

GOVERNMENT ARTS COLLEGE (AUTONOMOUS), KARUR – 639 005
B.Sc., COMPUTER SCIENCE - COURSE STRUCTURE UNDER CBCS SYSTEM
(For the candidates admitted from the year 2015-2016 onwards)

SEMESTER	COURSE	SUBJECT TITLE	SUBJECT CODE	INSTR. HOURS WEEK	CREDIT	EXAM HOURS	MARKS		TOTAL
							INT	ESE	
I	Tamil I	Tamil I	U15L1T1	6	3	3	25	75	100
	English – I	English I	U15L1E1	6	3	3	25	75	100
	Core Course – I	Programming in ‘C’	U15CS1C1	6	5	3	25	75	100
	Core Course – II	‘C’ Programming Lab	U15CS1C2P	3	2	3	25	75	100
	First Allied Course – I	Applied Mathematics – I	U15MM1A1	5	3	3	25	75	100
	First Allied Course – II	Applied Mathematics – II	-	2	-	-	-	-	-
	Value Education	Value Education	U15VE1	2	2	3	25	75	100
				30	18				600
II	Tamil II	Tamil II	U15L2T2	6	3	3	25	75	100
	English II	English II	U15L2E2	6	3	3	25	75	100
	Core Course II	Data Structures and C++	U15CS2C3	6	5	3	25	75	100
	Core Course III	C++ Programming Lab	U15CS2C4P	3	2	3	25	75	100
	First Allied Course II	Applied Mathematics – II	U15MM2A2	2	4	3	25	75	100
	First Allied Course III	Applied Mathematics – III	U15MM2A3	5	3	3	25	75	100
	Environmental Studies	Environmental Studies	U15ES2	2	2	3	25	75	100
				30	22				700
III	Tamil III	Tamil III	U15L3T3	6	3	3	25	75	100
	English III	English III	U15L3E3	6	3	3	25	75	100
	Core Course – IV	Programming in Java	U15CS3C5	6	5	3	25	75	100
	Core Course V Practical	Java Programming Lab	U15CS3C6P	3	2	3	25	75	100
	Second Allied Course I	Applied Physics I	U15PH3A1	5	3	3	25	75	100
	Second Allied Course II	Applied Physics II Practical	-	2	-	-	-	-	-
	Non Core Elective I	Discrete Mathematical Structure	U15MM3N1	2	2	3	25	75	100
				30	18				600
IV	Tamil IV	Tamil IV	U15L4T4	6	3	3	25	75	100
	English IV	English	U15L4E4	6	3	3	25	75	100
	Core Course V Practical	Operating System	U15CS4C7	5	5	3	25	75	100
	Core Course VI	Shell Programming Lab	U15CS4C8P	2	2	3	25	75	100
	Second Allied Course II	Applied Physics II Practical	U15PH4A2P	2	4	3	25	75	100
	Second Allied Course III	Applied Physics III	U15PH4A3	5	3	3	25	75	100
	Skill Based Elective I	Office Automation and HTML	U15CS4S1	2	4	3	25	75	100
	Non Core Elective II	Formal Languages and Automata Theory	U15MM4N2	2	2	3	25	75	100
			30	26				800	
V	Core Course VII	Design and Analysis of Algorithms	U15CS5C9	5	5	3	25	75	100
	Core Course VIII	Relational Database Management System	U15CS5C10	5	4	3	25	75	100
	Core Course IX	ASP.Net	U15CS5C11	5	3	3	25	75	100
	Core Course X	ASP.Net Programming Lab	U15CS5C12P	4	4	3	25	75	100
	Elective Course I	Microprocessor and its Applications	U15CS5E1	5	4	3	25	75	100
	Skill Based Elective II	Visual Basic	U15CS5S2	2	4	3	25	75	100
	Skill Based Elective III	PHP	U15CS5S3	2	4	3	25	75	100
	Soft Skills Development	Soft Skills Development	U15SSD3	2	2	3	25	75	100
				30	30				800
	Core Course XI	Software Development Lab	U15CS6C13P	6	5	3	25	75	100
	Core Course XII	Computer Graphics	U15CS6C14	6	5	3	25	75	100
	Core Course XIII	Software Engineering	U15CS6C15	6	5	3	25	75	100
	Elective Course II	Management Information System	U15CS6E2	5	5	3	25	75	100
	Elective Course III	Data Communication and Networks	U15CS6E3	6	4	3	25	75	100
	Extension Activities	Gender Education	U15EA4	1	1	3	25	75	100
Extension Activities				1					
			30	26				600	
TOTAL				180	140				4100

Sl. No.:

Subject Code:

U15L1T1

அரசு கலைக் கல்லூரி (தன்னாட்சி) - ஈநூர் - 5
கலையியல் / அறிவியல் / வணிகவியல் / பட்ட வகுப்பு
 (2015 - 2016 ஆம் கல்வியாண்டு முதல் பயிலும் மாணவர்களுக்குரியது)
 பகுதி - 1 பொதுத்தமிழ் -1 - முதல் பருவம்
 மரபுக்கவிதை, புதுக்கவிதை, சிறுகதை, இலக்கணம், இலக்கிய வரலாறு

பொதுத்தமிழ் -1 முதல் பருவம்

(மரபுக்கவிதை, புதுக்கவிதை, சிறுகதை, இலக்கணம், இலக்கிய வரலாறு)

அலகு 1 மரபுக்கவிதைகள்

- | | | |
|--|---|-----------------|
| அ) தமிழ்த்தாய் | - | பாரதியார் |
| ஆ) புத்தகச்சாலை | - | பாரதிதாசன் |
| இ) புத்தரும் ஏழைச்சிறுவனும்
(ஆசியஜோதி) | - | கவிமணி |
| ஈ) நோயற்ற வாழ்வு | - | நாமக்கல் கவிஞர் |
| உ) இரசம் தீர்ந்து விட்டது
(இயேசு காவியம்) | - | கண்ணதாசன் |
| ஊ) அதிவிரராம பாண்டியன் | - | சுரதா |

அலகு 2 புதுக்கவிதைகள்

- | | | |
|---|---|-----------------|
| அ) மீரா கவிதைகள் (நான் மனிதன்) | - | மீரா |
| ஆ) தேசப்பிதாவுக்கு ஒரு தெருப்பாடகனின் அஞ்சலி (கண்ணீர்ப்பூக்கள்) | - | மு.மேத்தா |
| இ) வடலூரும் வார்தாவும்(நேயர் விருப்பம்)- | - | அப்துல் ரகுமான் |
| ஈ) சர்ப்ப யாகம் | - | சிற்பி |
| உ) விசுவாமித்திரர் (அவதார புருஷன்) | - | வாலி |
| ஊ) நிலத்தை ஜெயித்த விதை
(இன்னொரு தேசிய கீதம்) | - | வைரமுத்து |
| எ) ஒரு வண்டி சென்றியூ(10 கவிதைகள்)- | - | ஈரோடு தமிழன்பன் |

அலகு 3 சிறுகதை

- | | | |
|--------------------|---|-------------------------|
| சிறுகதைத் தொகுப்பு | - | நியூ செஞ்சுரி புக ஹவுஸ் |
|--------------------|---|-------------------------|

அலகு 4 இலக்கணம்

- | | | |
|-------------------------|---|---------------------------|
| வல்லினம் மிகும் இடங்கள் | - | நல்ல தமிழ் எழுத வேண்டுமா? |
| வல்லினம் மிகா இடங்கள் | - | அ.கி.பரந்தாமனார் |

அலகு 5 இலக்கிய வரலாறு

மரபுக்கவிதை, புதுக்கவிதை, சிறுகதை

பரிந்துரை நூல்

- | | | |
|----------------------|---|---|
| முனைவர் கா.வாசுதேவன் | - | பன்முக நோக்கில் தமிழ் இலக்கிய வரலாறு
தேவன் பதிப்பகம், 16/43, திருநகர்,
திருவானைக்கோவில், திருச்சி |
|----------------------|---|---|

ஐந்து அலகுகளிலும் சம அளவில் வினாக்கள் அமைதல் வேண்டும்.

வினாத்தாள் அமைப்பு முறை

பகுதி அ (ஒரு மதிப்பெண் வினா - 20)

- | | |
|--|-------|
| அ) பொருத்தமான விடையைத் தேர்ந்தெடுத்தல் | 5*1=5 |
| ஆ) கோடிட்ட இடங்களை நிரப்பதல் | 5*1=5 |
| இ) பொருத்துதல் | 5*1=5 |
| ஈ) ஒரே சொற்களில் விடையளித்தல் | 5*1=5 |

பகுதி ஆ (ஐந்து மதிப்பெண் வினா)

இது அல்லது அது என்ற வகையில் அமைதல் வேண்டும் 5*5=25

பகுதி இ (பத்து மதிப்பெண் வினா)

ஐந்தில் எவையேனும் மூன்றனுக்கு மட்டும் கட்டுரை வடிவில் விடை எழுத வேண்டும்.

