guide students for competitive examinations like TNPSC, UPSC, SSC, RRB, IBPS etc.

Unit I

Public Service Commission: Tamil Nadu Public Service Commission (TNPSC) and its role - History of TNPSC - Constitutional Provisions on the Formation, Functions, and Powers of Public Service Commissions for the Union and for the States - TNPSC and its rules of Procedure.

Eligibility and examination pattern: TNPSC - Union Public Service Commission (UPSC) - Staff Selection Commission (SSC) - Railway Recruitment Board (RRB) – Institute of Banking Personnel Selection (IBPS).

Unit II

Intelligence, creativity & application, testing & assessment - Types, verbal abilities & fluency

Unit III

Numerical ability:

Numbers, simplification, time and work, percentage, fraction, speed and distance, simple and compound interest, ratio and proportion

Unit IV

Spatial and perceptual abilities, situation reaction test

Unit V

Memory and inductive reasoning, Logical reasoning, Coding and Decoding, Direction Test, Syllogism

Books for Reference:

1. Ajay rai, “intelligence tests”, sterling paperbacks, published by sterling publishers pvt. Ltd., l-
10, green park extension, new delhi 110 016., 2001
2. Competition success review magazines.



PART - V - 7BEA3- EXTENSION ACTIVITIES

Extension Activities will be organized for 2 days in the Third Semester. The programme may be organized in any Saturday and Sunday.

A meeting of all the staff of the College (Teaching, Administrative and Technical Staff) be conducted before departing to the camp in which each and every aspect like Programmes to carried out, accommodation, food, medical aid, transport facilities, etc., should be thoroughly discussed.

One credit will be allotted for this Extension Activities. The marks allotted for each camp will be 100. Each student participating in the camp will be evaluated internally for 100 marks. The criteria for evaluation of Extension Activities will be as follows:

S. No.	Criteria	Maximum Marks
1.	Interaction with villagers	10
2.	Participation / Attitude towards work	10
3.	Participation in interaction and discussion	10
4.	Knowledge of problems / issues	10
5.	Organising & decision making ability	20
6.	Expression: a) Cultural programmes	10
	b) Report Writing	20
7.	Ability to adjust and work in a team	10
Total		100

B.Sc COMPUTER SCIENCE

IIIrd Year-Vth Semester Syllabus-2020-2021

III YEAR – V SEMESTER
COURSE CODE: 7BCE5C1

CORE COURSE-IX–OPERATING SYSTEM

Unit I

Introduction to Operating Systems: Introduction, What is an Operating systems, Operating system components and goals, Operating systems architecture. Process Concepts: Introduction, Process States, Process Management, Interrupts, Interprocess Communication.

Unit II

Asynchronous Concurrent Execution: Introduction, Mutual Exclusion, Implementing Mutual Exclusion Primitives, Software solutions to the Mutual Exclusion Problem, Hardware solution to the Mutual Exclusion Problem, Semaphores. Concurrent Programming: Introduction, Monitors.

Unit III

Deadlock and Indefinite Postponement: Introduction, Examples of Deadlock, Related Problem Indefinite Postponement, Resource concepts, Four Necessary conditions for Deadlock, Deadlock solution, Deadlock Prevention, Deadlock Avoidance with Dijkstra's Banker's algorithm, Deadlock Detection, Deadlock Recovery.
Processor Scheduling: Introduction, Scheduling levels, Preemptive Vs NonPreemptive Scheduling Priorities, Scheduling objective, Scheduling criteria, Scheduling algorithms.

Unit IV

Real Memory Organization and Management: Introduction, Memory organization, Memory Management, Memory Hierarchy, Memory Management Strategies, Contiguous Vs Non-Contiguous Memory allocation, Fixed Partition Multiprogramming, Variable Partition multiprogramming.

Virtual Memory Management: Introduction, Page Replacement, Page Replacement Strategies, Page Fault Frequency (PFF) Page replacement, Page Release, Page Size.

Unit V

Disk Performance Optimization: Introduction, Why Disk Scheduling is necessary, Disk Scheduling strategies, Rotational optimization.

File and Database Systems: Introduction, Data Hierarchy, Files, File Systems, File Organization, File Allocation, Free Space Management, File Access control.

