

**Department of Computer Applications
Syllabus**

Class: II BCA

Semester:III

Sub.Code	Subject Name	Int	Ext	Total
731T	காப்பியமும் புதினமும்	25	75	100
732E	English for Enrichment - III	25	75	100
7BCA3C1	Core - V - Database Management Systems	25	75	100
7BCA3P1	Core - VI - Oracle Lab	40	60	100
7BITA3	Discrete Mathematics	25	75	100
7NME3C	Effective Employability Skills	25	75	100
7SBS3A1	Competitive Examination Skills	25	75	100
7BEA3	Extension Activities	100	-	100

**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

யாப்பும் 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: 7BCA3C1

CORE COURSE - V – 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 – Silberschatz Korth Sudarshan, International (6th Edition) McGraw Hill Higher Education, 2011.
2. Jose A.Ramalho – Learn ORACLE 8i BPB Publications 2007

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, McGraw Hill, Third Edition, 2003.
3. “Oracle 9i PL/SQL Programming “Scott Urman, Oracle Press, Tata McGraw Hill, 2002. ~~.....~~

**II YEAR – III SEMESTER
COURSE CODE: 7BCA3P1**

CORE COURSE - VI – ORACLE LAB

1. Creating, modifying and dropping Tables.
2. Creating tables with referential and check constraints.
3. Inserting, modifying, deleting rows.
4. Dropping, disabling /enabling constraints.
5. Retrieving rows with operators in where Clause.
6. Retrieving rows with Character functions.
7. Retrieving rows with Number and Date functions.
8. Retrieving rows with Group functions and HAVING.
9. Joining Tables. (Inner and Outer).
10. Retrieving rows with Sub Queries.
11. Simple PL/SQL Programs.
12. PL/SQL programs with control structures.
13. PL/SQL programs with Cursors.
14. PL/SQL programs with Exception Handling.
15. Creating and Calling Procedures.
16. Creating and Calling Functions.
17. Creating and Calling Packages.
18. Overloading Packages.
19. Working with Triggers.



ALLIED COURSE - III – DISCRETE MATHEMATICS

Unit - I

LOGIC: TF Statements – Connective – Disjunction – Negation – Conditional Statements – Bi conditional Statements – Atomic and Compound Statements – Well formed formulae – The truth table – Tautology – Tautological implication formulae with distinct Truth Tables.

Unit - II

NORMAL FORMS: Principles of Normal forms – Theory of Inference – Open Statements – Quantifiers – Valid Formulae and Equivalence – Theory of Inference for Predicate calculus.

Unit - III

GRAPH THEORY: Definition – Degrees – Sub graph – Isomorphism – Complete graph – Bipartite graph – paths, Cycles – Connectedness.

Unit - IV

TREES: Spanning tree – Kruskal's Algorithm – Prim's Algorithm – Dijkstra's Algorithm – Cutset and cutvertices – Eulerian-Hamiltonian graph.

Unit - V

LATTICE: Binary relation in a set – partition and covering of a set – Equivalence relations – Partial ordering – Posets – Hasse diagram – Lattices – Sub lattices – Properties of Sub-lattices– Special Lattices – Boolean Algebra – Boolean Functions.

Text Book

1. Discrete Mathematics by M.K.Venkataraman, N.Sridharan and N.Chandrasekaran, Nation Publishing co., Chennai

Book for Reference:

1. Discrete Mathematics Structures with applications to Computer Science by Trembly and Manohar – Mc Graw Hill.



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.



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.



Department of Computer Applications
Syllabus for ODD Semester

Class: III BCA

Semester: V

Sub.Code	Subject Name	Int.	Ext.	Total
7BCA5C1	Core – IX – .NET Programming	25	75	100
7BCA5P1	Core X – .NET Programming Lab	40	60	100
7BCA5C2	Core – XI – Computer System Architecture	25	75	100
7BCAE1A	Elective–I– Web Design Technology	25	75	100
7BCAE2A	Elective–II Computer Graphics	25	75	100
7SBS5A5	Heritage and Tourism	25	75	100
7SBS5A6	Marketing and sales management	25	75	100

COURSE CODE: 7BCA5C1

CORE COURSE - IX –. NET PROGRAMMING

Unit I – INTRODUCTION

Overview of Microsoft .NET Framework - The .NET Framework components-The Common Language Runtime (CLR) Environment- The .NET Framework class Library - Getting Started with Visual Basic .net IDE : Set up of work environment, start page, the menu system, toolbars, the new project dialog box, graphical designers, code designers, the object explorer, the toolbox, the solution explorer, the class view window, the properties window, the dynamic help window, the server explorer, the output window, the command window - Visual basic language concept : variables, Constants, Data Types, Operators, Control Structures and loops - Arrays : single and multidimensional array, declaring, dynamic array.

