BHARATHIAR UNIVERSITY: COIMBATORE-641 046
B.Sc. CS/IT/CT/SS/MMWT/CSA &BCA
(For the students admitted from the academic year 2018-2019 and onwards)

SCHEME OF EXAMINATION - CBCS PATTERN

Part	Study components	Course Title	Ins. Hrs/week	Dur. Hrs.	CIA	Ext.Marks	Total Marks	Credit
	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: Digital Fundamentals and Computer Architecture		4	3	25	75	100	4
III	Core Lab 1: Programming Lab – C		3	3	40	60	100	4
III	Allied 1: &&		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: C++ Programming		5	3	25	75	100	4
III	Core Lab 2: Programming Lab – C++		4	3	40	60	100	4
III	Core Lab 3: Internet Basics		2	3	20	30	50	2
III	Allied 2: &&		5	3	25	75	100	4
IV	Value Education – Human Rights #		2	3	-	50	50	2
	Semester III							
III	Core 4: Data Structures		6	3	25	75	100	4
III	Core 5: Java Programming		6	3	25	75	100	4
III	Core Lab 4: Programming Lab – Java		5	3	40	60	100	4
III	Allied 3: &&		6	3	25	75	100	4
IV	Skill based Subject 1 - &&		5	3	20	55	75	3
IV	Tamil @/ Advanced Tamil (OR) Non-major elective-1 (Yoga for Human Excellence)# / Women's Rights#		2	3	-	50	50	2

	Semester IV						
III	Core 6: System Software and Operating System	6	3	25	75	100	4
III	Core 7: Linux and Shell Programming	6	3	25	75	100	4
III	Core Lab 5: Linux and Shell Programming Lab	6	3	40	60	100	4
III	Allied 4: &&	6	3	25	75	100	4
IV	Skill based subject 2 (lab) &&	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 8: RDBMS & Oracle	6	3	25	75	100	4
III	Core 9: Visual Basic	6	3	25	75	100	4
III	Core Lab 6: Programming Lab – VB & Oracle	6	3	40	60	100	4
III	Elective 1 &&	6	3	25	75	100	4
IV	Skill based Subject 3: &&	6	3	20	55	75	3
	Semester VI						
III	Core 10: Graphics & Multimedia	5	3	25	75	100	4
III	Core 11: Project Work Lab %%	5	3	-	200	200	8
III	Core Lab 7: Programming Lab – Graphics & Multimedia	6	3	40	60	100	4
III	Elective II &&	5	3	25	75	100	4
III	Elective III &&	5	3	25	75	100	4
IV	Skill based Subject 4 (lab) &&	4	3	30	45	75	3
V	Extension Activities	-	-	50	-	50	2
	Total					3500	140

@ No University Examinations. Only Continuous Internal Assessment (CIA)
# No Continuous Internal Assessment (CIA). Only University Examinations.
%% see Guidelines for Project Work.

B.Sc.CS/IT/CT/SS/MM/CSA&BCA2017-18

Course Subject	**BCA**
Allied-1	Mathematical Structures for Computer Science
Allied-2	Discrete Mathematics
Allied-3	Computer Based Optimization Techniques
Allied-4	Business Accounting
Elective- I	Introduction to Compiler Design / PHP & Scripting Language / Digital Image Processing
Elective- II	Computer Networks / Dot Net programming / DistributedComputing
Elective- III	E-Commerce / Web Services / Software Testing
Skill-1	Web Programming
Skill-2 (lab)	Web Programming Lab
Skill-3	CASE Tools Concepts and Applications
Skill-4 (lab)	CASE Tools Lab

SEMESTER-I

BHARATHIYAR UNIVERSITY, COIMBATORE – 641046

UNDER GRADUATE DEGREE PROGRAMMES (CBCS SEMESTER PATTERN)

(For the students admitted during the academic year 2016 – 2017 and onwards)

பாடத்திட்டம் - முதற்பருவம் - பகுதி -1. தாள் 1

(2016 - 17 ஆம் கல்வியாண்டில் சேர்வோர்க்குரியது (செய்யுள் . சிறுகதை , இலக்கிய வரலாறு, இலக்கணம் , மொழிபெயர்ப்பு)

அலகு 1

1. பாரதியார் - தமிழ்த்தாய், தமிழ்
2. பாரதிதாசன் - அழகின் சிரிப்பு
3. நாமக்கல் கவிஞர் - தமிழ்வழி அரசு
4. ஆளூர் தமிழ்நாடன் - கரிக்கிறது தாய்ப்பால்
5. கவிமணி தேசிக விநாயகம் பிள்ளை - ஒற்றுமை , இலக்கிய மும்மணி

அலகு 2   சமூகம்

6. நவீன தாலாட்டு   -   வைரமுத்து
7. சாவிலா வீட்டில்   -   கண்ணதாசன்
8. சருகுகள் சலசலக்கின்றன   -   வெ.இறையன்பு
   ஒரு கல்லின் கதை
9. மு. மேத்தா கவிதைகள்   -   மு.மேத்தா
10. ரிஷி கவிதைகள்   -   முடிந்தது , இங்கே, படைப்பு, மதி, தாகம்

அலகு -3 சிறுகதைத் தொகுப்பு

அறிவுப் பதிப்பகம், இராயப்பேட்டை, சென்னை.

அலகு - 4   இலக்கிய வரலாறு - (பாடத்திட்டத்தைத் தழுவிபது)

1. புதுக்கவிதையின் தோற்றமும் வளர்ச்சியும்

2. சிறுகதையின் தோற்றமும் வளர்ச்சியும்

3. படிமம் , குறியீடு - பற்றிய விளக்கங்கள்

4. இலக்கணம்

   1. மொழித்திறன், சொற்பொருள் வேறுபாடு, ர,ற, ல.ள.ழ, ந.ண.ன, வேறுபடுத்தி அறியும் முறை

   2. தொடரில் வழுஉச் சொற்களை நீக்கி எழுதுதல்

   3. உண்டு , உள, உளது, அன்று, அல்ல, அல்லன், அல்லர், பயன்பாடு, ஒரு, ஓர் - பயன்பாடு

   4. ஒருமை - பன்மை - தொடரில் அமையும் விதம்

அலகு - 5   மொழி பெயர்ப்பு , பொதுப்பகுதி, அலுவலகப்பகுதி - ஆங்கிலத்தில் இருந்து தமிழில் மொழிபெயர்த்தல்.

குறிப்பு: முதற் பருவம் தாள் 1 – அலகு -3 சிறுகதைத் தொகுப்பு மாற்றம் செய்யப்பட்டுள்ளது.

ஏனைய பகுதிகளில் மாற்றம் இல்லை.

- 1 -   SCAA Dt. 6-2-2014

BHARATHIAR UNIVERSITY, COIMBATORE

PART-I, PAPER-I, FRENCH
(COMMON FOR ALL U.G. COURSES)
SYLLABUS - UNDER CBCS – AFFILIATED COLLEGES
[with effect from 2014-2015]

SEMESTER- I
PAPER I

Prescribed text	: **ALORS I**
Units	: 1 – 5
Authors	: Marcella Di Giura
	Jean-Claude Beacco
Available at	: Goyal Publishers Pvt Ltd
	86, University Block
	Jawahar Nagar (Kamla Nagar)
	New Delhi – 110007.
Tel	: 011 – 23852986 / 9650597000

Question Paper Pattern: Semester I
(ALL QUESTIONS TO BE SET ONLY FROM THE PRESCRIBED TEXT)

Maximum Marks: 75   Time: 3 hrs.

SECTION A (10)
1. CHOISISSEZ LA MEILLEURE RÉPONSE: (10X1=10)

SECTION B (20)
2. TRADUISEZ LES TEXTES SUIVANTS EN ANGLAIS:(4/5) (4X5=20)
 (Pg Nos : 26 ex-6,44 ex-3,56 ex-4,74ex-4,80.)

SECTION C (45)
3. COMPRÉHENSION (8x1=8)
4. EXERCICES DE GRAMMAIRE:(5X5=25) (EITHER/OR)
5. FAITES DES PHRASES:(6/8) (6X1=6)
6. TRADUISEZ LES EXPRESSIONS EN ANGLAIS :(6/8) (6X1=6)

BHARATHIAR UNIVERSITY :COIMBATORE – 641 046
Part I – Hindi Language
FIRST SEMESTER – Paper I

Syllabus for U.G. (Part. I) Hindi (C B C S)

(Prose, Non-detailed, Grammar & Translation, Comprehension)

PROSE : NUTHAN GADYA SANGRAHEditor : Jayaprakash
(Prescribed Lessons – only 6) Lesson 1 – Bharathiya SanskurthiLesson 3 – Razia
Lesson 4 – Makreal
Lesson 5 – Bahtha Pani Nirmala.
Lesson 6 – Rashtrapitha Mahathma GandhiLesson 9 – Ninda Ras.

Publisher : Sumitra Prakashan Sumitravas, 16/4, Hastings Road, Allahabad – 211 001.

NON DETAILED TEXT : KAHANI KUNJ Editor : Dr. V.P. Amithab.
(Stories 1-6 only)
Publisher : Govind Prakashan Sadhar Bagaar, Mathura, Uttar Pradesh – 281 001.
    GRAMMAR : SHABDHA VICHAR ONLY   (NOUN, PRONOUN, ADJECTIVE, VERB, \
    TENSE, CASE ENDINGS)   Theoretical & Applied.
Book for Reference :   Vyakaran Pradeep by Ramdev Publisher   :   Hindi
Bhavan,36, Tagore Town Allahabad – 211 002.

TRANSLATION : English – Hindi only.
ANUVADH ABHYAS – III
    (1-15 lessons only)
Publisher   :   DAKSHIN BHARAT HINDI PRACHAR SABHA CHENNAI – 17.

COMPREHENSION: 1 Passage from ANUVADH ABHYAS – III (16-30)
DAKSHIN BHARATH HINDI PRACHAR SABHA CHENNAI-17.