Text Book:

1. Operating Systems, Deitel&DeitelChoffnes, Pearson education, Third edition, 2008.
UNIT I: Chapter 1: 1.1, 1.2, 1.12, 1.13 &
Chapter 3: 3.1, 3.2, 3.3, 3.4, 3.5
UNIT II: Chapter 5: 5.1, 5.2, 5.3, 5.4(up to 5.4.2), 5.5, 5.6 &

Chapter 6: 6.1, 6.2
UNIT III: Chapter 7: 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.10
Chapter 8: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7
UNIT IV: Chapter 9: 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.8, 9.9
Chapter 11: 11.1, 11.5, 11.6, 11.8, 11.9, 11.10
UNIT V: Chapter 12: 12.1, 12.4, 12.5, 12.6
Chapter 13: 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7, 13.8

Books for Reference:

1. An introduction to Operating systems concepts and Practice, Pramod Chandra P. Bhatt, PHI, Second Edition, 2008.
2. Operating System Concepts, Abraham Silberschatz Peter Galvin Greg Gagne, 6th edition Windows XP Update, Wiley India edition, 2007.
3. Operating Systems Principles and Design, Pal Choudhury, PHI Learning, 2011.
4. Operating Systems, A Concept Based Approach Dhananjay M. Dhamdhare Tata Mc Graw Hill, 3rd Edition, 2012



III YEAR – V SEMESTER
COURSE CODE: 7BCE5C2

CORE COURSE-X–RELATIONAL DATABASE MANGEMENT SYSTEMS

Unit I

Introduction: Database System Applications – Purpose of Database Systems – View of Data– Database Languages – Relational Databases – Database Design – Object based and semi structured databases – Data storage and Querying – Database Users and Administrators– Transaction Management – Database users and Architectures – History of Database System.

Entity-Relationship Model: E-R model – constraints – E-R diagrams – E-R design issues – weak entity sets – Extended E-R features.

Unit II

Relational Database Design: Features of good Relational designs – Atomic domains and First Normal Form – Decomposition using functional dependencies – Functional dependency theory – Decomposition using functional – Decomposition using multivalued dependencies – more Normal forms – database design process – modeling temporal data

Unit III

Database System Architecture: Centralized and Client-Server architecture – Server system architecture – parallel systems – Distributed systems – Network types. Parallel databases: I/O parallelism – Interquery Parallelism – Intraquery parallelism. Distributed Databases: Homogeneous and Heterogeneous databases – Distributed Data storage – Distributed transactions – Distributed query processing.

Unit IV

Schema Objects Data Integrity – Creating and Maintaining Tables – Indexes – Sequences – Views – Users Privileges and Roles –Synonyms.

Unit V

PL/SQL: PL/SQL – Triggers – Stored Procedures and Functions – Package – Cursors – Transaction

Text Books:

1. Database System Concepts – SilberschatzKorthSudarshan, International (5th Edition) McGraw Hill Higher Education 2006
2. Jose A.Ramalho – Learn ORACLE 8i BPB Publications 2003

Books for Reference:

1. “Oracle 9i The complete reference“, Kevin Loney and George Koch, Tata McGraw Hill, 2004.
2. “Database Management Systems“, Ramakrishnan and Gehrke, Mc Graw Hill, Third Edition, 2003.
3. “Oracle 9i PL/SQL Programming “Scott Urman, Oracle Press, Tata Mc Graw Hill, 2002.



III YEAR – V SEMESTER
COURSE CODE: 7BCE5P1
CORE COURSE-XI-RELATIONAL DATABASE MANAGEMENT SYSTEMS LAB

The following concepts must be introduced to the students:

DDL Commands

- Create table, alter table, drop table

DML Commands

- Select, update, delete and insert statements
- Condition specification using Boolean and comparison operators (and, or, not, =, <>, >, <, >=, <=)
- Arithmetic operators and aggregate functions (Count, Sum, Avg, Min, Max)
- Multiple table queries (join on different and same tables)
- Nested select statements
- Set manipulation using (any, in, contains, all, not in, not contains, exists, not exists, union, intersect, minus, etc.)
- Categorization using group by.....having
- Arranging using order by

I. Create a table Student-master with the following fields client_no,name, address, city, state,

pincode, remarks, bal_due with suitable data types.

- a. Create another table supplier_table from client_master. Select all the fields and rename client_no with supplier_no and name with supplier_name.
- b. Insert data into client_master
- c. Insert data into supplier_master from client_master.
- d. Delete the selected row in the client_master.

II. Create a table sales_order with s_order_no and product_no as primary key. Set other fields

to store client number, delivery address, delivery date,order status.

- a. Add a new column for storing salesman number using ALTER Command.
- b. Set the s_order_no as foreign key as column constraints.
- c. Set the s_order_no as foreign key as table constraints.
- d. Enforce the integrity rules using CHECK.