3*10=30

மொத்த மதிப்பெண் -75

CHAIRMAN - BOS

CONTROLLER OF EXAMINATIONS

Sl. No.:

Subject Code:

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR- 05
ALL UG COURSES - I SEMESTER - PART – II - ENGLISH
(For the candidates admitted from the year 2015-16 onwards)

ENGLISH – I

Unit I

- Monday Morning - Mark Twain
My Financial Career - Stephen Leacock

Unit II

- Indian Women - S. Radhakrishnan
Head Ache - R. K. Narayan

Unit III

- Thomas Alva Edison - Egon Larson
Helen Keller - Patrick Pringle

Unit IV

Word Classes

I. Open Classes

1. Nouns
2. Adjectives
3. Verbs
4. Adverbs

II. Closed Classes

1. Pronouns
2. Determiners
3. Prepositions
4. Conjunctions
5. Exclamations / Interjections

Unit V

1. Spelling Rules
2. Words Often Confused or Misused
3. Homophones

CHAIRMAN – BOS

COE

Sl. No.:

Subject Code:

U15CS1C1

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – I SEMESTER – CORE COURSE -I

(For the candidates admitted from the year 2015-16 onwards)

PROGRAMMING IN C

UNIT -I

Overview of C: History of C - Structure of C Program. **Constants, variables and data types:** Constants – Variables – Keywords and Identifiers – Data types - Declaration of Variables – Operators – Type Conversions in expressions – Mathematical functions.

UNIT- II

Managing Input & Output Operations: Reading and Writing a character - Formatted input and output – **Decision making and branching:** IF, IF-ELSE, Nesting of IF-ELSE – ELSE-IF-Ladder – Switch - ?:Operator – GOTO. **Decision Making and Looping:** WHILE –DO, DO-WHILE , FOR – JUMPS IN LOOPS.

UNIT- III

Arrays: One dimensional Arrays – Two dimensional Arrays – Multi dimensional Arrays- **Character Array and Strings:** Declaring Initializing String Variables – String-Handling Functions. **User-defined functions:** Definition of Functions- Return values and their types – Function calls and declaration – Category of functions- Nesting of Functions – Recursion – Passing Arrays to Function.

UNIT- IV

Structures and Unions: Defining a structure – Declaring structure variables – Arrays within structures – Structure within Structure – Structures and Functions – Unions. **Pointers:** Introduction – Declaring Pointer variables – Initializing Pointer Variables – Pointers to functions- Pointers and Structures.

UNIT V

File Management: Introduction – Defining, Opening and Closing a file – Input Output Operations on files – Files with structures and Unions. Sample fiile programs (Student mark statement, employee pay bill) – **Preprocessors:** Preprocessors and Macros.

TEXT BOOK

1. Programming in ANSI C, E. Balgurusamy Tata McGraw Hill, New Delhi, 4th Edition

REFERENCE BOOKS

1. “Programming with C “ – Byron S. Gottfried – Schaum’s outline Series - Tata McGraw Hill publications
2. “ Let Us C “ – Yashawanth kanetkar – BPB publications.

Sl. No.:

Subject Code:

U15CS1C2P

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – I SEMESTER – CORE COURSE - II

(For the candidates admitted from the year 2015-16 onwards)

‘C’ Programming Lab

1. Write a C program to find solution of quadratic equations.
2. Write a C program to sort the given numbers in Ascending and Descending order using Arrays.
3. Write a C program to sort the names in Alphabetical order.
4. Write a C program to find the sum of Exponential Series.
5. Write a C Program for Matrix Addition and Subtraction of two 3X3 matrix.
6. Write a C program for Matrix Multiplication of two 3X3 matrix.
7. Write a C program for finding factorials of a given number using function.
8. Write a C program to generate Fibonacci numbers using recursive functions.
9. Write a C program for String Manipulations without using String functions(String length, Palindrome checking)
10. Write a C Program to solve the given equation using Bisection Method.
11. Write a C program to solve the given equation using Trapezoidal rule.
12. Write a C program to solve the given equation using Euler’s method.
13. Write a C program to find the length of a given string using pointers.
14. Write a C program for Student Marklist Preparation. (Use structures for record description)
15. Write a C program for file Creation and file accessing.

Sl. No.:

Subject Code:

U15MM1A1

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

**B.Sc., – I SEMESTER – FIRST ALLIED COURSE – I
(FOR COMPUTER SCIENCE MAJOR)**

(For the candidates admitted from 2015 – 2016 onwards)

**APPLIED MATHEMATICS - I
(ALGEBRA AND CALCULUS)**

- UNIT 1:** Theory of Equation: Relation between roots and coefficients - Transformation of equation - Diminishing, Increasing & Multiplying the roots by a constant – Forming equations with the given roots – Rolle’s theorem, Descartes rule of signs (statement only) - Simple problems.
- UNIT 2:** Singular matrices – Inverse of a non-singular matrix using Adjoint method - Rank of a matrix - Consistency – Characteristic equation – Eigen values, Eigen Vectors – Cayley Hamilton theorem (Proof not needed) - Simple applications only.
- UNIT 3:** Differentiation – Maxima & Minima - Concavity – Convexity – Points of inflexion - Partial differentiation – Euler’s theorem - Total Differential coefficient (proof not needed) - Simple problems only.
- UNIT 4:** Evaluation using integration by parts - Properties of definite integrals – Fourier series in the range $(0, 2\pi)$ & $(-\pi, \pi)$ - Odd & Even functions - Fourier Half Range Sine and Cosine series.
- UNIT 5:** Differential Equations: Variables Separable - Linear equations - Second order of types $aD^2 + bD + cy = F(X)$ where a, b, c are constants and F(X) is one of the following types (i) e^{kx} (ii) $\sin kx$ (or) $\cos kx$ (iii) x^n , n being an integer (iv) $e^{kx} f(x)$.

TEXT BOOKS:

1. T. K. Manickavasagam Pillai & Others, “**Algebra Vol. I**”, S.V. Publications, 2010 Revised Edition (Units I, II)
2. S. Narayanan, T. K. Manickavasagam Pillai, “**Calculus Vol. II**”, S.V. Publications, 2003 (Units III, IV, V)

REFERENCE BOOKS:

1. M. L. Khanna, “**Differential Calculus**”, Jaiprakashnath and Co. Meerut – 2004.
2. P. Kandasamy, K. Thilagavathy, “**Allied mathematics**”, S. Chand & Co. Ltd., 2010.

**CHAIRMAN
BOARD OF STUDIES**

CONTROLLER OF EXAMINATIONS

Sl. No.:

Subject Code:

U15VE1

அரசு கலைக் கல்லூரி (தன்னாட்சி), ஈரூர் - 639005
அனைத்து இளநிலை - முதல் பருவம் - பகுதி - 4
(2015 - 2016 கல்வியாண்டு முதல் பயிலும் மாணவர்களுக்கு உரியது)

மதிப்புக்கல்வி

அலகு 1

வாழ்வியல் கல்வி ஓர் அறிமுகம் - தனிமனித நெறிமுறைகள் - சமுதாய நெறிமுறைகள் - ஆன்மீக நெறிமுறைகள் - வாழ்வியல் நெறிகளின் மூலங்கள் - வாழ்வியல் நெறிகளின் அவசியம் - நன்னடத்தையும் நற்செயல்களும் - நற்பண்புகள் உருவாக்கம்.

அலகு 2

சமூக நற்பணி - சமூக நலப்பணித்திட்டங்கள் - சமுதாயத் தீமைகள் குறித்த விழிப்புணர்வு - போதை மருந்துகளுக்கு அடிமையாதல் - மதுப்பழக்கம் - புகைப்பிடித்தல் - தற்கொலை.

அலகு 3

இந்து சமயத்தின் போதனைகள் - இஸ்லாம் போதிக்கும் நெறிகள் - கிறித்துவம் போதிக்கும் நெறிகள் - சமயச் சார்பின்மை - சமய நல்லிணக்கம்.

அலகு 4

காந்தியடிகளின் அகிம்சை கொள்கை - அன்னை தெரசாவின் தொண்டுகள் - தன்னலமின்மையின் வடிவம் பெருந்தலைவர் காமராசர்.

அலகு 5

சமூகநீதி - மனித உரிமைகளும் - அவற்றின் பாதுகாப்பும் - மகளிர்க்கு எதிரான வன்முறைகள் - நாட்டின் ஒருமைப்பாடு.