BHARATHIAR UNIVERSITYCOIMBATORE 641 046
Syllabus for U.G. (Part. I) Malayalam (C B C S)

For those who joined in 2017-2018 academic year and onwards
First Semester

Paper I Prose, Composition & TranslationThis paper will   have the following five units:

Unit I & II   Novel

Unit III & IV   Short Story

Unit V Composition and Translation

Text books prescribed:
Unit I & II - Pathummayude Aadu - Vaikam Muhammed Basheerr (D.C.Books, Kottayam, Kerala)

Unit III & IV - Ente Priyappeta Kadhakal – Akbar Kakkattil)(D.C. Books,Kottayam, Kerala)

Unit V - Expansion of ideas, General Eassay and Translation. (A simple passagefrom Englishabout 100 works to Malayalam)

Reference Books:
Malayala Novel Sahithya Charitram-K.M.Tharakan (N.B.S.Kottayam) 2.Cherukatha Innale Innu-M.Achuyuthan (D.C Books, Kottayam) 3.Sahithya Charitram Prasthanangalilude-Dr.K.M George,
(D.C.Books Kottayam)
4. Malayala Sahithya vimarsam-Sukumar Azhee kode (D.C.books)

Bharathiar University–Coimbatore
Part II English-Semester I

(For the students admitted from the academic year 2016-17 and onwards)

Prescribed Text:AROMA Board of Editors
Publishers:NewCenturyBookHouse(p)Ltd., 41 B,SIDCOIndustrialEstate Chennai-98.

Unit I:-Poetry
Where the mind is without Fear-RabindranathTagore
The RoadnotTaken-Robert Frost
The VillageSchoolmaster-Oliver Goldsmith

Unit II:Prose
Spoken English and Broken English-G.B.Shaw
How to Avoid Foolish Opinion Bertrand Russell
At School –M.K.Gandhi

Unit III:Short Stories 1.Lalajee-JimCorbett 2.AHero-R.K.Narayan 3.ADay's Wait-Hemingway

Unit IV:OneActPlays
Refund-FritzKarinthy
The NeverNeverNest-Cedric Mounte

Unit V:Grammar andComposition
Parts of Speech Noun Pronoun Adjective Verb Adverb Preposition

Reading Comprehension(a Passage with 5 questions)
Question Paper Pattern: Existing Pattern is to be followed.

BHARATHIAR UNIVERSITY: COIMBATORE-641046
B.Sc.CS/IT/CT/SS/MM/CSA &BCA
(For the students admitted from the academic year **2016-2017** andonwards)
CBCS PATTERN

CORE SUBJECTS

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective from	**2016-2017 and Onwards**
Semester	**I**
Subject	**CORE 1 :** **COMPUTING FUNDAMENTALS AND C PROGRAMMING**

Subject Description: This subject deals with the Computer fundamentals and the concepts ofC programming language.

Goal: To learn about the Computer fundamentals and the C programming language concepts. **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-DefinedFunctions-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.
REFERENCE BOOK:
Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson, 2002.
Henry Mullish & Hubert L.Cooper: The Sprit of C, Jaico, 1996.

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective from	**2017-2018 and Onwards**
Semester	**I**
Subject	**CORE 2:** **DIGITAL FUNDAMENTALS AND COMPUTER ARCHITECTURE**

Subject Description: This subject deals with fundamentals of digital computers, Microprocessors and System architecture.
Goal: To learn about Computer Fundamentals and its Architecture.
Objective: On successful completion of this subject the students should have Knowledge on Digital circuits, Microprocessor architecture, and Interfacing of various components.

UNIT I: Number System and Binary Codes: Decimal, Binary, Octal, Hexadecimal – Binary addition, Multiplication, Division – Floating point representation, Complements, BCD, Excess3, Gray Code. Arithmetic Circuits: Half adder, Full adder, Parallel binary adder, BCD adder, Half subtractor, Full subtractor, Parallel binary subtractor - Digital Logic: the Basic Gates – NOR, NAND, XOR Gates.

UNIT II: Combinational Logic Circuits: Boolean algebra – Karnaugh map – Canonical form 1 – Construction and properties – Implicants – Don't care combinations - Product of sum, Sum of products, simplifications. Sequential circuits: Flip-Flops: RS, D, JK, and T - Multiplexers –

Demultiplexers – Decoder Encoder – shift registers-Counters.

UNIT III: Input – Output Organization: Input – output interface – I/O Bus and Interface –I/O Bus Versus Memory Bus – Isolated Versus Memory – Mapped I/O – Example of I/O Interface. Asynchronous data transfer: Strobe Control and Handshaking

UNIT IV: Priority Interrupt: Daisy- Chaining Priority, Parallel Priority Interrupt. Direct Memory Access: DMA Controller, DMA Transfer. Input – Output Processor: CPU-IOP Communication.

UNIT V: Memory Organization: Memory Hierarchy – Main Memory- Associative memory: Hardware Organization, Match Logic, Read Operation, Write Operation. Cache Memory: Associative, Direct, Set-associative Mapping – Writing into Cache Initialization.

TEXT BOOKS:

Digital Electronics Circuits and Systems, V.K. Puri, TMH.

Digital principles and applications, Albert Paul Malvino, Donald P Leach, TMH, 1996.

Computer System Architecture -M. Morris Mano , PHI.

REFERENCE BOOKS:

1. Computer Architecture -M. Carter, Schaum's outline series, TMH

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective from	**2016-2017 and Onwards**
Semester	**I**
Subject	**CORE LAB 1: PROGRAMMING LAB – C**

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

Write a C program to generate n prime numbers.

Write a C program to generate Fibonacci series.

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

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

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

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

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

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.

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

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.

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 SUBJECT-I

MATHEMATICAL STRUCTURES FOR COMPUTER SCIENCE

Subject Description: This subject deals with mathematical concepts like Matrices, Numerical analysis and Statistical methods for computer science and applications.

Goal: To learn about the mathematical structures for computer based applications

Objective: On successful completion of this subject the students should have

- Understood the concepts of mathematics

- Learnt applications of statistical and numerical methods for Computer Science.

UNIT I: Matrices – Introduction – Determination – Inverse of a matrix – Rank of a Matrix – Eigen value Problems

UNIT II: System of Simultaneous Linear algebraic Equation – Gauss elimination, Gauss Jordon, Gauss Seidal methods.

UNIT III: Numerical Differentiations – Newton's forward Difference - Backward Difference

– Starling formula Numerical Integration – Trapezoidal Rule & Simpson's rule.

UNIT IV: Measures of central tendency – Mean Median and Mode – Relationship among mean media and mode. Measures of dispersion – Range, quartile deviation and Standard deviation.

UNIT V: Regression and Correlation – Types of relationship – Linear regression – Correlation – Coefficient of correlation – Regression equation of variables.

TEXT BOOKS:

1. Engineering Mathematics, Volume II, Dr M.K. Venkataraman, National Publishing Company, Chennai. (Unit I)
2. Numerical Methods in Science & Engineering, M.K. Venkataraman, National PublishingCompany, Chennai, Revised Edition -2005 (Unit II & III)
3. Business Statistics, S.P. Gupta & M.P. Gupta, Sultan Chand and Sons (Unit IV & V)

REFERENCE BOOKS:

1. Numerical Methods, E. Balagurusamy, Tata McGraw Hill.

2. Fundamental of Mathematical Statistics, S. C. Gupta, V. K. Kapoor, Sultan Chand &Sons

**CORE MODULE SYLLABUS FOR ENVIRONMENTAL STUDIES
FOR UNDER GRADUATE COURSES OF ALLBRANCHES OF HIGHER EDUCATION**

SYLLABUS

Unit 1 : Multidisciplinary nature of environmental studies, Definition, scope and importance (2 lectures) Need for public awareness.

Unit 2 : Natural Resources : Renewable and non-renewable resources : natural resources and associated problems.
Forest resources : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people.
Water resources : Use and over-utilization of surface and ground water,floods, drought, conflicts over water, dams-benefits and problems.
Mineral resources : Use and exploitation, environmental effects ofextracting
and using mineral resources, case studies.
Food resources : World food problems, changes caused by agriculture and
overgrazing, effects of modern agriculture, fertilizer-pesticide problems,water logging, salinity, case studies.
Energy resources : Growing energy needs, renewable and non renewableenergy sources, use of alternate energy sources. Case studies.
Land resources : Land as a resource, land degradation, man inducedlandslides, soil erosion and desertification.
Role of an individual in conservation of natural resources.
Equitable use of resoureces for sustainable lifestyles.

Unit 3 : Ecosystems : • Concept of an ecosystem. Structure and function of an ecosystem. • Producers, consumers and decomposers.• Energy flow in the ecosystem. • Ecological succession. • Food chains, food webs and ecological pyramids. • Introduction, types, characteristic features, structure and function of the following ecosystem :- a. Forest ecosystem b. Grassland ecosystem c. Desert ecosystem d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit 4 : Biodiversity and its conservation : • Introduction – Definition :

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

Unit 5 : Environmental Pollution : Definition - • Cause, effects and control measures of :- a. Air pollution b. Water pollution c. Soil pollution d. Marine pollution e. Noise pollution f. Thermal pollution g. Nuclear hazards
Solid waste Management : Causes, effects and control measures of urban and industrial wastes. • Role of an individual in prevention of pollution. • Pollution case studies. • Diaster

management : floods, earthquake, cyclone and landslides.

Unit 6 : Social Issues and the Environment : • From Unsustainable to Sustainable development . • Urban problems related to energy • Water conservation, rain water harvesting, watershed management • Resettlement and rahabilitation of people; its problems and concerns. Case Studies : • Environmental ethics : Issues and possible solutions. • Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies. • Wasteland reclamation. • Consumerism and waste products.

Environment Protection Act. • Air (Prevention and Control of Pollution)Act.

Water (Prevention and control of Pollution) Act • Wildlife Protection Act

Forest Conservation Act • Issues involved in enforcement of environmental legislation. • Public awareness.

Unit 7 : Human Population and the Environment • Population growth, variation among nations. • Population explosion – Family Welfare Programme. • Environment and human health. • Human Rights. • Value Education. • HIV/AIDS. • Women and Child Welfare. • Role of Information Technology in Environment and human health.• Case Studies.

Unit 8 : Field work • Visit to a local area to document environmental assetsriver/ forest/grassland/hill/mountain • Visit to a local polluted site- Urban/Rural/Industrial/Agricultural • Study of common plants, insects, birds.

Study of simple ecosystems-pond, river, hill slopes, etc. (Field work Equal to 5 lecture hours)

SEMESTER-II

BHARATHIAR UNIVERSITY: COIMBATORE-641046

இரண்டாம் பருவம்

பாடத்திட்டம் - பகுதி -1. தாள் -2.