III. Create a table student_master with the following fields name, regno, dept and year with suitable data types. Use Select command to do the following.

- a. Select the student's name column.

- b. Eliminate the duplicate entry in table.
 - c. Sort the table in alphabetical order.
 - d. Select all the Students of a particular department.
- IV. Create a table sales_order_details with the s_order_no as primary key and with the following fields: product_no, description, qty_ordered, qty_disp, product_rate, profit_percent, sell_price, supplier_name.
- a. Select each row and compute sell_price*.50 and sell_price*1.50 for each row selected.
 - b. Select product_no, profit_percent, Sell_price where profit_per is not between 10 and 20 both inclusive.
 - c. Select product_no, description, profit_percent, sell_price where profit_percent is not between 20 and 30.
 - d. Select the suppliername and product_no where suppliername has 'r' or 'h' as second character.
- V. Create and use the following database schema to answer the given queries

EMPLOYEE			
DEFAULT			
Field	Type	Null	Key
Eno	Char(3)	No	Primary
Ename	Varchar(50)	No	
Job_type	Varchar(50)	No	
Manager	Char(3)	Yes	Foreign
Hiredate	Date	No	
Dno	Integer	Yes	Foreign
Commission	Decimal(10,2)	Yes	
Salary	Decimal(7,2)	No	

DEPARTMENT			
DEFAULT			
Field	Type	Null	Key
Dno	Integer	No	Primary
Dname	Varchar(50)	Yes	

Perform the following queries:

- a. Query to display Employee Name, Job, Hire Date, Employee Number; for each employee with the Employee Number appearing first.
- b. Query to display unique Jobs from the Employee Table.
- c. Query to display the Employee Name concatenated by a Job separated by a

- comma.
- d. Query to display all the data from the Employee Table. Separate each Column by a comma and name the said column as THE_OUTPUT.
 - e. Query to display the Employee Name and Salary of all the employees earning more than \$2850.
 - f. Query to display Employee Name and Department Number for the Employee No= 7900.
 - g. Query to display Employee Name and Salary for all employees whose salary is not in the range of \$1500 and \$2850.
 - h. Query to display Employee Name and Department No. of all the employees in Dept. 10 and Dept 30 in the alphabetical order by name.
 - i. Query to display Name and Hire Date of every Employee who was hired in 1981.
 - j. Query to display Name and Job of all employees who don't have a current Manager.
 - k. Query to display the Name, Salary and Commission for all the employees who earn commission.
 - l. Sort the data in descending order of Salary and Commission.
 - m. Query to display Name of all the employees where the third letter of their name is A.
 - n. Query to display Name of all employees either have two R's or have two A's in their name and are either in Dept. No=30 or their Manger's Employee No=7788.
 - o. Query to display Name, Salary and Commission for all employees whose Commission Amount is 14 greater than their Salary increased by 5%.
 - p. Query to display Name, Hire Date and Salary Review Date which is the 1st Monday after six months of employment.
 - q. Query to display Name and calculate the number of months between today and the date each employee was hired.
 - r. Query to display Name with the 1st letter capitalized and all other letter lower case and length of their name of all the employees whose name starts with J, A and M.
 - s. Query to display Name, Department Name and Department No for all the employees.
 - t. Query to display Unique Listing of all Jobs that are in Department # 30.
 - u. Query to display Name, Job, Department No. And Department Name for all the employees working at the Mumbai location.
 - v. Query to display Name, Dept No. And Salary of any employee whose department No. and salary matches both the department no. and the salary of any employee who earns a commission.
 - w. Query to display the Highest, Lowest, Sum and Average Salaries of all the employees
 - x. Query to display the Employee No. And Name for all employees who earn more than the average salary.

y. Query to display Employee Number and Name for all employees who work in a department with any employee whose name contains a 'T'.

VI. Create a table master_book to contain the information of magazine code, magazine name

and publisher. Weekly/biweekly/monthly, price. Write PL/SQL block to perform insert, update and delete operations on the above table.

VII. Create a table to contain phone number, user name, address of the phone user. Write a function to search for a address using phone numbers.

VIII. Create a table stock to contain the item-code, item-name, current stock, date of last purchase. Write a stored procedure to seek for an item using item-code and delete it, if the date of last purchase is before 1 year from the current date. If not, update the current stock.

IX. Create a table to store the salary details of the employees in a company. Declare the Cursor to contain employee number, employee name and net salary. Use Cursor to update the employee salaries.

X. Create a table to contain the information about the voters in a particular constituency. Write a proper trigger to update or delete a row in the table.