Text Book:

1. மதிப்புக் கல்வி - Y.K.55, கூட்டுறவு பண்டகசாலை, அரசு கலைக்கல்லூரி(தன்னாட்சி), ஈரூர் - 5.

CHAIRMAN – BOS

COE

Sl. No.:

Subject Code:

U15L2T2

அரசு கலைக் கல்லூரி (தன்னாட்சி) - ஈநூர் - 5
கலையியல் / அறிவியல் / வணிகவியல் / பட்ட வகுப்பு
 (2015 - 2016 ஆம் கல்வியாண்டு முதல் பயிலும் மாணவர்களுக்குரியது)

பகுதி - 1 பொதுத்தமிழ் -2 - இரண்டாம் பருவம்

(பக்தி இலக்கியங்கள், சிற்றிலக்கியங்கள், உரைநடை, இலக்கணம், இலக்கிய வரலாறு)

அலகு 1 பக்தி இலக்கியங்கள்

தேவாரம்

- திருநாவுக்கரசர்
(திருவையாறு- 4ஆம் திருமுறை)

நாலாயிர திவ்விய பிரபந்தம்

- மதுரகவி ஆழ்வார்(கண்ணி நுண்
சிறுத்தாம்பு)

தெய்வமணிமாலை

- இராமலிங்க வள்ளலார்

பராபரக்கண்ணி

- குணங்குடி மஸ்தான் சாகிபு

யாக்கை நிலையாமை

- திருமந்திரம்

அலகு 2 சிற்றிலக்கியங்கள்

தமிழ்விடுதூது

- முதல் 16 கண்ணிகள்

திருக்குற்றாலக் குறவஞ்சி

- குறத்தி மலைவளம் கூறல்

நந்திக்கலம்பகம்

- பாடல் எண்கள்: 34,35,36,37,38,39,44,45,46,49

அபிராமி அந்தாதி

- 11-20 பாடல்கள்

கயிலாசநாதர் சதகம்

- அரிதெனல், இறந்தும் இருக்கின்றவர்,
இருந்தும் இறந்தவர், கோபக்கொடுமை, கல்விச்
சிறப்பு**அலகு 3 உரைநடை**

இனியவை நாற்பது

- முனைவர் இரா.மோகன்

அலகு 4 இலக்கணம்

வாக்கிய வகைகள்

- நல்ல தமிழ் எழுத வேண்டுமா?
அ.கி.பரந்தாமனார்**அலகு 5 இலக்கிய வரலாறு**

பக்தி இலக்கியங்கள், சிற்றிலக்கியங்கள், உரைநடை

பரிந்துரை நூல்

முனைவர் கா.வாசுதேவன்

-பன்முக நோக்கில் தமிழ் இலக்கிய வரலாறு
தேவன் பதிப்பகம்,16/43, திருநகர்,
திருவானைக்கோவில்,திருச்சி

ஐந்து அலகுகளிலும் சம அளவில் வினாக்கள் அமைதல் வேண்டும்.

வினாத்தாள் அமைப்பு முறை

பகுதி அ (ஒரு மதிப்பெண் வினா - 20)

- | | |
|--|-------|
| அ) பொருத்தமான விடையைத் தேர்ந்தெடுத்தல் | 5*1=5 |
| ஆ) கோடிட்ட இடங்களை நிரப்புதல் | 5*1=5 |
| இ) பொருத்துதல் | 5*1=5 |
| ஈ) ஒரே சொற்களில் விடையளித்தல் | 5*1=5 |

பகுதி ஆ (ஐந்து மதிப்பெண் வினா)

இது அல்லது அது என்ற வகையில் அமைதல் வேண்டும் 5*5=25

பகுதி இ (பத்து மதிப்பெண் வினா)

ஐந்தில் எவையேனும் மூன்றனுக்கு மட்டும் கட்டுரை வடிவில் விடை எழுத வேண்டும்.

3*10=30

மொத்த மதிப்பெண் -75

Sl. No.:

Subject Code:

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR- 05

ALL UG COURSES - II SEMESTER - PART – II - ENGLISH

(For the candidates admitted from the year 2015-16 onwards)

ENGLISH – II

Unit I

The Luncheon - Somerset Maugham
A Cup of Tea - Katherine Mansfield

Unit II

A Work of Art - Anton Checkov
The Necklace - Guy de Maupassant

Unit III

My Lord the Baby - Rabindranath Tagore
An Astrologer's Day - R.K Narayan

Unit IV

The Sentence

1. Types of Sentences
2. Simple, Compound and Complex Sentences
3. Sentence Patterns

Unit V

Transformation of Sentences

1. Affirmative into Negative and vice versa
2. Interrogative into Assertive and vice versa
3. Exclamatory into assertive and vice versa
4. Simple, Compound and Complex sentences
5. Voice: Active and Passive
6. Degrees of Comparison

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Sl. No.:

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U15CS2C3

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – II SEMESTER – CORE COURSE - III

(For the candidates admitted from the year 2015-16 onwards)

DATA STRUCTURES AND C++

UNIT – I

Arrays: axiomatization-ordered lists-representation of arrays- stacks and queues: fundamentals – evaluation of expressions- linked lists: singly linked list- linked stack and queues.

UNIT – II

Trees: basic terminology-binary trees-binary tree representation - binary tree traversal – Graphs :terminology and representation – traversals connected component and spanning trees – Internal sorting : searching- insertion sort -quick sort-heap sort.

UNIT – III

Principles of Object Oriented Programming – Tokens expressions and control structures – functions in C++

UNIT – IV

Classes and objects – constructors and destructors – parameterized constructors – multiple constructors in a class – constructors with default arguments – destructors – operator overloading and type conversions :Defining operating overloading-overloading unary operators – overloading binary operators.

UNIT – V

Inheritance: Extending classes: introduction – defining derived classes – single inheritance – making a private member inheritable – multilevel inheritance – multiple inheritance – hierarchical inheritance – hybrid inheritance – pointers, virtual function and polymorphism: pointers to objects – this pointer – managing console I/O operations: C++ streams – C++ streams classes – unformatted I/O operations.

TEXT BOOKS

- 1) Fundamentals of Data Structures by Ellis Horowitz – Galgotia Booksourcree
- 2) Object oriented programming with C++ by E.Balagurusamy – 2nd Edition TMH

REFERENCE BOOKS:

1. “Let us C++” – Yashwant Kanetkar – BPB Publications, 1999.
2. “Programming with C++” – John R.Hubbard – Schaum’s outline series, 1996.
3. Data structures – Lipschutz, TMH, Schaums outline series

Sl. No.:

Subject Code:

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – II SEMESTER – CORE COURSE - IV

(For the candidates admitted from the year 2015-16 onwards)

C++ PROGRAMMING LAB

1. Write a C++ program to create a Student Class
2. Write a C++ program to implement constructors and destructors
3. Write a C++ program to implement Matrix Manipulation
4. Write a C++ program using friend and static function
5. Write a C++ program using operator overloading
6. Write a C++ program using function overloading
7. Write a C++ program to implement multiple inheritance
8. Write a C++ program to implement multilevel inheritance
9. Write a C++ program to implement Hierarchical inheritance
10. Write a C++ program to implement Hybrid inheritance
11. Write a C++ program to using string functions.
12. Write a C++ program to implement stack using array
13. Write a C++ program to implement queue using linked list
14. Write a C++ program to sort N numbers using quick sort
15. Write a C++ program for insertion sort

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U15MM2A2

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc., –II SEMESTER – FIRST ALLIED COURSE - II (FOR COMPUTER SCIENCE MAJOR)

(For the candidates admitted from 2015-2016 onwards)

APPLIED MATHEMATICS - II (NUMERICAL METHODS)

- UNIT 1:** Solution of Algebraic and Transcendental Equations: Bisection method – Regula falsi method – Newton Raphson Method – Iteration Method – Simple Problems.
(Ch. 3: § 3.1 - 3.4)
- UNIT 2:** Solution of Simultaneous Linear Algebraic Equations: Gauss-Elimination Method – Gauss-Jordan Method – Gauss-Jacobi method – Gauss-Seidal Method.
(Ch. 4: § 4.1 - 4.4, 4.8, 4.9)
- UNIT 3:** Interpolations: Linear interpolation – Gregory – Newton forward and backward interpolation formula – Lagrange interpolation formula (for unequal intervals).
(Ch. 6: § 6.1 - 6.3 & Ch 8: § 8.1 - 8.7)
- UNIT 4:** Numerical Differentiation and Integration: Newton's formula to compute derivative – Numerical Integration – A General Quadrature formula – Trapezoidal Rule - Simpson's 1/3rd Rule – Simpson's 3/8th rule.
(Ch. 9: § 9.1 to 9.3, 9.7 - 9.9, 9.13, 9.14)
- UNIT 5:** Numerical Solutions of ODE – Taylor's series Method – Euler Method – Second order and Fourth order Runge-Kutta Methods – Predictor and Corrector methods – Milne's predictor – Corrector formula.
(Ch.11: § 11.6, 11.7, 11.9, 11.12 - 11.17)

TEXT BOOK:

1. P.K. Kandasamy, K. Thilagavathi & K. Gunavathi, "**Numerical Methods**", S. Chand & Co Ltd . IInd Revised Edition 2003.