(செய்யுள் , உரைநடை, இலக்கிய வரலாறு, விண்ணப்பம் வரைதல்)

அலகு - 1 திருக்குறள் - (மூன்று அதிகாரங்கள்)

அ. நட்பு
ஆ. நட்பாராய்தல்
இ. கூடா நட்பு

2. மூதுரை - ஔவையார் 1-15 (15 பாடல்கள்)
3. பழமொழி நானூறு   கல்வி 10 பாடல்கள்

அலகு - 2

1. நந்திக்கலம்பகம்
2. திருப்பாவை, திருவெம்பாவை
3. சித்தர்பாடல்கள்

அலகு -3 உரைநடை

1. சங்கநெறிகள் - முனைவர்   .   வ.சுப்பமாணிக்கம்.
2. இன்றைய சூழலில் மகளிரின் பணி-   மீனாட்சி
3. புதிர் எதிர் காலம் -   சிற்பி பாலசுப்பிரமணியம்
4. இணையத் தமிழ் வளர்ச்சி -   முனைவர் ப.அ.நக்கீரன்.

அலகு - 4

1. வல்லினம் மிகும் இடம் - மிகா இடம்.
2. வினா- விடை வகைகள் (அறுவகை வினா, எண்வகை விடை, தொல்காப்பியர் வழியில்).
3. ஆகுபெயர் விளக்கம் - பயன்பாடு-வகைகள் 10

அலகு- 5

இலக்கிய வரலாறு பாடத்திட்டத்துரைத் தழுவியது

1. பதினெண் கீழ்க்கணக்கு நூல்கள
2. தமிழ் உரைநடையின் தோற்றமும் - வளர்ச்சியும்

பயிற்சிக்குரியன

3. விண்ணப்பங்கள் , மடல்கள், எழுதச்செய்தல்.

BHARATHIAR UNIVERSITY, COIMBATORE

PART-I, PAPER-II, FRENCH
(COMMON FOR ALL U.G. COURSES)
SYLLABUS - UNDER CBCS – AFFILIATED COLLEGES
[with effect from 2014-2015]

SEMESTER- II
PAPER II

Prescribed text	: **ALORS I**
Units	: 6 – 10
Authors	: Marcella Di Giura
	Jean-Claude Beacco
Available at	: Goyal Publishers Pvt Ltd
	86, University Block
	Jawahar Nagar (Kamla Nagar)
	New Delhi – 110007.
Tel	: 011 – 23852986 / 9650597000

Question Paper Pattern: Semester II
(ALL QUESTIONS TO BE SET ONLY FROM THE PRESCRIBED TEXT)

Maximum Marks: 75   Time: 3 hrs.

SECTION A (10)
1.CHOISISSEZ LA MEILLEURE RÉPONSE: (10X1=10)

SECTION B (20)
2. TRADUISEZ LES TEXTES SUIVANTS EN ANGLAIS:(4/5) (4X5=20)
(Pg Nos :86 ex-4,104 ex-3,116 ex-3a,b,134 ex-4,146 ex-2,162,163,164,165,166,167)

SECTION C (45)
3. COMPRÉHENSION (8x1=8)
4. EXERCICES DE GRAMMAIRE:(5X5=25) (EITHER/OR)
5. FAITES DES PHRASES:(6/8) (6X1=6)
6. TRADUISEZ LES EXPRESSIONS EN ANGLAIS :(6/8) (6X1=6)

BHARATHIAR UNIVERSITY: COIMBATORE-641
Syllabus for U.G. (Part. I) Hindi (C B C S)

SECOND SEMESTER – PAPER II

(Modern Poetry, One Act Play, Translation & Letter Writing, Conversation)
MODERN POETRY : BHOOMIJA by NAGARJUNPublishers :   Rajkamal Prakashan
1B Nethaji Subash Marg,New Delhi.

ONE ACT PLAY   :   NAVEEN EKANKI SANGRAH
By Dr. Smt. MALATI THIVARI SUMITHRA PRAKASHAN ASHOK NAGAR ALLAHABAD
– 1.

TRANSLATION   :   HINDI-ENGLISH ONLY
(ANUVADH ABYAS-III)
Lessons – 1-15 only

PUBLISHER :   DAKSHIN BHARATH HINDI PRACHAR SABHA
CHENNAI – 600 017.

LETTER WRITING :   (Leave Letter, Job Application, Ordering Books, Letter
to Publisher, Personal Letter)

CONVERSATION   :   (Doctor & Patient, Teacher & Student, Storekeeper & Buyer,
Two Friends, Booking Clerk & Passenger at Railway Station, Autorickshaw driver and
Passenger)
Ref : Bolchal Ki Hindi Aur Sanchar by Dr. Madhu DhavanVani Prakashan, New Delhi.

BHARATHIAR UNIVERSITY: COIMBATORE-641
Syllabus for U.G. (Part. I) Malayalam (C B C S)
Second Semester
Paper II Prose : Non-Fiction

This paper will have the following five units:

Unit I & II
Autobiography

Uinit III,IV & V
Travelogue

Text Books prescribed:
Unit I & II
Vazhithiruvukal-Dr.A.P.J.Abdulkalam(D.C.Books, Kottayam)

Unit III,IV & V
Alkoottathil Thaniyae - M.T Vasudhevan Nair (D.C.Books, Kottayam)

Reference books:
Athmakathasahithyam Malayalathil-Dr.Vijayalam Jayakumar (N.B.S.Kottayam)
Sancharasahithyam Malayalathil –Prof.Ramesh chandran. V,(Kerala Bhasha Institute, Trivandrum)

BHARATHIAR UNIVERSITY: COIMBATORE-641
Part II English-Semester II

PrescribedText:SIZZLERSBoardofEditors Publishers:Manimekala
PublishingHouse39,North Chitrai Street,
Madurai-625001

Unit I:Poetry
Stopping By Woods on a Snowy Evening-Robert Frost
A Prayer for my Daughter B.Yeats3.Enterprise-Nissim Ezekiel

Unit II:Prose
Woman, not the weaker sex-M.K.Gandhi
Dimensions of Creativity-Dr.A.P.J. AbdulKalam
3.Three Days to See-HelenKeller

Unit III:Short Stories
An Astrologer'sDay-R.K.Narayan
Little Girls wiser than Men-Tolstoy
Boy who Wanted more Cheese-William Elliot Griffir

Unit IV:Biographies
MartinLutherKing-R.N.Roy
Nehru-A.J.Toynbee

UnitV :Grammar and Composition
1.Phrases and clauses 2.Types of sentences
Framing questions and answers 4.DialogueWriting

Question Paper Pattern:Existing Pattern is to be followed.

Course	**BScCS,IT,CT,SS,CSA, MM&B.C.A (Regular)**
Effectivefrom	**2016-2017andOnwards**
Semester	**II**
Subject	**CORE3:C++ PROGRAMMING**

Subject Description: This subject deals with Object–oriented programming concepts like Abstraction, Encapsulation, Inheritance and Polymorphism.

Goal: Knowledge on Object–oriented concept and programming with C++.
Objective: Toinculcate 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, Multipath 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– DeclaringandInitializingstringobjects–StringAttributes–Miscellaneousfunctions.

TEXTBOOK:
AshokNKamthane,Object-OrientedProgrammingwith
AnsiAndTurboC++,PearsonEducation,2003.

REFERENCEBOOKS:
E.Balagurusamy, Object-Oriented Programming with C++, TMH,1998.
Maria Litvin & Gray Litvin,C++ for you,Vikas publication,2002.
John R Hubbard, Programming with C, 2ndEdition,TMH publication,2002.

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective From	**2016-2017 and Onwards**
Semester	**II**
Subject	**CORE LAB 2: PROGRAMMING LAB – C++**

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..

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

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.

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.

Write a C++ Program to create a class STRING. Write a Member Function to initialize, get and display stings. Overload the operators ++ and == to concatenate two Strings and to compare two strings respectively.

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.

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.

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.

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.

Write a C++ Program to check whether the given string is a palindrome or not using Pointers.

Write a C++ Program to create a File and to display the contents of that file with line numbers.
Write a C++ Program to merge two files into a single file.

Course	**BScCS,IT,CT,SS,CSA, MM&B.C.A (Regular)**
Effectivefrom	**2016-2017andOnwards**
Semester	**II**
Subject	**CORELAB 3:PROGRAMMING LAB– INTERNET BASICS**

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

ALLIED -II: DISCRETE MATHEMATICS

Subject Description: This subject deals with discrete structures like set theory, mathematicallogic, relations, languages, graphs and trees.
Goal: To learn about the discrete structures for computer based applications.

Objective: On successful completion of this subject the students should have: - Understanding the concepts of discrete mathematics - Learning applications of discrete structures in Computer Science.

UNIT I: Set theory-Introduction-Set & its Elements-Set Description-Types of sets-Venn-Euler Diagrams- Set operations & Laws of set theory-Fundamental products-partitions of sets-minsets- Algebra of sets and Duality-Inclusion and Exclusion principle

UNIT II: Mathematical logic – Introduction- prepositional calculus –Basic logical operations- Tautologies-Contradiction-Argument-Method o f proof- Predicate calculus.

UNIT III: Relations – Binary Relations – Set operation on relations-Types of Relations – Partial order relation – Equivalence relation – Composition of relations – Functions – Types of functions – Invertible functions – Composition of functions.

UNIT IV: Languages – Operations on languages – Regular Expressions and regular languages – Grammar – Types of grammars – Finite state machine – Finite – State automata

UNIT V: Graph Theory – Basic terminology – paths, cycle & Connectivity – Sub graphs – Types of graphs – Representation of graphs in computer memory - Trees – Properties of trees

– Binary trees – traversing Binary trees – Computer Representation of general trees.

TEXT BOOKS:

1. Discrete Mathematics, J.K. Sharma, 2nd edition, 2005, Macmillan India Ltd.
   (UNIT I TOV)

 REFERENCE BOOKS:

1. Discrete Mathematics Structures with Applications to Computer Science, J. P. Tremblay, R Manohar, McGraw Hill International Edition

 2.Discrete Mathematics, M. K. Venkataraman, N.Sridharan, N.Chandarasekaran, National Publishing Company, Chennai

BHARATHIAR UNIVERSITY : COIMBATORE 641 046.