**III YEAR – V SEMESTER
COURSE CODE: 7BC EE1B**

ELECTIVE COURSE-I (B)–WEB DESIGN

Unit I

Introduction to HTML: Markup Languages – editing HTML – common tags – header – text styling – linking – images – formatting text – special characters, horizontal rules and line breaks – unordered list – nested and ordered list – tables and formatting – forms – linking – frames.

Unit II

Cascading Style Sheets:

Introduction – Inline styles – Embedded Style Sheets – Conflicting Style – Linking External Style Sheets – Positioning Elements – Backgrounds – Element Dimension – Box Model and Text Flow – Media Types – Building a Dropdown menu

Unit III

Java Script: introduction – control structures – if structure – while structure – assignment operators – increment and decrement operators – for structure – switch structure – do/while structure – break and continue statement – logical operators

Unit IV

Java Script Functions: Programmer defined functions – function definitions – duration of identifiers – scope rules – recursion – recursion vs iteration – global functions

Java Script Arrays: Arrays – declaring and allocating arrays – references and reference parameters – passing arrays to functions – sorting arrays – searching arrays – multiple-subscripted arrays

Java Script Objects: Math object – String object – Date object – Boolean and Number Object – document object – window object.

Unit V

Document Object Model (DOM): Modeling a document – Traversing and modifying a DOM Tree – DOM collections and Dynamic styles.

Events: Registering Event Handlers – onload - onmousemove, the event Object and this – onmouseover and onmouseout – onfocus and onblur – form processing with onsubmit and onreset – event bubbling and other events.

XML: Basics – structuring Data – XML Name Spaces – Document Type Definations – W3C XML schema documents – XML Vocabularies – XSLT

Text Book:

1. “Internet and World Wide Web – How to Program”, H.M.Deitel, P.J.Deital, T.R.Nieto, Pearson Education Asia – Addison Wesley Longman Pte Ltd.

Book for Reference:

1. “Special edition using HTML”, Mark R Brown and Jerry Honeycutt, Third edition



III YEAR – V SEMESTER

COURSE CODE: 7BCEE2A

ELECTIVE COURSE-II (A)–DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION

Unit I

Number Systems and Codes: Binary Number system – Binary to decimal – decimal to binary – hexa decimal – ASCII code – Excess-3 Code – Gray code.

Digital Logic: The Basic Gates – NOT, OR, AND - Universal Logic Gates – NOR, NAND.

Unit II

Combinatorial Logic Circuits: Boolean Laws and Theorems. - Sum of Products method - Truth table to Karnaugh Map – Pairs, Quads, Octets – Don't Care Conditions- Product-of sums method -Product-of sums Simplifications.

Data Processing Circuits: Multiplexers – Demultiplexers-1-of-16 Decoder – BDC-todecimal Decoders – Seven-segment Decoders – Encoders – Exclusive-OR Gates- Parity Generators and Checkers.

Unit III

Arithmetic Circuits: Binary Addition- Binary Subtraction – 2'S Complement Representation - 2'S Complement Arithmetic – Arithmetic Building Blocks.

Unit IV

Basic Computer organization and Design: Instruction codes - stored program organization - Computer registers and common bus system - Computer instructions - Timing and control - Instruction cycle: Fetch and Decode - Register reference instructions.

Micro programmed Control: Control memory organization - Address sequencing, micro instruction format and symbolic microinstructions - symbolic micro-program - binary microprogram.

Unit V

Central Processing Unit : General register organization - stack organization – instruction formats - addressing modes - Data transfer and manipulation - Program control. CISC and RISC - Parallel processing - Pipeline- general consideration.

Input-output organization: Peripheral devices - I/O interface - Memory organization:

Memory hierarchy - Main memory - Auxiliary memory.

Text Book:

1. Digital Principles and Applications – Donald P Leach, Albert Paul Malvino, GoutamSaha, 8th edition , McGraw-Hill Education, 3rd reprint 2015. 2.
2. Computer System Architecture, M. Morris Mano, Pearson Education, 3rd edition.,2007

UNIT I Chapters 5: (5.1 to 5.9) and 2: (2.1 to 2.3) Text Book 1

UNIT II Chapters 3: (3.1 to 3.8) and 4: (4.1 to 4.7) Text Book 1

UNIT III Chapters 6: (6.1 to 6.8) Text Book 1

UNIT IV Chapters 5 (5.1 to 5.5) and 7 (7.1 to 7.3) Text Book 2

UNIT V Chapters 8 (8.1 to 8.8), 9 (9.1 to 9.2), Text Book 2

11 (11.1 to 11.5) and 12(12.1 to 12.3)