REFERENCE BOOKS:

1. S. S. Sastry, "**Introductory Methods of Numerical Analysis**", Prentice Hall of India Pvt. Ltd., New Delhi, Third Edition, 2002.
2. M. K. Venkataraman, "**Numerical Methods in Science and Engineering**", National Publishing Company, 2007.

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Subject Code:

U15MM2A3

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

**B.Sc., –II SEMESTER – FIRST ALLIED COURSE - III
(FOR COMPUTER SCIENCE MAJOR)**

(For the candidates admitted from 2015-2016 onwards)

**APPLIED MATHEMATICS - II
(OPERATIONS RESEARCH)**

- UNIT 1:** Operations Research: Introduction – Role of computers in O.R – Linear Programming formulation - Graphical solution of two variables – Canonical and standard forms of Linear Programming Problems.
(Ch. 1: § 1.1, 1.2, 1.6, 1.8, Ch 2: §2.1-2.6)
- UNIT 2:** Simplex Methods – Algorithms – Simplex Method for \leq , \geq Constrains – Big M Method – Two Phase Method.
(Ch. 3: § 3.1 - 3.5)
- UNIT 3:** Transportation Problems: Algorithms – Degeneracy in Transportation Problem – Unbalanced Transportation Problem – Assignment Problem– Algorithms – Unbalanced Assignment Problem.
(Ch. 6: § 6.1, 6.2, 6.4, 6.5, 6.7, 6.9, Ch7: §7.1-7.3)
- UNIT 4:** Sequencing Problems: Problem with n jobs and two machines – Problems with n jobs and three machines.
(Ch. 10: § 10.1-10.4)
- UNIT 5:** Network – Fulkerson’s rule – CPM-PERT Calculations.
(Ch. 21: § 21.1 - 21.7)

TEXT BOOK:

1. Kantiswarup, P.K. Gupta & Manmohan, “**Operations Research**”, Sultan & Chand Publishers, New Delhi, 2014.

REFERENCE BOOK:

1. Hira and Gupta, “**Operations Research**”, S.Chand & Co. Ltd., 1999.

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U15ES2

GOVERNMENT ARTS COLLEGE (AUTONOMOUS), KARUR-05
ALL UG COURSES - II SEMESTER – PART – IV
(For the candidates admitted from the year 2015-16 onwards)

ENVIRONMENTAL STUDIES

Unit 1

Environment – Introduction – Nature – Scope – Content – Need for study: Natural resources – Forest and Energy resources – use and over exploitation – deforestation – Energy resources – reviewable and non reviewable energy resources.

Unit 2

Eco System: Concept – Structure and function – Procedures – consumers and decomposers – Food Chains – Food Webs and Ecological Pyramids – Biodiversity and its conservation : Introduction – definition – genetic – species and eco system diversity – conservation of biodiversity.

Unit 3

Environmental Pollution – Definition – causes – effects and control Measures – Types – Air – Water – Soil – Thermal and Nuclear hazards – solid waste and Management – Disaster Management – Role of an individuals in controlling pollution – Earth Quake – Earth Quake and Cyclone – Flood.

Unit 4

Social issues and the environment: urbanization – urban problems related to energy – Water Shed Management – Environmental ethics: issues and possible solutions – Wasteland reclamation – Climate Change – Global Warming - Acid rain – Ozone layer depletion – Public awareness.

Unit 5

Human Population and the environment: Population growth, Variation among nations – Population explosion – Family Welfare Programme – Human rights – HIV/AIDS – Women and Child Welfare – Role of information technology in environment and human health.

Text Book:

1. சுற்றுச்சூழல் கல்வி - முனைவர். ஆ. சசிலா அப்பாத்துரை -
நியூ செஞ்சுரி புக் ஹவுஸ் (பி) லிட், சென்னை.

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Sl. No.:

Subject Code:

U15L3T3

அரசு கலைக் கல்லூரி (தன்னாட்சி) - ஈநர் - 5
கலையியல் / அறிவியல் / வணிகவியல் / பட்ட வகுப்பு
(2015 - 2016 ஆம் கல்வியாண்டு முதல் பயிலும் மாணவர்களுக்குரியது)
பகுதி - 1 பொதுத்தமிழ் - 3 - மூன்றாம் பருவம்
(காப்பியங்கள், நாடகம், இலக்கணம், இலக்கிய வரலாறு)

அலகு 1 காப்பியங்கள்

சிலப்பதிகாரம் (புறஞ்சேரியிறுத்த காதை)
மணிமேகலை (சிறைக்கோட்டம் அறக்கோட்டம் ஆக்கிய காதை)
கம்பராமாயணம் (இரணிய வதைப்படலம்)

அலகு 2 காப்பியங்கள்

பெரியபுராணம் (இளையான்குடி மாற நாயனார் புராணம்)
தேம்பாவணி (நாட்டுப்படலம்)
சீறாப்புராணம் (பாந்தள் வசனித்த படலம்)

அலகு 3 நாடகம்

சேர தாண்டவம் - பாரதிதாசன்

அலகு 4 இலக்கணம்

நிறுத்தக் குறிகள்

அலகு 5 இலக்கிய வரலாறு

காப்பியங்கள், நாடகம்

பரிந்துரை நூல்

முனைவர் கா.வாசுதேவன் - பன்முக நோக்கில் தமிழ் இலக்கிய வரலாறு
தேவன் பதிப்பகம், 16/43, திருநகர்,
திருவானைக்கோவில், திருச்சி

ஐந்து அலகுகளிலும் சம அளவில் வினாக்கள் அமைதல் வேண்டும்.

வினாத்தாள் அமைப்பு முறை

பகுதி அ (ஒரு மதிப்பெண் வினா - 20)

அ) பொருத்தமான விடையைத் தேர்ந்தெடுத்தல் 5*1=5
ஆ) கோடிட்ட இடங்களை நிரப்புதல் 5*1=5
இ) பொருத்துதல் 5*1=5
ஈ) ஒரிரு சொற்களில் விடையளித்தல் 5*1=5

பகுதி ஆ (ஐந்து மதிப்பெண் வினா)

இது அல்லது அது என்ற வகையில் அமைதல் வேண்டும் 5*5=25

பகுதி இ (பத்து மதிப்பெண் வினா)

ஐந்தில் எவையேனும் மூன்றனுக்கு மட்டும் கட்டுரை வடிவில் விடை எழுத வேண்டும். 3*10=30

மொத்த மதிப்பெண் -75

Sl. No.:

Subject Code:

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR- 05

ALL UG COURSES - III SEMESTER - PART – II - ENGLISH

(For the candidates admitted from the year 2015-16 onwards)

ENGLISH – III

Unit I

A Prayer for My Daughter - W.B Yeats
A Poison Tree - William Blake

Unit II

Stopping by Woods on a Snowy Evening - Robert Frost
Because I Could Not Stop For Death - Emily Dickinson

Unit III

My Grand Mother's House - Kamala Das
Small Scale Reflections on a Great House - A.K Ramanujan

Unit IV

1. Error Correction
2. One word Substitution
3. Idioms and Phrases

Unit V

1. Comprehension
2. Note Making and Summarizing
3. Précis Writing

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U15CS3C5

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – III SEMESTER – CORE COURSE -V

(For the candidates admitted from the year 2015-16 onwards)

PROGRAMMING IN JAVA

UNIT – I

Fundamentals of Object Oriented Programming – Java Evolution – Java history – Java features – Java environment – Overview of Java Language – Constants, Variables and Data Types – Operators and Expressions.

UNIT – II

Decision making and Branching – Decision making and Looping – Classes, Objects and Methods – Defining a class – Adding variables and method – Creating objects – Accessing class members – Constructors – Method overloading – Nesting of methods – Inheritance – Method overriding – Visibility control.

UNIT – III

Arrays, Strings and Vectors – Interface – Defining interface – Extending interface – Implementing interface – Accessing interface variable – Packages – Java API packages – Using system package – Naming conventions – Creating packages – Accessing a package – Using a package – Adding a class to a package – Hiding classes.