Value Education – Human Rights

(2 hours per week)

(FOR THE UNDER GRADUATE STUDENTS OF AFFILIATED COLLEGES
WITH EFFECT FROM 2008-2009)

UNIT – I :   Concept of Human Values,   Value Education Towards Personal Development

Aim of education and value education; Evolution of value oriented education; Concept of Human values; types of values; Components of value education.

Personal Development :
Self analysis and introspection; sensitization towards gender equality, physically challenged, intellectually challenged. Respect to - age, experience, maturity, family members, neighbours, co-workers.

Character Formation Towards Positive Personality:
Truthfulness, Constructivity, Sacrifice, Sincerity, Self Control, Altruism, Tolerance, Scientific Vision.

UNIT – II : Value Education Towards National and Global Development

National and International Values:
Constitutional or national values - Democracy, socialism, secularism, equality, justice, liberty, freedom and fraternity.

Social Values - Pity and probity, self control, universal brotherhood.

Professional Values - Knowledge thirst, sincerity in profession, regularity, punctuality and faith.

Religious Values - Tolerance, wisdom, character.

Aesthetic values - Love and appreciation of literature and fine arts and respect for the same.

National Integration and international understanding.

UNIT – III : Impact of Global Development on Ethics and Values

Conflict of cross-cultural influences, mass media, cross-border education, materialistic values, professional challenges and compromise.

Modern Challenges of Adolescent Emotions and behavior; Sex and spirituality: Comparision and competition; positive and negative thoughts.

SEMESTER-III

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective from	**2016-2017 and Onwards**
Semester	**III**
Subject	**CORE 4: DATA STRUCTURES**

UNIT I Introduction: Introduction of Algorithms, Analysing Algorithms. Arrays: Sparse Matrices - Representation of Arrays. Stacks and Queues. Fundamentals - Evaluation ofExpression Infix to Postfix Conversion - Multiple Stacks and Queues

UNIT II Linked List: Singly Linked List - Linked Stacks and Queues - Polynomial Addition - More on Linked Lists - Sparse Matrices - Doubly Linked List and Dynamic - Storage Management - Garbage Collection and Compaction.

UNIT III Trees: Basic Terminology - Binary Trees - Binary Tree Representations - Binary Trees -Traversal - More on Binary Trees - Threaded Binary Trees - Binary Tree Representation of Trees - Counting Binary Trees. Graphs: Terminology and Representations - Traversals, Connected Components and Spanning Trees, Shortest Paths and Transitive Closure

UNIT IV External Sorting: Storage Devices -Sorting with Disks: K-Way Merging - Sorting with Tapes Symbol Tables: Static Tree Tables - Dynamic Tree Tables - Hash Tables: Hashing Functions - Overflow Handling.

UNIT V Internal Sorting: Insertion Sort - Quick Sort - 2 Way Merge Sort - Heap Sort - Shell Sort - Sorting on Several Keys. Files: Files, Queries and Sequential organizations - Index Techniques -File Organizations.
  TEXT BOOKS
Ellis Horowitz, Sartaj Shani, Data Structures, Galgotia Publication.
Ellis Horowitz, Sartaj Shani, Sanguthevar Rajasekaran, Computer Algorithms, Galgotia Publication.

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective From	**2016-2017 and Onwards**
Semester	**III**
Subject	**CORE 5: JAVA PROGRAMMING**

Subject Description: This subject deals with Java Programming concepts.
Goal: Enable to create wide range of Applications and Applets using Java.
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.

TEXTBOOK:
1. Programming with Java – A Primer - E. Balagurusamy, 3rd Edition, TMH.

REFERENCE BOOKS:
The Complete Reference Java 2 - Patrick Naughton & Hebert Schildt, 3rd Edition, TMH
Programming with Java – John R. Hubbard, 2nd Edition, TMH.

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective from	**2016-2017 and Onwards**
Semester	**III**
Subject	**CORE LAB 4: PROGRAMMING LAB - JAVA**

Write a Java Applications to extract a portion of a character string and print the extracted string.
Write a Java Program to implement the concept of multiple inheritance using Interfaces.
Write a Java Program to create an Exception called payout-of-bounds and throw the exception.
Write a Java Program to implement the concept of multithreading with the use of anythree multiplication tables and assign three different priorities to them.
Write a Java Program to draw several shapes in the created windows.
Write a Java Program to create a frame with four text fields name, street, city and pincode 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.
Write a Java Program to demonstrate the Multiple Selection List-box.
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
Write a Java Program to create Menu Bars and pull down menus.

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.

Write a Java Program to draw circle, square, ellipse and rectangle at the mouse click positions.

Write a Java Program which open an existing file and append text to that file.

Allied-3:COMPUTER BASED OPTIMIZATION TECHNIQUES

Subject Description: This subject deals various optimization techniques for linear programming, Transportation, Assignment Problems, Game theory, PERT and CPM.

Goal: To learn about the managerial concepts like decision making, optimization, etc.

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 RoundTechniques - Assignment and Traveling Salesman Problem.

UNIT III: Game Theory - Concept of Pure and Mixed Strategies – Solving 2 x 2 matrix 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 andinfinite population model.

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

TEXT BOOK:

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 Publishers.

SKILL – 1 : BCA - WEB PROGRAMMING

Unit I: Introduction to Internet – World Wide Web – Browsers: Introduction – Popular Web Browsers – know your browsers – Electronic Mail : Introduction – E-mail networks and servers – E-mail protocols – Structure of an E-mail.

Unit II: HTML : Introduction – Getting started – Creating and saving an HTML document – Document Layout of HTML Page – HTML elements – Some other formatting Styles – Hypertext Links.

Unit III: HTML (contd) : URLs – Images – HTML tables – Forms – Special Characters – Metatages. **Interactivity Tools and Multimedia** : Introduction – DHTML – Scripting Languages – Java – ASP.

Unit IV: XML :XML basics – Introduction – need for XML – Advantages – Working with an XML Document – Structure of an XML Document – DTD- XML Schema.

Unit V: XML (contd) : Working with XML Schema - Declaring Attributes – XML namespaces – Reusing Schema Components – Grouping elements and attributes. XML Style sheets : Introduction – CSS – eXtensible Style Sheet language – Formatting Data based on controls – Displaying data in a Tabular Format.

Text Books:
Internet and Web Design, ITL Education, Macmillan India Ltd.
HTML and XML an Introduction, NIIT, Prentice Hall of India Pvt. Ltd

REFERENCE BOOK:
1. World Wide Web Design with HTML, C. Xavier, 2007, TMH.

NON MAJOR ELECTIVE - I

"**Women's Rights**

FOR PART–IV IN THIRD SEMESTER OF UNDER GRADUATE CANDIDATES WITH EFFECT FROM 2008-09 IN CBCS PATTERN

UNIT I
Laws,LegalSystems and Change
Definition-Constitutional law,CEDAW and International HumanRights–LawsandNorms–LawsandSocialContext–Constitutionaland LegalFramework.

UNIT II
Politicsof landand genderinIndia
Introduction – Faces of Poverty – Land as Productive Resources – Locating Identities – Women'sClaims to Land– Right to Property-CaseStudies.

UNIT III
Women'sRights:AccesstoJustice
Introduction – Criminal Law – Crime Against Women – Domestic Violence – DowryRelated Harassment and Dowry Deaths – Molestation – Sexual Abuse and Rape –Loopholesin Practice–LawEnforcementAgency.

UNIT IV
Women'sRights
Violence Against Women – Domestic Violence - The Protection of Women fromDomestic Violence Act, 2005- The Marriage Validation Act, 1982 - The Hindu WidowRe-marriageAct, 1856 - TheDowryProhibition Act,1961

UNIT V
Special   Women   Welfare   Laws   SexualHarassmentatWorkPlaces– RapeandIndecentRepresentation–TheIndecedentRepresentation (Prohibition) Act, 1986 - Immoral Trafficking – The Immoral Traffic(Prevention) Act, 1956 - Acts Enacted for Women Development and Empowerment -RoleofRapeCrisis Centers.

References
1. NityaRao"GoodWomendonot Inherit Land"SocialSciencePressandOrientBlackswan2008
2.InternationalSolidarityNetwork"KnowingOurRights"AnimprintofKaliforWomen2006
P.D.Kaushik"WomenRights"BookwellPublication2007
Aruna   Goal   "Violence   Protective   Measures   for   Women   Development andEmpowerment"DeepandDeep PublicationsPvt 2004
MonicaChawla"GenderJustice"Deep andDeepPublicationsPvtLtd.2006
Preeti Mishra "Domestic Violence Against Women" Deep and Deep Publications Pvt2007
ClairM.Renzetti, Jeffrey L.Edleson, Raquel Kennedy Bergen, Source Book   on"Violence Against Women"SagePublications 2001

CONSTITUTION OF INDIA

UNIT I

Making of Constitution-Constituent Assembly-Dr.Rajendra Prasath-Dr.B.R.Ambedkar -Salient features-Fundamental Rights.

UNIT II

Union Executive-President of India-Vice-President-Prime Minister-Cabinet -Functions

UNIT III

Union Legislature-Rajiya Sabha-Lok Sabha-Functions and Powers

UNIT IV

Union Judiciary-Supreme Court-Functions –Rule of law

UNIT V

State-Executive-Legislature-Judiciary

Books for Reference:

Agharwal.R.C.-NationalMomentandConstitutionalDevelopment- NewDelhi,1977
ChapraB.R.,ConstitutionofIndia,NewDelhi,1970
RaoB.V.,ModernIndianConstitution,Hyderabad,1975.
NaniPalkhivala-ConstitutionofIndia,NewDelhi,1970
KrishnaIyer,V.R.,LawandJustice,NewDelhi,2009

BHARATHIAR UNIVERSITY : COIMBATORE
SYLLABUS FOR
"YOGA FOR HUMAN EXCELLENCE"
FOR PART – IV IN THIRD SEMESTER OF UNDERGRADUATE CANDIDATES
WITH EFFECT FROM 2008-09
IN CBCS PATTERN

Unit I - Yoga and Physical Health

1.1 Physical Structure – Three bodies – Five limitations

1.2 Simplified Physical Exercises – Hand Exercises -Leg Exercises – Breathing Exercises – Eye Exercises – Kapalapathi

1.3 Maharasanas 1-2 – Massages – Acu-puncture – Relaxation

1.4 Yogasanas – ~~Surya Namaskar~~ – Padmasana – Vajrasanas – Chakrasanas (Side) – Viruchasanas – Yoga muthra – Patchimothasanas – Ustrasanas – Vakkarasanas – Salabasanas