Unit II - INTRODUCTION TO WINDOWS COMMON CONTROLS

Working with Form - Properties : appearance, behaviour, layout, windows style etc, methods and events - Differentiate procedure oriented, object oriented and event driven programming – Input box- Message box- Working with Common Tool Box Controls: Label , button, Textbox , NumericUpDown , Check Box, Radio Button , Group Box , control and all important methods and events.

Unit III - ADDITIONAL CONTROLS AND MENUS OF WINDOWS

Working with other controls of toolbox: Date Time Picker, List Box, Combo box, Picture Box, Rich Text Box, Progress bar, Masked Text box, Link Label, Checked List box -

Working with Menus: creating menu,inserting,deleting,assigning short cut keys, popup menu.

Unit IV - INBUILT FUNCTIONS AND DIALOG BOX

Inbuilt Functions : Mathematical Functions-String manipulation - Dialog Boxes: OpenFileDialog, SaveFileDialog, FontDialog, ColorDialog, PrintDialog - Sub Procedures and functions : declaring, passing and returning arguments, exiting from it, pass by value and pass by ref - Exception Handling : Structured Error Handling (Try ...Catchfinally), Unstructured Error Handling (On error go to line, goto 0, goto -1, resume next) - Multiple document interface (MDI) : MDI Parent form and child form.

Unit V - DATABASE ACCESS USING ADO.NET

ADO .NET Object Model: Dataprovider - Dataset - ADO .NET Programming : Creating a Database Application, Creating Connection to a Database using ADO.NET , Populating Data in ADO.NET, Browsing Records, Datagrid view, Editing, Saving, Adding and Deleting Records using bounded and unbounded.

Text Books:

1. Shelly, cashman, Quasney ' Microsoft Visual Basic .NET : Comprehensive Concepts And Techniques 'Cengage learning, 2012
2. StevenHolzner , Visual Basic .NET Programming Black Book , Dreamtech Press Publications, New Delhi

III YEAR – V SEMESTER
COURSE CODE: 7BCA5P1

CORE COURSE - ~~X~~ NET PROGRAMMING LAB

1. Observe and draw visual .net IDE layout and hands on practice to create, save and open the project.
2. Write a program to accept any character from keyboard and display whether it is vowel or not.
3. Write, test and debug program to test inputbox, messagebox.
4. Write, test and debug applications to use textbox, label, and button.
5. Write, test and debug applications to use radio button, checkbox, numericupdown and group box controls.
6. Write, test and debug application using date time picker, list box, combo box, picture box.
7. Write, test and debug application using rich text box, progress bar, masked text box, link label.
8. Write, test and debug application using checked list box, scroll bars, timer.
9. Write, test and debug applications using menu.
10. Write, test and debug applications using dialog boxes.
11. Write, test and debug applications using sub procedures and functions.
12. Write, test and debug applications using MDI.
13. Write, test and debug applications using math and string manipulation functions.
14. Create and test connection using ado.net to view SQL express server/Microsoft Access/ Oracle/other database data in textbox etc controls.
15. Create connection view controls like data-gridview controls.
16. Write, test and debug small application to add, edit, search, and delete record in database in bounded mode.
17. Write, test and debug small application to add, edit, search, and delete record in database in unbounded mode i.e. through coding.



III YEAR – V SEMESTER
COURSE CODE: 7BCA5C2

CORE COURSE - XI – COMPUTER SYSTEM ARCHITECTURE

Unit I

Data Representation: Data types, Complements, Register Transfer Language, Register Transfer Bus and Memory Transfers, Arithmetic, Logic and Shift unit. Introduction to Basic computer organization and design: Instruction codes, computer registers, Computer Instructions, Timing and control, Instruction cycle.