Books for Reference:

1. Digital design, R.Anantha Natarajan, PHI Learning, 2015.
2. Principles of digital Electronics, K.Meena, PHI Learning, 2013.
3. Digital Computer Fundamentals, Thomas C. Bartee TMH 2007.
4. Digital Circuits and Design, S. Salivahanan and S. Arivazhagan, Vikas Publishers, 2005.
5. Computer Organization and Architecture, V.Rajaraman and T.Radhakrishnan, PHI learning, 5th Print, 2015.
6. Computer Organization, Carl HamacherZvonkoVranesicSafwatZaky, McGraw Hill Education, 5th Edition, 11th reprint, 2015.
7. Computer Organization and Architecture, SmrutiRanjan Sarangi, McGraw Hill Education.



GROUP I – SET II
III YEAR – V SEMESTER
COURSE CODE: 7SBS5A5
COURSE II – HERITAGE AND TOURISM

Objectives:

- To understand the definitions, terminology and concepts of cultural heritage and its relationships with tourism.
- To Understand heritage tourism supply by examining different categories of heritage attractions and the contexts within which heritage exists and additional perspectives on scale from the supply perspective
- To understand the role of interpretation in cultural heritage sites and the relevance of such interpretation approaches to visitors.
- Provide a framework to plan, design, and assess interpretation programs for tourists

Unit I

Tourism – Introduction – Concepts – Significance – Forms of Tourism – Effects of Tourism – Social, Economic and Environmental aspects – Human Rights

Unit II

Importance of preserving heritage – Heritage Spots in India – In Tamil Nadu – Brief history of the heritage spots – The role of heritage spots in promoting tourism – UNESCO guidelines on Heritage

Unit III

Role of Government in promoting tourism – ITDC- TTDC-Palace on wheels – Travel industry service network – Land (rail and road) Air – Water – Travel Agency – Hospitality and Accommodation

Unit IV

Travel Guide – Features – requirements – One’s role as a guide – Income and Employability – Qualities and skills of a professional travel or tourist guide

Unit V

Project work – Field visit to heritage and tourism spots in Sivagangai and Ramanathapuram Districts and submission of a report (15 to 25 pages)

Books for Reference:

- | | | |
|--------------|---|--|
| Bhatia, A. K | – | Tourism Development Principles and Practices,
(Sterling Publishers (P) Ltd., New Delhi) |
| Ananand M. M | – | Tourism and Hotel Industry in India
(Sterling Publishers (P) Ltd., New Delhi) |
| Acharya Ram | – | Tourism and Cultural Heritage
(Rosa Publications: Jaipur, 1986) |
| Jha, S.M | – | Tourism Marketing (Himalaya Publishing House) |



GROUP I – SET II
III YEAR – V SEMESTER
COURSE CODE: 7SBS5A6
COURSE III – MARKETING AND SALES MANAGEMENT

Objectives:

- To acquire analytical skills for solving marketing related problems and challenges and to familiar with the strategic marketing management process
- To learn the elements of sales force to be an effective component of an organization's overall marketing strategy.

Unit I

Introduction: Evolution of Marketing – Types of Marketing: Consumer Products Marketing, Industrial Marketing and Services Marketing – Demographic and Behavioural Dimensions of Marketing – Marketing Planning

Unit II

Basics of Market Segmentation, Targeting and Positioning – Components of The Marketing Mix: Product – Price – Place – Promotion – Distribution Channels: Types – Merits and Demerits

Unit III

Marketing Vs Selling – Nature and Scope of Sales Management – Personal Selling and Salesmanship – Selling Function – Understanding Consumer's Decision Making Process – Sales Organization and Types Of Selling

Unit IV

Prospecting – Approaching The Customer – Sales Presentation – Sales Demonstration – Negotiating Buyer Concerns – Closing The Sale – Post Sales Service and Complaint Handling

Unit V

Modern Trends in Marketing and Sales: Internet Marketing – Direct Marketing – Multi Level Marketing – Relationship Marketing – Selling through Kiosks

Books for Reference:

1. Chunawalla, S. A., Sales Management, 5th Edition (2007), Himalaya Publishing House
2. Havaldar, Krishna; Sales And Distribution Management, 1st Edition (2006), Tata Mcgraw Hill
3. Perreault, Jr., William; Mccarthy, E. Jerome, Basic Marketing, 15th Edition, 2006, Tata Mcgraw Hill