Unit II - Art of Nurturing the life force and Mind

2.1 Maintaining the youthfulness – Postponing the ageing process

2.2 Sex and Spirituality - Significance of sexual vital fluid – Married life – Chastity

2.3 Ten stages of Mind

2.4 Mental frequency – Methods for concentration

Unit III - Sublimation

3.1 Purpose and Philosophy of life

3.2 Introspection – Analysis of Thought

3.3 Moralization of Desires

3.4 Neutralization of Anger

Unit IV – Human Resources Development

4.1 Eradication of worries

4.2 Benefits of Blessings

4.3. Greatness of Friendship

4.4 Individual Peace and World Peace

Unit V – Law of Nature

5.1 Unified force – Cause and Effect system

5.2 Purity of Thought and Deed and Genetic Centre

5.3 Love and Compassion

5.4 Cultural Education – Five fold Culture

பாரதியார் பல்கலைக்கழகம் : கோயமுத்தூர்

பகுதி – IV: **தமிழ்த் தாள் - 1 - மூன்றாம் பருவம்**

இளங்கலை 2012-13 கல்வி ஆண்டுமுதல் சேர்வோர்க்குரியது

(12-ம் வகுப்பு வரை தமிழ் மொழிப்பாடம் பயிலாதவர்களுக்கு)

அக மதிப்பீட்டுத் தேர்வு மட்டும் - பல்கலைக்கழக எழுத்துத் தேர்வுகள் கிடையாது

1. தமிழ் மொழியின் அடிப்படைக் கூறுகள்.

   எழுத்துகள் : முதலெழுத்துகள் (உயிர் எழுத்து, மெய் எழுத்து, உயிர்மெய் எழுத்து)

   சொற்கள் : வகைகள் (பெயர்ச்சொல், வினைச்சொல், இடைச்சொல், உரிச்சொல்)

   தொடர் : தொடரமைப்பு (எழுவாய், செயப்படுபொருள், பயனிலை)

2. குறிப்பு எழுதுதல் : பத்துப் பதினைந்து தொடர்களில் குறிப்பு வரைதல்

   பிழைநீக்கி எழுதுதல் : (ஒற்றுப்பிழை, எழுத்துப்பிழை)

2012-2013 கல்வியாண்டு முதல் பயில்பவர்களுக்குப் பின்வரும் வினாத்தாள் அமைப்பு பின்பற்றப்பட வேண்டும்.

	அக மதிப்பீட்டுத் தேர்வு மதிப்பெண் வழங்கும் முறை	மதிப்பெண்கள்
1.	வகுப்புத் தேர்வு-1	10
2.	வகுப்புத் தேர்வு-2	10
3.	மாதிரித் தேர்வு	10
4	பயிற்சிக் கட்டுரை	10
5	வாய்மொழித் தேர்வு	10
	மொத்த மதிப்பெண்கள்	50

குறிப்பு : வாய்மொழித் தேர்வில் தமிழ்ச் செம்மொழி வரலாறு தொடர்பான வினாக்கள் மட்டுமே கேட்கப்பட வேண்டும்.

பாரதியார் பல்கலைக்கழகம் : கோயமுத்தூர்

பகுதி – IV : சிறப்புத் தமிழ் தாள் - 1

முன்றாம் பருவம்

இளங்கலை 2012-13 கல்வி ஆண்டுமுதல் சேர்வோர்க்குரியது

(12-ம் வகுப்பு வரை தமிழ் மொழிப்பாடம் பயின்றவர்களுக்கு)

கூறு – 1 : பாரதியார் கவிதைகள்
          கண்ணன் என் சேவகன்
          பாரதிதாசன் - அழகின் சிரிப்பு (முழுவதும்)
          மீரா (கவிஞர்) – குக்கூ (புதுக்கவிதை)

கூறு – 2 : மொழித் திறன்
          பிழையீங்கி எழுதுதல் -   நன ர வேறுபாடு அறிதல்
                                      ளன, ழன, லன வேறுபாடு அறிதல்
                                      ன, ண, ந வேறுபாடு அறிதல்
                                      குறில் நெடில் வேறுபாடு அறிதல்

கூறு – 3 : கடிதங்கள் எழுதுதல் -   பாராட்டுக் கடிதம், நன்றிக்கடிதம்
                                      அழைப்புக்கடிதம், அலுவலக விண்ணப்பம்.

கூறு – 4 : சொற்களைத் தந்து தொடர்களை அமைக்கும் பயிற்சி அளித்தல்
          வல்லினம் மிகும் இடங்கள்.

கூறு – 5 : பாடந்தழுவிய வரலாறு.

2012-2013 கல்வியாண்டு முதல் பயில்பவர்களுக்கு பின்வரும் வினாத்தாள் அமைப்பு பின்பற்றப்பட வேண்டும்.

Maximum 50 Marks – wherever applicable			
Section A	Multiple choice questions with four options	10*1=10	10 questions – 2 each from every unit
Section B	Short answer questions of either / or type (like 1.a (or) b	5*3=15	5 questions – 1 each from every unit
Section C	Essay-type questions of either / or type (like 1.a (or) b	5*5=25	5 questions – 1 each from every unit
NOTE: In Section "C" one of the questions shall be application oriented or a problem or a case study.			

SEMESTER-IV

Course	BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)
Effective From	2016-2017 and Onwards
Semester	IV
Subject	CORE 6: SYSTEM SOFTWARE AND OPERATING SYSTEMS

Subject Description: It deals with fundamentals of System Software and Resources of Operating System.

Goal: Knowledge on various System Software and Operating System concepts.

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

(SYSTEM SOFTWARE: Units I & II)

UNIT I: Introduction –System Software and machine architecture. Loader and Linkers: Basic Loader Functions - Machine dependent loader features –Machine independent loader features
- Loader design options.

UNIT II: 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.**(OPERATING SYSTEMS: UNIT III, IV & V)**

UNIT III: What is an Operating System? – Process Concepts: 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.

UNIT IV: Virtual Storage: Virtual Storage Management Strategies – Page Replacement Strategies – Working Sets – Demand Paging – Page Size. Processor Management: Job and Processor Scheduling: Preemptive Vs Non-preemptive scheduling – Priorities – Deadline scheduling.

UNIT V: 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 BOOKS:

Leland L.Beck, System Software: An Introduction to Systems Programming, Pearson, Third Edition.

H.M. Deitel, Operating Systems, 2nd Edition, Perason, 2003.

REFERENCE BOOKS:
Achyut S. Godbole, Operating Systems, TMH, 2002.
John J. Donovan, Systems Programming, TMH, 1991.
D.M. Dhamdhere, Systems Programming and Operating Systems, 2nd Revised Edition,TMH.

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective From	**2016-2017 and Onwards**
Semester	**IV**
Subject	**CORE 7: LINUX AND SHELL PROGRAMMING**

UNIT I: Introduction to LINUX Operating System: Introduction - The LINUX Operating System.

UNIT II: Managing Files and Directories: Introduction – Directory Commands in LINUX – File Commands in LINUX.

UNIT III: Creating files using the vi editor: Text editors – The vi editor. Managing Documents: Locating files in LINUX – Standard files – Redirection – Filters – Pipes.

UNIT IV: Securing files in LINUX: File access permissions – viewing File access permissions – Changing File access permissions. Automating Tasks using Shell Scripts: Introduction – Variables- Local and Global Shell variables – Command Substitution

UNIT V: Using Conditional Execution in Shell Scripts: Conditional Execution – The case…esac Construct. Managing repetitive tasks using Shell Scripts: Using Iteration in Shell Scripts – The while construct – until construct – for construct – break and continue commands – Simple Programs using Shell Scripts.

TEXT BOOK:
1. Operating System LINUX, NIIT, PHI, 2006, Eastern Economy Edition.
REFERENCE BOOK:
1. Richard Petersen, Linux: The Complete Reference, Sixth Edition, Tata McGraw-Hill Publishing Company Limited, New Delhi, Edition 2008.

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective From	**2016-2017 and Onwards**
Semester	**IV**
Subject	**CORE LAB 5: LINUX AND SHELL PROGRAMMING LAB**

Write a shell script to stimulate the file commands: rm, cp, cat, mv, cmp, wc, split, diff.

Write a shell script to show the following system configuration :
currently logged user and his log name
current shell , home directory , Operating System type , current Path setting , current working directory
show currently logged number of users, show all available shells
show CPU information like processor type , speed
show memory information

Write a Shell Script to implement the following: pipes, Redirection and tee commands.
Write a shell script for displaying current date, user name, file listing and directories by getting user choice.
Write a shell script to implement the filter commands.
Write a shell script to remove the files which has file size as zero bytes.
Write a shell script to find the sum of the individual digits of a given number.
Write a shell script to find the greatest among the given set of numbers using commandline arguments.
Write a shell script for palindrome checking.
Write a shell script to print the multiplication table of the given argument using for loop.

ALLIED- IV:BUSINESS ACCOUNTING

UNIT I: Introduction-Accounting Principles-Branches of accounting-accounting rules-Journalising-Ledger-Subsidiary Book including cash books-Trial Balance.

UNIT II: Preparation of Final Accounts: Trading, Profit and Loss Account and Balance sheet with simple adjustments-Outstanding Expenses and Income, Prepaid Expenses, Pre received Income, Depreciation –Provision for bad debts.

UNIT III: Cost Account-Meaning elements of cost-Preparation of cost sheet with simple adjustments.

UNIT IV: Material cost: Stores Ledger-FIFO-LIFO-weighted average, simple average method. Management Account-Meaning –Objectives- Management account with financial Account.

UNIT V: Budget and Budgetary control-Preparation of various budgets-Flexible Budget- Production Budget-Cash Budget – Sales Budget.

Note: **Distribution of Marks between Problems and Theory shall be 60% and 40%.**

TEXT BOOK:

1. Accounting for Management, N.P.Srinivasan and M.Sakthivel Murugan, S.Chand & Company Ltd., New Delhi.

REFERENCE BOOKS:

1. Double entry book Keeping, T.S Grewal, Sultan Chand & Sons, New Delhi.

2. Management Accounting, Sharma and Gupta, Kalyani Publishers, New Delhi.

SKILL – 2 : BCA - WEB PROGRAMMING LAB

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.

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.

Design a HTML document describing you. Assign a suitable background design and background color and a text color.