UNIT – IV

Multithreaded programming – Creating threads – Extending the thread class – Stopping and blocking a thread – Life cycle of a thread – Thread methods – Thread priorities – Synchronization – Implementing the Runnable interface – Managing errors and Exceptions – Types of exception – Try and catch – Multiple catch – Finally.

UNIT – V

Introduction – Applet code – Applet life cycle – Applet Tag – Web page designing – Running the applet – More about applet tag – Passing parameters to Applets. Managing I/O files – Streams – Stream classes – Byte streams – Character streams – Using stream – I/O classes and file class – Creating file – Reading /Writing characters and bytes – Handling primitive data types.

TEXT BOOK:

1. Programming with Java “ E.Balagurusamy “ TMH

REFERENCE BOOK:

1. Java 2 Complete Reference, Herbert Schildt, Tata McGraw Hill, 4th Edition 2001.

Sl. No.:

Subject Code:

U15CS3C6P

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – III SEMESTER – CORE COURSE -VI

(For the candidates admitted from the year 2015-16 onwards)

JAVA Programming Lab

1. Program to implement looping statements.
2. Program to implement simple classes to understand objects, member functions.
3. Program to implement constructors.
4. Program to implement array and Vectors.
5. Program to implement String Handling.
6. Program to implement Inheritance.
7. Program to implement method overloading.
8. Program to implement method overriding.
9. Program to develop User defined Packages in Java.
10. Program to implement Interfaces.
11. Program to implement Multi Threading.
12. Program to implement Exception Handling Mechanism in Java.
13. Program to implement Applet class.
14. Program to implement copying characters from one file to another.
15. Program for reading and writing primitive data.

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Subject Code:

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc., III SEMESTER – SECOND ALLIED COURSE – I (FOR COMPUTER SCIENCE MAJOR)

(For the candidates admitted from the year 2015-16 onwards)

APPLIED PHYSICS-I

UNIT –I: ELECTROSTATICS

Definitions: Electric field, electric potential, lines of force - Coulomb's law - Gauss theorem - Electric intensity due to a charged sphere - Electric intensity due to a uniformly charged cylinder - Mechanical force on surface of a charged conductor - Principle of capacitors – Capacitors in series and parallel – Capacitance of a cylindrical capacitor - Energy stored in a charged capacitor - Loss of energy due to sharing of charges.

UNIT – II: MAGNETO STATICS

Magnetic field - Magnetic induction - Intensity of magnetization - Permeability - Susceptibility - Magnetic shell - Potential at any point due to a magnetic shell - Properties of Para, dia, and ferromagnetic materials – Hysteresis - B-H curve by Magnetometer method - Energy loss due to Hysteresis.

UNIT – III: CURRENT ELECTRICITY

Laplace's law - Magnetic intensity at a point due to a straight conductor carrying current - Magnetic intensity at a point along the axis of a circular coil carrying current - Kirchoff's law - Wheatstone's network - Carey foster's bridge - Determination of Specific Resistance - Potentiometer - Calibration of low range voltmeter - Ammeter calibration - Moving coil ballistic galvanometer.

UNIT – IV: ELECTROMAGNETIC INDUCTION

Laws of electromagnetic induction - Faraday's law - Fleming's right hand rule - Self Induction of a long solenoid - Determination of Self Inductance by Anderson's method - Mutual inductance - Determination of mutual inductance between two coaxial solenoids - coefficient of coupling - Eddy currents and its applications.

UNIT – V: A.C CIRCUITS

AC circuit: containing Resistor only- Inductor only - Capacitor only - LR series - AC circuit containing LCR in series - Resonant frequency - The Q-factor - Principle of choke coil - Skin effect - Power factor in ac circuit with L and R - Wattles current – Discharge of a capacitor through LR.

BOOKS FOR STUDY:

1. Brij Lal and N .Subramaniam, *Electricity and Magnetism* - Ratan Prakashan Mandir, New Delhi 1995.
2. R. Murugesan, *Electricity and magnetism* - S. Chand & company, Fourth Revised Edition 2002.
3. A.sundaravelusami, *Applied physics*.

BOOKS FOR REFERENCES:

1. Narayanamurthy and Nagarathinam, *Electricity and Magnetism*.
2. D L Seghal and Chopra, *Electricity and magnetism*.

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Sl. No.:

Subject Code:

U15MM3N1

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

**B.Sc., - III SEMESTER – NON CORE ELECTIVE – I
(FOR COMPUTER SCIENCE MAJOR)**

(For the candidates admitted from 2015 – 2016 Onwards)

QUANTITATIVE APTITUDE - I

UNIT 1:	Numbers – HCF – LCM – Problems on numbers.	(Ch. 1, 2 & 7)
UNIT 2:	Decimal Fractions and Simplification.	(Ch. 3 & 4)
UNIT 3:	Surds and Indices – Percentage – Profit and Loss.	(Ch. 9, 10 & 11)
UNIT 4:	Ratio and Proportion – Partnership – Allegation or Mixture.	(Ch. 12, 13 & 20)
UNIT 5:	Average – Problems on Age.	(Ch. 6 & 8)

TEXT BOOK:

1. R. S. Aggarwal, “**Quantitative Aptitude**”, S. Chand & Company Ltd., Ram Nagar, New Delhi, 2007.

REFERENCE BOOK:

1. Abhijit Guha, “**Quantitative Aptitude for Competitive Examinations**”, Tata McGraw Hill Publishing Company Ltd., New Delhi, 2008.

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U15L4T4

அரசு கலைக் கல்லூரி (தன்னாட்சி) - ஈநர் - 5
கலையியல் / அறிவியல் / வணிகவியல் / பட்ட வகுப்பு
(2015 - 2016 ஆம் கல்வியாண்டு முதல் பயிலும் மாணவர்களுக்குரியது)
பகுதி - 1 பொதுத்தமிழ் - 4 - நான்காம் பருவம்
(சங்க இலக்கியம், புதினம், இலக்கணம், இலக்கிய வரலாறு)

அலகு 1

நற்றிணை - 5,21,27,80,92

குறுந்தொகை -10 பாடல்கள் (2,16,20,40,62,67,202,244,263,286)

ஐங்குறுநூறு (அன்னாய் வாழிப்பத்து)

அகநானூறு - 2 பாடல்கள் (10,23)

புறநானூறு - 5 பாடல்கள் (74,192,204,206,312)

கலித்தொகை- 2 பாடல்கள் (11,88)

அலகு 2

சிறுபாணாற்றுப்படை (முழுவதும்)

அலகு 3

பூர்வீக பூமி - சூரியகாந்தன்

அலகு 4 கட்டுரை

பொதுக்கட்டுரை, விண்ணப்பம், மடல், அலுவலகக் கடிதங்கள் எழுதப் பழகுதல்

அலகு 5

இலக்கிய வரலாறு - சங்க இலக்கியம், புதினம்

பரிந்துரை நூல்

முனைவர் கா.வாசுதேவன்

-பன்முக நோக்கில் தமிழ் இலக்கிய வரலாறு

தேவன் பதிப்பகம்,16/43, திருநகர்,

திருவானைக்கோவில்,திருச்சி

ஐந்து அலகுகளிலும் சம அளவில் வினாக்கள் அமைதல் வேண்டும்.

வினாத்தாள் அமைப்பு முறை

பகுதி அ (ஒரு மதிப்பெண் வினா - 20)

அ) பொருத்தமான விடையைத் தேர்ந்தெடுத்தல் 5*1=5

ஆ) கோடிட்ட இடங்களை நிரப்புதல் 5*1=5

இ) பொருத்துதல் 5*1=5

ஈ) ஒரே சொற்களில் விடையளித்தல் 5*1=5

பகுதி ஆ (ஐந்து மதிப்பெண் வினா)

இது அல்லது அது என்ற வகையில் அமைதல் வேண்டும் 5*5=25

பகுதி இ (பத்து மதிப்பெண் வினா)

ஐந்தில் எவையேனும் மூன்றனுக்கு மட்டும் கட்டுரை வடிவில் விடை தருக. 3*10=30

மொத்த மதிப்பெண் -75

Sl. No.:

Subject Code:

U15L4E4

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR- 05
ALL UG COURSES - IV SEMESTER - PART – II - ENGLISH
(For the candidates admitted from the year 2015-16 onwards)

ENGLISH – IV

Unit I

- Grand Mother's Gold - Ella Adkins
Medieval Magic - Geoffrey Chaucer

Unit II

- The little Man - John Galsworthy
The Pot of Broth - W.B Yeats

Unit III

- The Proposal - Anton Checkov
The Bishop's Candle Sticks - Norman Mc Kinnell

Unit IV

1. Letter Writing
2. Developing Hints
3. Complete the Dialogue

Unit V

1. Essay
2. Group Discussion
3. Interview Techniques

CHAIRMAN – BOS

COE

Sl. No.:

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U15CS4C7

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – IV SEMESTER – CORE COURSE - VII

(For the candidates admitted from the year 2015-16 onwards)

OPERATING SYSTEM

UNIT- 1

Operating system objectives and function – operating system and user/computer interface, operating system as a resources manager: evaluation of operating system – serial processing sample batch system, time sharing system. Process decryption, process control – process and threads. Concurrency – principles of concurrency. Deadlock – deadlock prevention, dead lock detection, Deadlock Avoidance – An Integrated deadlock strategy.