Unit II

Memory reference instructions Input – Output and Interrupt. Introduction to programming the basic computer: Machine Language, Assembly Language, The assembler, Program Loops, Programming Arithmetic and Logic operations and Subroutines.

Unit III

Central Processing Unit: Introduction, General register Organization, Stack Organization, Instruction formats, addressing modes, data transfer and Manipulation, and Reduced Instruction Set Computer (RISC).

Unit IV

Introduction to computer Arithmetic, Addition and Subtraction, Multiplication algorithms, Division Algorithms, Input – Output Interface, priority Interrupt – Direct Memory Access, Input-Output Processor.

Unit V

Memory Organization: Memory Hierarchy, Main memory, Auxiliary memory, Associative memory, Cache memory, Virtual memory. Characteristics of multiprocessors.

Text Book:

1. Computer System Architecture, M.Morris Mano, PHI Pvt. Ltd. Third Edition, 2013.

Book for Reference:

1. Modern Computer Architecture, Mohammed Rafiquzzaman, and Rajan Chandra, Galgotia Publications Pvt. Ltd.



III YEAR – V SEMESTER
COURSE CODE: 7BCAE1A

ELECTIVE COURSE - I (A) – WEB DESIGN TECHNOLOGY

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

Java script: Introduction to Scripting: Introduction – Memory Concepts – Arithmetic – Decision Making – Java Script Internet & www resources. Java script Arrays: Passing arrays to Functions – Multi Subscripted Array.

Unit III

Java Script Control Structures – Selection Structure: If – If Else, Repetition Structure: While – For – Do While – Logical operators.
Java Script Functions: Introduction – Program Modules in Java Script Programmer Defined Functions.

Unit IV

Function Definition: Duration of identifiers – scope rules – recursion – java script global functions
Java Script Objects: Introduction – Thinking about objects – Math, Strings, Date, Boolean and Number Objects.

Unit V

VB Script: Introduction- Operators – Data Type and Control Structures – VB Script Functions – Array – String Manipulation – Classes and Objects – Operator Precedence Chart- The MsgBox functions – input boxes – controlling the flow of code -Simple Program .

Text Book:

1. Web Technology – A Developer’s Perspective, N.P. Gopalan, J. Akilandeswari, Prentice Hall India Learning Private Limited, New Delhi, 2007.

Books for Reference:

1. Internet and World Wide Web - How to Program H.M.Deitel, P.J.Deital, T.R.Neito, Pearson Education Asia-Addison Wesley Longman pvt Ltd.
2. Web Technologies - Godbole A. S. & Kahate A., TMH.
3. Web Technology & Design - Xavier C., New Age Publication



**III YEAR – V SEMESTER
COURSE CODE: 7BCAE2A**

ELECTIVE COURSE - II (A) – COMPUTER GRAPHICS

Unit I

Introduction: Overview – Brief History – Applications of Computer Graphics – Video Display Generation – Input Devices – Hard Copy output Devices – Graphics System Software– Output Primitives: Point Plotting – Line Draw Algorithms – Using Equation of a line – DDA – Bresenham’s algorithm – Circle Generation Algorithms – Drawing Ellipse

Unit II

Two Dimensional Transformations: Transformation Principles – Basic Transformations – Matrix Representation – Composite Transformations.

Unit III

Two dimensional viewing and Clipping: Viewing Transformations – Windows and viewpoints – Aspect Ratio – Clipping and Shielding: Point Clipping – Line Segment Clipping– Convex polygon clipping – Sutherland Hodgman Algorithm.

Unit IV

Three Dimensional Transformations: Concepts – Basic Transformations: Translation, Scaling, Rotation and Mirror Reflection – Matrix Representation – Composite Transformation.

Unit V

User Interface design: Components of User interface – The User’s model – The Command Language – Styles of Command Language – Information Display – Feedback – Examples.

Text Books:

1. M. Newman and F.Sprull, Interactive Computer Graphics, McGraw Hill.
2. Plastok and Gordon Kalley, Computer Graphics, McGraw Hill.
3. Computer Graphics Donald Hearn and M. Pauline Bake , Pearson Education

Book for Reference:

1. Foley Feiner, Computer Graphics, Principles and Practice – Addison Wesley.



**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**