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.

Write a HTML document to print the following: ***The family has the following facilities:*** 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***

Write a HTML document to print your class Time Table.

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

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*

Develop complete set of web pages to describe you skills in various areas using HTML.
Develop a web site to publish your family and the details of each member using HTML.
Develop a HTML document to display a Registration Form for an inter-collegiate function.
Develop a HTML document to design Alumni Registration form of your college.

பாரதியார் பல்கலைக்கழகம் : கோயமுத்தூர்
பகுதி – IV : தமிழ்த் தாள் - 2 - நான்காம் பருவம்
இளங்கலை 2012-13 கல்வி ஆண்டுமுதல் சேர்வோர்க்குரியது
(12-ம் வகுப்பு வரை தமிழ் மொழிப்பாடம் பயிலாதவர்களுக்கு)
அக மதிப்பீட்டுத் தேர்வு மட்டும் - பல்கலைக்கழக எழுத்துத் தேர்வுகள் கிடையாது

1.   நீதி நூல்கள் : ஆத்திச்சூடி (முதல் 12) ("அறம் செய விரும்பு", முதல் "ஒளவியம்
     பேசேல்" வரை.

     கொன்றை வேந்தன் - "அன்னையும் பிதாவும் முன்னறி தெய்வம்" முதல் எண்ணும்
     எழுத்தும் கண்ணெனத்தகும்" வரை (7)

     திருக்குறள் (5)   1. அகர முதல ... (1)

                      2. செயற்கரிய ... (26)

                      3. மனத்துக் கண் ... (34)

                      4. கற்க கசடறக் ... (391)

                      5. எப்பொருள் யார் யார் ... (423)

     எளிய நீதிக் கதைகள் - (தெனாலிராமன் கதைகள், பீர்பால் கதைகள், கிராமியக்
     கதைகள், ஈசாப் கதைகள்)

2.   தமிழ் இலக்கியங்கள் : வரலாறு – குறிப்பு - அறிமுகம்
     எடுத்துக்காட்டு : குறள் பற்றி எளிய தொடர்களில் அறிமுகம்
     தமிழகம் - உணவுமுறை, விழாக்கள், கலைகள் பற்றியக் குறிப்புகள்.

     2012-2013 கல்வியாண்டு முதல் பயில்பவர்களுக்குப் பின்வரும் வினாத்தாள்
     அமைப்பு பின்பற்றப்பட வேண்டும்.

	அக மதிப்பீட்டுத் தேர்வு மதிப்பெண் வழங்கும் முறை	மதிப்பெண்கள்
1.	வகுப்புத் தேர்வு-1	10
2.	வகுப்புத் தேர்வு-2	10
3.	மாதிரித் தேர்வு	10
4.	பயிற்சிக் கட்டுரை	10
5.	வாய்மொழித் தேர்வு	10
	மொத்த மதிப்பெண்கள்	50

குறிப்பு : வாய்மொழித் தேர்வில் தமிழ்ச் செம்மொழி வரலாறு தொடர்பான வினாக்கள்
             மட்டுமே கேட்கப்பட வேண்டும்.

பாரதியார் பல்கலைக்கழகம் : கோயமுத்தூர்
பகுதி – IV : சிறப்புத் தமிழ் தாள் – 2
நான்காம் பருவம்
இளங்கலை 2012-13 கல்வி ஆண்டுமுதல் சேர்வோர்க்குரியது
(12-ம் வகுப்பு வரை தமிழ் மொழிப்பாடம் பயின்றவர்களுக்கு)

கூறு – 1   திருக்குறள் - ஒழிபியலில் முதல் 5 அதிகாரங்கள் மட்டும்

கூறு – 2   உரைநடை : (கட்டுரை)
(இளைஞர்களின் ஒளியயான எதிர்காலத்திற்கு
த.வெ.பாலசுப்பிரமணியம், அனுராதா ஏஜென்சிஸ்
தம்பகோணம். தொலைபேசி : 04366-262237, 263237

கூறு – 3   எழுத்துப்பிழை நீக்க வழிகள் - பிழையும் திருத்தமும்
சொற்களைச் சரியாகப் பயன்படுத்தும் பாங்கு - வினைச் சொற்கள்
துணை வினைகள் (எடுத்துக்காட்டுகளுடன் விளக்குதல்).

கூறு – 4   வழுக்கரிதல் : மரபு வழக்கு – இயல்பு வழக்கு – தகுதி வழக்கு அரிதல்

கூறு – 5   படைப்பாற்றல் பயிற்சி
கட்டுரைகள் எழுதுதல்

2012-2013 கல்வியாண்டு முதல் பயில்பவர்களுக்கு பின்வரும் வினாத்தாள்
அமைப்பு பின்பற்றப்பட வேண்டும்.

Maximum 50 Marks – wherever applicable			
Section A	Multiple choice questions with four options	10*1=10	10 questions – 2 each from every unit
Section B	Short answer questions of either / or type (like 1.a (or) b	5*3=15	5 questions – 1 each from every unit
Section C	Essay-type questions of either / or type (like 1.a (or) b	5*5=25	5 questions – 1 each from every unit
NOTE: In Section "C" one of the questions shall be application oriented or a problem or a case study.			

BHARATHIAR UNIVERSITY : COIMBATORE 641 046
PART-IV GENERAL AWARENESS
FOR B.A.,B.Sc., B.C.A., B.S.W., B.Com., B.B.M. and B.B.A. DEGREE EXAMINATIONS

CONTENTS

1. VERBAL APTITUDE

2. NUMERICAL APTITUDE

3. ABSTRACT REASONING

4. TAMIL AND OTHER LITERATURE

5. GENERAL SCIENCE AND TECHNOLOGY
   AND EDUCATION

6. COMPUTER SCIENCE

7. ECONOMICS AND COMMERCE

8. HISTORY AND FREEDOM STRUGGLE

9. SPORTS

10. CURRENT AFFAIRS

SEMESTER V

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective From	**2016-2017 and Onwards**
Semester	**V**
Subject	**CORE 8: RDBMS AND ORACLE**

Subject Description: This subject deals with RDBMS concepts using Oracle SQL and PL/SQL.

Goal: Knowledge on Oracle Programming techniques.

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 Modeling and Normalization: Data Modeling – 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.

TEXT BOOK:
1. Database Systems using Oracle, Nilesh Shah, 2nd edition, PHI.

REFERENCE BOOKS:
Database Management Systems, Majumdar & Bhattacharya, 2007, TMH.
Database Management Systems, Gerald V. Post, 3rd edition, TMH.

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective From	**2016-2017 and Onwards**
Semester	**V**
Subject	**CORE 9: VISUAL BASIC**

UNIT I: Getting Started with VB6, Programming Environment, Working with Forms,Developing an application, Variables, Data types and Modules, procedures and control structures, arrays. Working with Controls: Creating and using controls, working with control arrays.

UNIT II: Menus, Mouse events and Dialog boxes: Mouse events, Dialog boxes, MDI and Flexgrid: MDI, Using the Flexgrid control.

UNIT III: ODBC and Data Access Objects: Data Access Options, ODBC, Remote data objects, ActiveX EXE and ActiveX DLL: Introduction, Creating an ActiveX EXE Component, Creating ActiveX DLL Component.

UNIT IV: Object Linking and Embedding: OLE fundamentals, Using OLE Container Control, Using OLE Automation objects, OLE Drag and Drop, File and File System Control: File System Controls, Accessing Files.

UNIT V: Additional controls in VB: sstab control, setting properties at runtime, adding controls to tab, list control, tabstrip control, MSFlexgrid control, Why ADO, Establishing a reference, Crystal and Data reports.

TEXT BOOKS
Visual Basic 6.0 Programming, Content Development Group, TMH, 8th reprint, 2007. (Unit I to Unit IV)
Programming with Visual Basic 6.0, Mohammed Azam, Vikas Publishing House, Fourth Reprint, 2006. **(Unit V)**

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective from	**2016-2017 and Onwards**
Semester	**V**
Subject	**CORE LAB 6: PROGRAMMING LAB – VB and Oracle**

VISUAL BASIC:

Write a simple VB program to accept a number as input and convert them into

Binary b) Octal c) Hexadecimal

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.

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

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

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).

Develop a simple project for Student Database Management System using VB as frontend and Oracle as back end.

ORACLE:

Create a table for Employee details with Employee Number as primary key and following fields: Name, Designation, Gender, Age, Date of Joining and Salary. Insert at least ten rows and perform various queries using any one Comparison, Logical, Set, Sorting and Grouping operators.

Create tables for library management system which demonstrate the use of primary key and foreign key. Master table should have the following fields: Accno, Title, Author and Rate. Transaction table should have the following fields: User id, Accno, Date of Issue and Date of Return. Create a Report(Select verb) with fields Accno, Title, Date of Issue for the given Date of Return with column formats.

Write a PL/SQL to update the rate field by 20% more than the current rate in inventory table which has the following fields: Prono, ProName and Rate. After updating the table a new field (Alter) called for Number of item and place for values for the new field without using PL/SQL block.

Write a PL/SQL to split the student table into two tables based on result (One table for ‖Pass‖ and another for ‖Fail‖). Use cursor for handling records of student table. Assume necessary fields and create a student details table.

Create a database trigger to implement on master and transaction tables which are based on inventory management system for checking data validity. Assume the necessary fields for both tables.

Write a PL/SQL to raise the following Exception in Bank Account Management table when deposit amount is zero.

ELECTIVE-I: INTRODUCTION TO COMPILER DESIGN

UNIT I: Introduction to Compliers: Compliers and Translator – Need of Translator – The structure of a Complier – Lexical analysis – Syntax analysis – Intermediate code generation – optimization – code generation – Complier – writing tools. Finite automata and lexicalAnalysis: The role of the lexical analysis – A simple approach to the design of lexical analyzers- Regular expressions to finite automata – Minimizing the number of states of a DFA.

UNIT II: The Syntactic specification of programming languages: context free grammars – derivations and parse trees – capabilities of context free grammars. Basic parsing techniques: Parsers – shift – reduce parsing – operator – precedence parsing – top down parsing – predictive parsers.

UNIT III: Syntax – directed translation: syntax – directed translation schemes – implementation of syntax – directed translators – intermediate code – postfix notation – parse trees and syntax trees – 3 address code – quadruples and triples – translation of assignment statements – Boolean expressions – statements that alter the flow of control. Symbol tables: the contents of a symbol table – data structures for symbol table – representing scope information.