UNIT- II

Memory management requirements- fixed partitioning placement algorithm, reallocation in paging system –sample segmentation. Virtual memory-paging-address translation in a paging system. Segmentation - organization, address translation in a segmentation system-combined paging and segmentation-Virtual memory-operating system-operating system software-fetch policy, placement policy and replacement policy, page buffering resident set management.

UNIT -III

Scheduling-Types of scheduling, scheduling algorithms, scheduling criteria, FIFO, Round Robin, Shortest Path next, shortest remaining time, highest response ration and feedback scheduling performance comparison-fair-share scheduling. File management-files, file management systems, file system architecture, function of file management file directories-file sharing-secondary storage management-file allocation.

UNIT- IV

Linux Introduction and Installation: Linux-Advantages-Red Hat Linux-New Features-Installation procedures and Methods. Using Desktop-GNOME-KDE-Linux Commands Accessing and Running Applications Installing Red Hat Linux Applications, Running Window Application, Running Window, DOS and Macintosh Applications –Tools for using Internet and Web.

UNIT- V

Administration: Understanding System Administration: Root login-super user-GUI tools, commands and Log files-Configuring Hardware-File System and Disk Management- Monitoring performances. Setting Up and Supporting users: Creating user accounts – Setting user defaults –Creating Desktops - Modifying and Deleting Accounts. Security Issues: Hacker versus Cracker-Password Protection- Protection from break-in-Filtering Network Access-Firewalls-Detecting Instructions – Encryption techniques

TEXT BOOKS:

1. William Stallings, “Operating System”, Second edition, Maxwell McMillan, International Editions 1997.
2. Christopher Negus “Red Hat Linux 9 Bible”, WILEY- Dreamtech India Pvt.Ltd, New Delhi, First Edition, 2003

REFERENCE BOOKS:

1. Dental H.M. “An Introduction to Operating Systems”,Addison Wesley Publishing Co.1998.
2. Thomas Schenk, “Red Hat Linux System Administration”, Techmedia, New Delhi,2003.

CHAIRMAN-BOS

COE

Sl. No.:

Subject Code:

U15CS4C8P

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – IV SEMESTER – CORE COURSE - VIII

(For the candidates admitted from the year 2015-16 onwards)

SHELL PROGRAMMING LAB

Write Shell Programs for the following using the Linux Operating System

1. To demonstrate basic Linux commands
2. Shell Script Program to Print Student Mark Sheet
3. Shell Script Program to find Greatest of 3 numbers
4. Shell Script Program to whether year is Leap year or not
5. Shell Script Program to find whether the given number is Prime or not
6. Shell Script Program to print Armstrong no's from 1-1000
7. Shell Script Program to find Factorial of a number
8. Shell Script Program to print the Fibonacci series
9. To check whether the number is palindrome or not
10. Using case.. esac structure
 - a. Find the number of users logged into the system
 - b. Print the calendar for current year
 - c. Print the date
11. Shell Script Program to check whether given file is a directory or not
12. Shell Script Program to Count number of files in a Directory
13. Shell Script Program to implement read, write, execute permissions
14. Shell Script Program to copy contents of one file to another
15. Demonstrate filter commands

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Subject Code:

U15PH4A2P

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR -05

B.Sc., – IV SEMESTER – SECOND ALLIED COURSE – II

(FOR COMPUTER SCIENCE MAJOR)

(For the candidates admitted from the year 2015-16 onwards)

APPLIED PHYSICS – II – LAB

(Any fifteen experiments)

1. Series and Parallel resonance circuit.
2. FET – Characteristics.
3. Transistor Characteristics – CE Configuration.
4. Transistor Characteristics – CB Configuration.
5. Bridge Rectifier and Zener controlled regulated power supply.
6. Field along the axis of a coil – Determination of B_H value.
7. Field along the axis of a coil – M.
8. Potentiometer – Measurement of specific resistance.
9. Potentiometer – Ammeter Calibration.
10. Carey Foster's Bridge – Specific resistance.
11. Calibration of a thermistor and determination of its Energy gap.
12. R-C Coupled amplifier.
13. Hartley Oscillator using transistor.
14. Astable multivibrator using IC.
15. Adder and subtractor using op – amp.
16. Integrator and differentiator using op – amp.
17. Half adder and Half subtractor using gates.
18. NAND and NOR as universal building blocks.
19. Flip Flop using IC gates.
20. Verification of De Morgan's theorem.

CHAIRMAN-BOS

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Subject Code:

GOVERNMENT ARTS COLLEGE (AUTONOUMS) KARUR-05
B.Sc., – IV SEMESTER – SECOND ALLIED COURSE – III
(For the candidates admitted from the year 2015-16 onwards)
(FOR COMPUTER SCIENCE MAJOR)

APPLIED PHYSICS-III

UNIT-I: SEMICONDUCTOR PHYSICS

Theory of energy bands in crystals - Distinction between conductors, insulators and semiconductors-Intrinsic and Extrinsic Semiconductor - n-type and p-type semiconductor - Formation of pn Junction - Junction Diode -V-I characteristics -Rectifiers -Half wave &bridge rectifier - Zener diode -V-I characteristics – Zener diode voltage regulator -Hall Effect - Determination of Hall coefficient.

UNIT-II : TRANSISTORS

Transistor action: NPN & PNP-Transistor characteristics CE and CB configuration - Hybrid parameters-Amplifier-Single Stage RC Coupled Amplifier - Principle of feedback - Negative feedback - Gain of negative voltage amplifier - Oscillator - Hartley oscillator.

UNIT-III: SPECIAL DEVICES

FET - Construction – n-channel and p channel - Characteristics - FET parameters – FET amplifier (CS configuration) - UJT characteristics - LED -Materials for LED - LED configuration and performance - Photo conduction - Photo Diode - Photo Transistor - Digital clock - Seven segment display - LCD.

UNIT-IV: OPERATIONAL AMPLIFIER

Definition of op-amp - Characteristics, parameters - Inverting and Non-inverting operational amplifiers - Adder - Subtractor - Sign changer - Scale changer Differentiator and Integrator - D/A binary weighted method - R-2R Ladder method - A/D successive approximation - Counter type method - op-amp as a comparator.

UNIT-V: LASER

Laser Principle - Theory of stimulated emission and Population Inversion - Optical Pumping -Derivation of Einstein's A and B coefficients - Properties of Laser - Ruby laser -He-Ne and semiconductor lasers - Applications of laser in materials processing-Lasers in welding, drilling, heat treatment.

BOOK FOR STUDY:

1. P. K .Palanisamy, *Semiconductor physics And Opto -Electronics* Scitech publications (India) Pvt .Ltd.
2. V.K. Metha &Rohit Metha, *Principle of Electronics* –S. Chand & Co.
3. Dr. M. Arumugam, *Applied Physics* –Anuradha Agencies.
4. B.B. Laud, *Laser and optics* –New Age International Publications.
5. A.Sundaravelusami, *Applied physics*.

BOOKS FOR REFERENCES

1. Jacob, *Micro Electronics*- McGraw Hill.
2. Theraja, *The fundamentals of solid state physics* - Sultan chand & Co.
3. GK Mithal and Vanvasi, *Pulse and digital electronics* - Khannan Publications-Delhi.
4. Ramanan, *Functional Electronics* - TMH-1994.
5. Milmann and Halkins, *Electronic Devices and circuits* - TMH 1991.

Sl. No.:

Subject Code:

U15CS4S1

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – IV SEMESTER - SKILL BASED ELECTIVE - I

(For the candidates admitted from the year 2015-16 onwards)

OFFICE AUTOMATION AND HTML

UNIT – I

MS Word – Starting Word – Parts of Word Window – Mouse and Keyboard Operations - Menus, Commands, Toolbars and their Icons – Creating Word Documents – Editing Word Documents – Inserting Objects - Formatting Documents - Working with Tables – Mail Merge.**MS Excel** - Introduction - Entering and Editing text, Numbers, Formulas and Date - Menus, Commands, Toolbars and their Icons – Inserting rows and columns- Building Worksheets – Creating and formatting charts – Application of Financial and Statistical functions.