UNIT IV: Run time storage administration: Implementation of a simple stack allocation scheme – implementation of block-structured languages – storage allocation in block structured languages. Error deduction and recovery: errors – lexical phase errors – syntactic phase errors – semantic errors.

UNIT V: Introduction of code optimization: The principle sources of optimization – loop optimization – the DAG representation of basic blocks – value numbers and algebraic laws – Global data flow analysis. Code generation: Object programs – problems in code generation – a machine model – a simple code generator – register allocation and assignment – code generation from DAG_s – peepholes optimization.

TEXT BOOK:
1. Principles of Complier Design, Alfred V.Aho, Jeffrey D.Ullman, Narosa Publishing House.

ELECTIVE - I- PHP & SCRIPTING LANGUAGES

UNIT I: VB Script and Java Script: Language structure - control structure - Procedures and functions - Error handling.

UNIT II: VB Script: Input & Output - Data Validation -Integration with Forms – Activex Control & Scripting

UNIT III: Java Script: Form Validation – SSI and Cookies – Frames and Windows – MIME Types - Plugins

UNIT IV PHP: Server side scripting Language: Basic syntax - Types - Variables - Constants - Expressions - Operators - Control Structures

UNIT V: PHP: Functions - Classes and Objects - HTML forms - HTTP authentication with PHP - Cookies - Handling file uploads - Using remote files - Connection handling - Database Connections.

TEXT BOOKS:
Christopher J.Goddard, Mark White, Mastering VB Script, Galgotia Publications, NewDelhi.
Lee Purcell, Mary Jane Mara, The ABCs of Javascript,
Steven Holzner, PHP: The Complete Reference

Course	**B.Sc. MM and BCA (Regular)**
Effective from	**2016-2017 and Onwards**
Semester	**For B.Sc. MM : Allied-4 (IV Semester)** **For BCA & CT : Elective-I (V Semester)**
Subject	**DIGITAL IMAGE PROCESSING**

UNIT I: Digital Image Fundamentals Image Transforms- Walsh, Hadamard, Discrete cosine, Hotelling Transforms-Image Formation. File Formats.

UNIT II: Image Enhancement Histogram Modification Techniques-Image Smoothening-Image Sharpening-Image Restoration-Degradation Model-Diagonalization of Circulant and Black circulant matrices-algebraic approach to restoration.

UNIT III: Image Compression and Segmentation Compression Models-Elements of Information Theory-Error free Compression-Inage Segmentation- Detection of Discontinuities-

Edge Linking and boundary detection-Thresholding-Regions Oriented Segmentations-Morphology.

UNIT IV: Feature Extraction Image feature descriptions-Interpretations of Line drawings, Image pattern recognition algorithms.

UNIT V: Knowledge Representation and Use Knowledge Representation and Use-Image analysis using Knowledge about scenes-Image Understanding using two dimensional methods.

TEXT BOOK:

Gonzalez &Woods, Digital Image Processing, 2nd Edition, Pearson Education, 2002. (Chapters: 1, 2, 3, 4, 5, 8, 9, 10, 11 and 12).
Anil Jain, Fundamentals of Digital Image Processing, PHI, 1989. (Chapters: 5, 7, 8 and11).

REFERENCE BOOKS:

Sid Ahmed, Image Processing, McGraw Hill, New York, 1995.
Milan Sonka, Vaclav Hlavac and Roger Boyle, Image Processing Analysis and Machine Vision, Second Edition, Thomson Brooks/Cole, 1999.

SKILL –III: BCA: CASE TOOLS CONCEPTS AND APPLICATIONS

UNIT I: Data Modeling: Business Growth-Organizational Model-Case Study of student MIS-What is the purpose of such Models-Understanding the business-Types of models- model development approach-the case for structural development-advantages of using a case tool. System analysis and design-what is DFD-General Rules for Drawing DFD-Difference Between Logical data flow diagram and Physical data flow diagram-Software verses Information Engineering-How case tools store information.

UNIT II: Approach used to solve the problem statement: How to deal with a problem statement-Data flow diagram for Payroll System-Presentation Diagram for Payroll System-sehematics of the model-Forms-Screens-Menu Screens-Data entry Screens-Report Output Format-Utilities. Installation of Ubridge and Synthesis: How to use the tools in Ubridge Synthesis for case-Installation of Ubridge Synthesis-Computer Aided Software Engineering-Getting Ubridge to work-Setup-Assign-Housekeep-The Ubridge page.

UNIT III: Introduction to Ubridge: Introduction - Main flow of the system prototyping your Report-Introducing the Novice Model of the Operation. Introducing Synthesis - Synthesis basic – Synthesis - Menu Drawing the screen-Requirement Definition-Diagram-Data Dictionary-Document-Synthesis Main Administration - Synthesis reference - importing and exporting screen.

UNIT IV: Diagram definition tool: Introduction-Starting DDT-Drawing your own Icon - Defining the connection rules-Rebuilding your icon. Object oriented methodologies: Rambaugh et.al._s object modeling techniques-The Booch methodology –The Jacobson et.al. Methodologies-Pattern-Frame works-The Unified Approach.

UNIT V: Introduction to UML-UML Diagram-Class Diagram-Use Case Diagram-Interaction Diagram-Sequence Diagram-Collaboration Diagram-State Chart Diagram-Activity Diagram-Component Diagram-Deployment Diagram.

TEXT BOOKS:

Case Tools Concepts and Applications, Ivan N Bayross, BPB Publications

Object Oriented System Development using the Unified Modeling Language, McGraw Hill International edition.

REFERENCE BOOK:

1. Software Engineering: A Practitioner's Approach, Roger S Pressman, McGraw Hill International Edition.

SEMESTER VI

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective from	**2016-2017 and Onwards**
Semester	**VI**
Subject	**CORE 11: GRAPHICS AND MULTIMEDIA**

Subject Description: This subject deals with Graphics Concepts and Multimedia methodologies.

Goal: Mathematical Knowledge on Graphics and Technical background of Multimedia.

Objective: To inculcate knowledge on Graphics & Multimedia concepts.

(GRAPHICS – UNITS I & II)

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.

(MULTIMEDIA – UNITS III, IV &V)

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.

TEXT BOOKS:

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)*

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:

Computer Graphics, Amarendra N Sinha, Arun D Udai, TMH.

Multimedia: Making it Work, Tay Vaughan, 7th edition, TMH.

BHARATHIAR UNIVERSITY: COIMBATORE-641 046
B.Sc. CS/IT/CT/SS/MM/CSA &BCA

(For the students admitted from the academic year **2016-2017** and onwards)

CBCS PATTERN GUIDELINES FOR PROJECT WORK

The aim of the project work is to acquire practical knowledge on the implementation of the programming concepts studied.

Each student should carry out individually one project work and it may be a work using the software packages that they have learned or the implementation of concepts from the papers studied or implementation of any innovative idea focusing on application oriented concepts.

The project work should be compulsorily done in the college only under the supervision of the department staff concerned.

 Viva Voce

Viva-Voce will be conducted at the end of the year by both Internal (Respective Guides) and External Examiners, after duly verifying the **Annexure Report** available in the College, for a total of 200 marks at the last day of the practical session.

Out of 200 marks, 160 marks for project report and 40 marks for Viva Voce.

Course	**BSc CS, IT, CT, SS, CSA, MM & B.C.A (Regular)**
Effective from	**2016-2017 and Onwards**
Semester	**VI**
Subject	**CORE LAB 7:** **PROGRAMMING LAB – GRAPHICS AND MULTIMEDIA**

Graphics:

Write a program to rotate an image.

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

Write a program to drop a line using DDA Algorithm.

Write a program to move a car with sound effect.

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

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

Multimedia:

Create Sun Flower using Photoshop.

Animate Plane flying in the Clouds using Photoshop.

Create Plastic Surgery for the Nose using Photoshop.

Create See-through text using Photoshop.

Create a Web Page using Photoshop.

Convert Black and White Photo to Color Photo using Photoshop.

Course	**B.Sc. CS/IT/SS/CSA/BCA (Regular)**
Effective from	**2016-2017 and Onwards**
Semester	**B.Sc. IT: Allied-4 (IV Semester)** **B.Sc. CS/SS/CSA/BCA : Elective**
Subject	**ELECTIVE :II - COMPUTER NETWORKS**

Subject Description: This subject deals different Network concepts like Layers, WirelessConcepts, Transmission and Security.

Goal: Knowledge on Computer Networks and technologies like broadband and Bluetooth.

Objective: To inculcate knowledge on Networking concepts and technologies like wireless,broadband and Bluetooth.

UNIT I: Network Hardware: LAN – WAN – MAN – Wireless – Home Networks. Network Software: Protocol Hierarchies – Design Issues for the Layers – Connection-oriented and connectionless services – Service Primitives – The Relationship of services to Protocols. Reference Models: OSI Reference Model – TCP/IP reference Model – Comparison of OSI and TCP/IP -Critique of OSI and protocols – Critique of the TCP/IP Reference model.

UNIT II: PHYSICAL LAYER - Guided Transmission Media: Magnetic Media – Twisted Pair – Coaxial Cable – Fiber Optics. Wireless Transmission: Electromagnetic Spectrum – Radio Transmission – Microwave Transmission – Infrared and Millimeter Waves – Light Waves. Communication Satellites: Geostationary, Medium-Earth Orbit, Low Earth-orbit Satellites – Satellites versus Fiber.

UNIT III: DATA-LINK LAYER: Error Detection and correction – Elementary Data-link Protocols – Sliding Window Protocols. MEDIUM-ACCESS CONTROL SUB LAYER: Multiple Access Protocols – Ethernet – Wireless LANs - Broadband Wireless – Bluetooth
UNIT IV: NETWORK LAYER: Routing algorithms – Congestion Control Algorithms. TRANSPORT LAYER: Elements of Transport Protocols – Internet Transport Protocols: TCP.

UNIT V: APPLICATION LAYER: DNS – E-mail. NETWORK SECURITY: Cryptography Symmetric Key Algorithms – Public Key Algorithms – Digital Signatures.