UNIT – II

MS PowerPoint: Introduction – Menus, Toolbar and Navigating in PowerPoint.
MS Access: Introduction – Parts of an Access Window: Starting MS Access – Creating a New DataBase – Creating a Database through Table Wizard – Creating a New Table – Rename Columns – Saving the Database – Relationship – Creating Table through Design View – Relationship – Query – Form – Report – Exiting MS Access.

UNIT – III

Introduction To HTML: Designing a Home Page – HTML Documents – Anchor Tag – Hyper Links – Head and Body Section: Header Section – Title – Links – Colorful Web Page – Comment Lines – Designing the Body Section: Heading Printing – Aligning The Headings – Horizontal Rule – Paragraph – Tab Settings – Images and Pictures.

UNIT – IV

Ordered and Unordered Lists: Lists – Unordered Lists – Heading in a List – Ordered Lists – Nested Lists – Table Handling: Table – Table Creation in HTML – Width of the Table and Cells – Cells Spanning Multiple Rows/Columns – Coloring Cells – Column Specification.

UNIT – V

Frames: Frameset Definition – Frame Definition – Nested Framesets – Forms: Action Attribute – Method Attribute – Enctype Attribute – Drop Down List.

TEXT BOOKS:

1. MS Office 2000 – Sanjay Saxena, Vikas Publishing House
2. World Wide Web Designing, C.Xavier, Tata McGraw Hill, 2000.

Sl. No.:

Subject Code:

U15MM4N2

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

**B. Sc., – IV SEMESTER – NON CORE ELECTIVE – II
(FOR COMPUTER SCIENCE MAJOR)**

(For the candidates admitted from 2015 – 2016 onwards)

QUANTITATIVE APTITUDE - II

UNIT 1:	Chain Rule – Time – Work and Wages – Pipes and Cisterns	(Ch. 14, 15 & 16)
UNIT 2:	Simple Interest – Compound Interest – Logarithm.	(Ch. 21, 22 & 23)
UNIT 3:	Time and Distance – Trains – Boats and Streams	(Ch. 17, 18 & 19)
UNIT 4:	Area – Volume and Surface Area of Solid Figures – Clocks.	(Ch. 24, 25 & 28)
UNIT 5:	Data Interpretation – Tabulation – Bar Graphs – Pie Charts – Line Graph.	(Ch. 36, 37, 38 & 39)

TEXT BOOKS:

1. R. S. Aggarwal, “**Quantitative Aptitude**”, S. Chand & Company Ltd., Ram Nagar, New Delhi, 2007.

REFERENCE BOOKS:

1. Abhijit Guha, “**Quantitative Aptitude for Competitive Examinations**”, Tata McGraw Hill Publishing Company Ltd., New Delhi, 2008.

**CHAIRMAN
BOARD OF STUDIES**

COE

Sl. No.:

Subject Code:

U15CS5C9

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – V SEMESTER – CORE COURSE - IX

(For the candidates admitted from the year 2015-16 onwards)

DESIGN AND ANALYSIS OF ALGORITHMS

UNIT-I

Introduction: Algorithm definition and specification –Performance analysis – Elementary Data structures: Stacks and Queues –Trees- Dictionaries –Priority queues- Sets and Disjoint set union-Graphs-Basic Traversal and Search techniques.

UNIT-II:

Divide and Conquer: General method –Binary search-Finding the Maximum and Minimum –Merge sort –Quick sort-Selection –Strassen’s Matrix Multiplication-Convex Hull.

UNIT-III

The Greedy Method: The General Method-Knapsack problem-Tree Vertex Splitting- Job Sequencing with Deadlines-Minimum cost spanning trees-Optimal storage on tapes- Optimal merge patterns-Single source shortest path.

UNIT-IV

Dynamic programming: The general method-Multistage graphs-All pair’s shortest paths-Single source shortest paths-Optimal binary search trees-String editing-0/1 Knapsack-Reliability Design-The Traveling salesman problem-Flow shop scheduling.

Basic Traversal and Search Techniques: Techniques for Binary trees-Techniques for Graphs-Connected components and Spanning Trees-Bi-connected components and DFS.

UNIT-V

Backtracking: The general method-The 8- Queens Problem-Sum of subsets-Graph coloring-Hamiltonian Cycles-Knapsack problem.

TEXT BOOKS

1. Ellis Horowitz, Sartaj Sahni, S.Rajasekaran,” Fundamentals of Computer Algorithms”, Galgotia, 2003.

REFERENCE BOOKS

1. S. Lakshmivarahan, Sundarshan, K. Dhall,”Analysis and Design of Parallel Algorithms”.
2. Alfred V. Aho, John E. Hopcroft, Jeffrey D. Ullman,”Data Structures and Algorithms”.
3. Wiley, Goodrich “Data Structures & Algorithms in Java”, 3rd edition.

CHAIRMAN-BOS

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Sl. No.:

Subject Code:

U15CS5C10

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – V SEMESTER – CORE COURSE - X

(For the candidates admitted from the year 2015-16 onwards)

RELATIONAL DATABASE MANAGEMENT SYSTEM

UNIT- I

Introduction – File and Database System – Data Abstraction – Instances and Schemas – Database Languages – Database System Structure – Database Administrator.

UNIT- II

Data Models – E-R- Diagram – Key Constraints – Weak Entity set and Strong Entity set – Extended ER features – ER diagram with relationships – Aggregate Functions – Relational Algebra – Relational Calculus

UNIT- III

SQL – Data Definition – Queries in SQL – Nested Sub queries – Modification of the Database – Views – Joined Relations – Embedded SQL – Dynamic SQL – Security and Authorization – Triggers.

UNIT- IV

Normalization – Types of Normalization – File organization – Organization of Records in files – Operations on Files – Heap Files – Sorted Files – Hashing Techniques – Dynamic Hashing – Indexing – B+ Tree Index Files – B tree Index Files.

UNIT -V

Transaction – Transaction Processing – Concurrency control – Object Oriented Database – Object Oriented Data Model – Inheritance – XML – Distributed Databases – Transparency – Data Mining – Data Warehousing.

TEXT BOOK:

1. Abraham Silberschatz, Henry F.Korth and Sudarshan, “Database System Concepts”, Fourth Edition, McGraw-Hill, 2002.

REFERENCE BOOKS:

1. Ramez Elmasri and Shamkant B.Navathe, “Fundamental Database System”, Third Edition, Pearson Education, 2003.
2. Raghuram Ramakrishnan, “Database Management System”, Tata McGraw-Hill, 2003.
3. Hector Garcia, Molina, Jeffrey D.Ullman and Jennifer Widom, “ Database System Implementation”, Pearson Education, 2000.
4. Alexis Leon and Mathews Leon, “Database Management Systems”, Vikas Publishing House Pvt Ltd, New Delhi, 2002.

Sl. No.:

Subject Code:

U15CS5C11

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – V SEMESTER – CORE COURSE - XI

(For the candidates admitted from the year 2015-16 onwards)

ASP.NET Programming

UNIT - I

The .NET frame work: The .NET Programming framework, The Common Languages Runtime, The .NET Class Library, ASP.NET, Visual Studio .NET. **Learning the .NET Languages:** The .NET Languages, Data types, Declaring Variables, Scope and Accessibility, Variable Operations, Object-Based Manipulation, Conditional Structure, Loop Structure, Function and Subroutines.

UNIT - II

Types, Objects and Namespace: The Basics About Classes, Value Types And Reference, Understanding Name Spaces and Assemblies. **Setting up ASP.Net and IIS:** IIS manager, **ASP.NET Application:** -ASP.NET Application, Code Behind.

UNIT- III

Web Form Fundamentals: A Simple Page Applet, Improving The Currency Converter, Deeper Look At HTML Control Classes, The Page Class. **WEB Controls:** Stepping Up To Web Controls, Web Control Classes, Auto Post Back And Web Controls Events, A Simple Web Page Applet.

UNIT- IV

Using Visual Studio .NET: The Promise of Visual Studio .NET, Starting A Visual Studio .NET Project, The Web Form Designer, Writing Code, Visual Studio .NET Debugging. **Validation and Rich Controls:** The Calendar Control – The AdRotator – Validation – Validator Process – Validation Classes.

UNIT - V

ADO.NET Data Access: SQL Basics – Creating Connection – Using a command with DataReader – Updating Data – Accessing Disconnected Data – Updating Disconnected data, **Date Binding:** Introduction- Single – Value Data Binding- Repeated Value Data Binding – Data Binding with Databases.