TEXT BOOK:
Computer Networks, Andrew S. Tanenbaum, 4th edition, PHI. (UNIT-I:1.2-1.4
UNIT-II:2.2-2.4 UNIT-III:4.2-4.6 UNIT-IV:5.2,5.3,6.2,6.5 UNIT-V:7.1,7.2,8.1-8.4)

REFERENCE BOOKS:
Data Communication and Networks, Achyut Godbole, 2007, TMH.
Computer Networks: Protocols, Standards, and Interfaces, Uyless Black, 2nd ed, PHI

ELECTIVE-II : DISTRIBUTED COMPUTING

Subject Description This Course presents the distributed computing techniques emphasizingthe client server model
Goals To enable the students to learn the concepts of distributed computing
Objectives On successful completion of the course the students should have understood thetrends and principles of distributed computing

UNIT I: Distributed Systems: Fully Distributed Processing systems – Networks and interconnection structures – designing a distributed processing g system.

UNIT II: Distributed systems: Pros and Cons of distributed processing – Distributed databases – the challenges of distributed data – loading, factors – managing the distributed

resources division of responsibilities.

UNIT III: Design considerations: Communication Line loading – line loading calculations- partitioning and allocation - data flow systems – dimensional analysis- network database design considerations- ration analysis- database decision trees- synchronization of network databases

UNIT IV: Client server network model: Concept – file server – printer server and e-mail server

UNIT V: Distributed databases: An overview, distributed databases- principles of distributed databases – levels of transparency- distributed database design- the R* project techniques problem of heterogeneous distributed databases

REFERENCE BOOKS:

John A. Sharp, An introduction to distributed and parallel processing, Blackwell Scientific Publication(Unit I & III)
Uyless D. Black, Data communication and distributed networksǁ(unit II)
Joel M.Crichllow , Introduction to distributed & parallel computing (Unit IV)
Stefans Ceri, Ginseppe Pelagatti , Distributed database Principles and systems, McGraw Hill

ELECTIVE-II : BCA : DOT NET PROGRAMMING

UNIT I: Introduction to .Net: .NET framework- difference between VB6 and VB .Net- Object-Oriented programming and VB .Net-Data types-Variables-Operators-Arrays- Conditional logic.

UNIT II: Procedures- Dialog boxes- File IO and System objects- Error handling- Namespaces-Classes and Objects- Multithreading-Message Queue- Programming MSMQ.

UNIT III: VB .Net IDE-Compiling and Debugging-Customizing- Data access: ADO.Net-Visual studio .Net and ADO .Net. Windows Forms: Controls-Specific controls- Irregular forms.

UNIT IV: Vb .Net and web: Introduction to ASP .Net page framework- HTML server controls-Web controls- Validation controls- Events-CSS- State management- Tracing- Security.

UNIT V: Web Services: Introduction- Infrastructure- SOAP-Building web services- Deploying and publishing web services- Finding and consuming web services

TEXT BOOK:

1. Bill Evjen, Jason Beres, et.al, Visual Basic .Net programming, Wiley Dreamtech India (p) Ltd. ISBN 81-265-0254-1. (Chapters: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18,

19, 21, 22, 25, 26, 27, 29, 31, 32, 33, 34, 35, 36, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 49, 50).

REFERENCE BOOKS:

Fergal Grimes, Microsoft .NET for programmers, Shroff Publishers & Distributors (P) Ltd. ISBN 81-7366-540-0.

Thuan Thai & Hoang Q.Lam, .NET Framework Essentials, Shroff Publishers & Distributors (P) Ltd. ISBN 81-7366-654-7

Course	**B.Sc. MM & BCA (Regular)**
Effective from	**2016-2017 and Onwards**
Semester	**For B.Sc.MM: Allied III (III Semester)** **For BCA : Elective III (V Semester)**
Subject	**ELECTIVE-III:WEB SERVICES**

UNIT I: Introduction to Web Services – Industry standards, Technologies and Concepts underlying Web Services – their support to Web Services, Applications that consume Web Services.

UNIT II: XML – its choice for Web Services – Network protocols to backend databases – Technologies – SOAP, WSDL – exchange of information between applications in distributed environment – Locating remote Web Services – its access and usage, UDDI Specification –an introduction.

UNIT III: A brief outline of Web Services – Conversation – static and interactive aspects of system interface and its implementation, Work Flow – Orchestration and refinement, Transactions, Security issues – the Common attacks – security attacks facilitated within Web services Quality of Services – Architecting of systems to meet users requirement with respect to latency, performance, reliability, QOS metrics, Mobile and wireless Services – energy consumption, network bandwidth utilization, Portals and Services Management.

UNIT IV: Building real world Enterprise applications using Web Services – sample source codes to develop Web Services – Steps necessary to build and deploy Web Services and Client applications to meet Customer_s requirement – Easier development, Customization, maintenance, Transactional requirements, seamless porting to multiple devices and platforms.

UNIT V: Development of Web Services and applications onto Tomcat application Server and Axis SOAP server (both are freeware) – Web Services Platform as a set of Enabling technologies for XML based distributed Computing.

TEXT BOOKS:

Sandeep Chatterjee, James Webber, Developing Enterprise Web Services: An Architects Guide, Prentice Hall, Nov 2003

Keith Ballinger, NET Web services: Architecture and Implementation with **.**Net, Pearson Education, First Education Feb 2003.

REFERENCE BOOKS:

Ramesh Nagappan, Developing Java Web Services: Architecting and developing secure Web Services Using Java, John Wiley and Sons, 2003.

Eric A Marks and Mark J Werrell, Executive Guide to Web Services, John Wiley and Sons, 2003

Anne Thomas Manes, Web Services: A Managers Guide, Addison Wesley, 2003.

ELECTIVE:III:E-COMMERCE

Subject Description: This Subject deals with the E-Commerce

Goal: To learn about E-Commerce

Objective: On successful completion of this subject the students should have thoroughunderstanding of: E-Commerce , E-Market , EDI , Business Strategies etc.

UNIT I: Introduction to E-Commerce: The Scope of E-Commerce – Definition-E-Commerce & the Trade Cycle – Electronic Market – Electronic Data Interchange – The Internet Commerce – The E-Commerce in Perspective. Business Strategy: The Value Chain – Supply Chains – Porter's Value Chain Model – The Inter Organizational Value Chain.

UNIT II: The Introduction to Business Strategy – Strategic Implications of IT – Technology– Business Environment – Business Capability – Existing Business Strategy – Strategy Formulation & Implementation Planning – e-Commerce Implementation - Commerce Evaluation. The Inter Organizational Transactions – The Credit Transaction Trade Cycle. A Variety of Transactions – Pens & Things.

UNIT III: E-Markets: Markets – E-Markets-Usage of E-Markets-Advantages & Disadvantages of E-Markets. EDI: Introduction – Definition - Benefits of EDI – EDI Standards – EDI Communication EDI Implementation – EDI Agreement – EDI Security.

UNIT IV: The Internet : The Internet – The Development of the Internet – TCP/IP – Internet Components – Uses of the Internet – A Page on the Web: HTML Basics – Introduction to HTML – Further HTML – Client Side Scripting – Server Side Scripting – HTML Editors & Editing – The Elements of E-Commerce : Elements – e-Visibility – The e-Shop – On line Payments - Delivering the Goods – Internet e-Commerce Security .

UNIT V: E-Business: Introduction - The Internet Bookshops – Grocery Supplies - Software Supplies and Support – Electronic Newspapers – The Internet Banking -

The Virtual Auctions – Online Share Dealing – Gambling on the Net – e-Diversity.
TEXT BOOK:

1. David Whiteley, E-Commerce–Strategy, Technology & Applications, Tata McGraw-Hill.

ELECTIVE –III: BCA : SOFTWARE TESTING

Subject Description: This subject deals software testing concepts like unit-wise testing,integration testing and acceptance testing.
Goal: Knowledge on software testing and how to test the software at various levels.
Objective: To inculcate knowledge on Software testing concepts.

UNIT I: Software Development Life Cycle models: Phases of Software project – Quality, Quality Assurance, Quality control – Testing, Verification and Validation – Process Model to represent Different Phases - Life Cycle models. White-Box Testing: Static Testing – Structural Testing –Challenges in White-Box Testing.

UNIT II: Black-Box Testing: What is Black-Box Testing? - Why Black-Box Testing? – When to do Black-Box Testing? – How to do Black-Box Testing? – Challenges in White Box
Testing - Integration Testing: Integration Testing as Type of Testing – Integration Testing asa Phase f Testing – Scenario Testing – Defect Bash.

UNIT III: System and Acceptance Testing: system Testing Overview – Why System testing is done? – Functional versus Non-functional Testing - Functional testing - Non-functional Testing – Acceptance Testing – Summary of Testing Phases.

UNIT IV: Performance Testing: Factors governing Performance Testing – Methodology of Performance Testing – tools for Performance Testing – Process for Performance Testing – Challenges. Regression Testing: What is Regression Testing? – Types of Regression Testing
When to do Regression Testing – How to do Regression Testing – Best Practices in Regression Testing.

UNIT V: Test Planning, Management, Execution and Reporting: Test Planning – Test Management – Test Process – Test Reporting –Best Practices. Test Metrics and Measurements: Project Metrics – Progress Metrics – Productivity Metrics – Release Metrics.

TEXT BOOK:
1. Software Testing Principles and Practices, Srinivasan Desikan & Gopalswamy Ramesh,2006, Pearson Education. (UNIT-I: 2.1-2.5, 3.1-3.4 UNIT-II: 4.1-4.4, 5.1-5.5 UNIT III: 6.1-6.7 (UNIT IV: 7.1-7.6, 8.1-8.5 UNIT-V: 15.1-15.6, 17.4-17.7)

REFERENCE BOOKS*:*

Effective Methods of Software Testing, William E. Perry, 3rd ed, Wiley India.

Software Testing, Renu Rajani, Pradeep Oak, 2007, TMH.

SKILL 4 : BCA - CASE TOOLS LAB

To design an ATM transfer system using UML diagram and to generate VB code.

To design a student mark analysis using UML diagram and to generate VB code.

To design a platform assignment system using UML diagram and to generate VB code.

To design a railway reservation system using UML diagram and to generate VB code.

To design an expert system for medicine field using UML diagram and to generate VB code.

To design a stock maintenance system using UML diagram and to generate VB code.

To design a quizzing system using UML diagram and to generate VB code.

To design a remote computer monitoring system using UML diagram and to generate VB code.

To design an online ticket reservation system using UML diagram and to generate VB code.

To design an E-mail client server system using UML diagram and to generate VB code.