TEXT BOOK:

1. The Complete Reference Asp.Net - Matthew Macdonald –TMH.

REFERENCE BOOKS:

1. ASP.Net 3.5 Unleashed – Waither – Pearson Education
2. ASP and ASP.Net Rescue , Francise, Thomson Damer Learning

Sl. No.:

Subject Code:

U15CS5C12P

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – V SEMESTER – CORE COURSE - XII

(For the candidates admitted from the year 2015-16 onwards)

ASP.NET PROGRAMMING LAB

1. Design a web page that makes uses of Ad Rotator Control.
2. Design a web page involving Multi View and Calendar control.
3. Develop a web page using Wizard Control.
4. Make use of Image Control involving two Hot Spots in a web page.
5. Create a Web Page to stimulate a Super Bazar (Without Database).
6. Design a simple web site that makes use of Master Pages.
7. Program to develop ASP.Net Program using Web Controls.
8. Program to develop ASP.Net Program using Server controls.
9. Create table and Insert, Delete, Update the records using ADO .Net.
10. View the records using Grid View, Details View and Form View controls.
11. Create a student mark list in PHP using IF statement.
12. Create a shopping cart in PHP.
13. Create a database using classes in PHP.
14. Create a database using interface in PHP.
15. Create a PHP program using file concept.

CHAIRMAN-BOS

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Sl. No.:

Subject Code:

U15CS5E1

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – V SEMESTER – ELECTIVE COURSE - I

(For the candidates admitted from the year 2015-16 onwards)

MICROPROCESSOR AND ITS APPLICATIONS

UNIT – I

Evolution of Microprocessors – Single-chip Microcomputer – Memory – Buses – Memory Address Capacity of CPU – Intel 8085 – Instruction Cycle.

UNIT – II

Instruction set of Intel 8085 – Instruction and Data Formats – Addressing Modes – Status Flags – Intel 8085 Instructions – Programming of Microprocessors – Stacks and Subroutines –Micro Programming.

UNIT – III

Assembly Language Programming – Simple Examples – Addition and Subtraction – Complements – Shift – Masking – Finding Max and Min Number in an array – Arranging a series of numbers – Multibyte Addition and Subtraction.

UNIT – IV

Peripheral devices and interfacing – Address Space Partitioning – Memory and I/O Interfacing – Data Transfer Schemes – Interrupts of Intel 8085 – Interfacing Devices and I/O Devices – I/O Ports – Programmable Peripheral Interface.

UNIT – V

Microprocessor Applications – Delay Subroutines – Interfacing of 7 segment LED Displays – Frequency measurement – Temperature Measurement and Control – Water Level Indicator – Microprocessor Based Traffic Control.

TEXT BOOK:

1. Fundamentals of Microprocessors and Microcomputers – Badri Ram – Fifth revised and enlarged edition – Dhanpat Rai publication – 2001.

REFERENCE BOOK:

1. Microprocessor Architecture, programming and application with the 8085/8080A – Romesh S.Ganokar – Penram International Publishers India 1997.

Sl. No.:

Subject Code:

U15CS5S2

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – V SEMESTER – SKILL BASED ELECTIVE- II

(For the candidates admitted from the year 2015-16 onwards)

VISUAL BASIC

UNIT – I

Customizing form and writing simple programs: Starting a new project – The properties of window – Common form properties – Scale properties – Color properties – Making a form responsive – Printing a visual representation of a form – types – creating stand – alone windows programs.

UNIT –II

Building the user interface : The toolbox – creating controls – The name (Control name) property – properties of command buttons – simple event procedures for command buttons –access keys – Image controls – Text boxes – labels – Navigating between controls – Message boxes – The Grid – The ASCII representation of forms.

UNIT – III:

Statements in Visual Basic – Variables – Setting properties with code – Data Types – Working with variables – More on strings – More on numbers – Constants – Input boxes – Displaying information on a form – The format function – Picture boxes – Rich Text Boxes – The Printer Object- Determination loops – indeterminate loops – Making decisions – Select case – Nested If-Then’s – The GoTo.

UNIT – IV

Built –in- function: String functions – Numeric Functions – Date and Time functions – financial functions- Function procedures – sub procedures – Advanced uses of procedures and functions organizing information vis code and control: List: One-dimensional arrays – Arrays with more than one dimension – Using Lists and Array with functions and procedures - Records (User-Defined Types) The With statement – Enums – Control arrays – List and Combo Boxes – The Flex grid control.

UNIT – V

Tool box – Frames – option buttons – check box – scroll bars – timers – common dialog control - The Mouse event procedures – Dragging and dropping operations – File commands – Sequential files- Random access files – Binary files – sharing files – File system controls – The file system objects .

TEXT BOOK:

1. Gary Cornell, “Visual Basic 6.0 from the Ground Up”, Tata McGraw Hill Edition, 1999.

REFERENCE BOOKS:

1. Peter Norton’s & Michael Groh, 1998 – “Guide to Visual Basic 6 Techmedia” “Visual Basic”- Paul Sheriff – PHI – 1999.
2. “Mastering visual Basic 6” – Evangelus Petroustos BPB Puhlntata

Sl. No.:

Subject Code:

U15CS5S3

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – V SEMESTER – SKILL BASED ELECTIVE III

(For the candidates admitted from the year 2015-16 onwards)

PHP

UNIT- I

PHP Introduction: PHP Basics – Introduction to PHP programming – Introduction to variables – Operators – Constants.

UNIT- II

Control structures: Conditional statements – Conditional loops – Nested control Statement. **Arrays:** Initializing Arrays – Working With Arrays. **Functions:** Introduction to Functions – Passing Arguments to Functions – Returning Values from Functions.

UNIT- III

Understanding Classes: Classes – Constructor – **Cookies** – Introduction – The Scope of a Cookie – Implementing Cookies in PHP. **Handling Files:** Working With Files.

UNIT- IV

Handling Data Storage: An Introduction to Database Concept – Database Management System – Database Normalization – Advantage and Disadvantage of using Web Databases – **MYSQL Database Programming:** Creating Databases – Creating Tables – Viewing the Table in a Database – Viewing Table Structure – Entering Data in to a Table – Viewing Data in Table – Modifying the Data in a Table – Deleting a Data from a Table .

UNIT- V

Using PHP with SQL Databases (MYSQL): Connecting to a Database – Creating a Database in Mysql – Selecting a Database – Creating a Table in a Database – Inserting Records in a Table- Retriving Information from a Table - Updating Information in a Table.

TEXT BOOK:

1. **“PHP PROFESSIONAL PROJECTS”** – Ashish Wilfred, meeta gupta and kartik bhatnagar with NIIT, PHI publication (Prentice – Hall India)

REFERENCE BOOK:

1. **”PHP, MY SQL and Apache”** – Julie c.meloni pearson education.

Sl. No.:

Subject Code:

U15SSD3

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

ALL UG COURSES – V SEMESTER – PART - IV

(For the candidates admitted from the year 2015 - 2016 onwards)

SOFT SKILLS DEVELOPMENT

Learning Objective

Today's world is all about relationship, communication and presenting oneself, one's ideas and the company in the most positive and impactful way. This course intends to enable students to achieve excellence in both personal and professional life.

- UNIT- I Know Thyself/Understanding Self**
Introduction to Soft Skills-Self discovery-Developing positive attitude-Improving perceptions-Forming values.
- UNIT- II Interpersonal Skills/Understanding Others**
Developing interpersonal relationship-Team building-group dynamics-Net working-Improved work relationship.
- UNIT-III Communication Skills / Communication with others**
Art of listening-Art of reading-Art of speaking-Art of writing-Art of writing e-mails-e mail etiquette.
- UNIT-IV Corporate Skills / Working with Others**
Developing body language-Practicing etiquette and mannerism-Time management-Stress management.
- UNIT-V Selling Self / Job Hunting**
Writing resume/cv-interview skills-Group discussion-Mock interview-Mock GD-Goal setting-Career planning.

Text Book:

Meena.K and V.Ayothi (2013) A Book on Development of Soft Skills (Soft Skills : A Road Map to Success), P.R.Publishers & Distributors, No, B-20 & 21, V.M.M. Complex, Chatiram Bus Stand, Thiruchirappalli - 620 002.

(Phone No:0431 - 2702824: Mobile No: 94433 70597, 98430 74472)

Alex. K (2012) Soft Skills - Know Yourself & Know the World, S.Chand & Company LTD, Ram Nagar, New Delhi - 110 055.

Mobile No: 94425 14814 (Dr.K. Alex)

Reference Books

- (i) Developing the leader within you John c Maxwell
- (ii) Good to Great by Jim Collins
- (iii) The seven habits of highly effective people Stephen Covey
- (iv) Emotional Intelligence Daniel Goleman
- (v) You can win Shive Khera
- (vi) Principle centred leadership Stephen Covey.

CHAIRMAN - BOS

COE

Sl. No.:

Subject Code:

U15CS6C13P

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – VI SEMESTER – CORE COURSE - XIII

(For the candidates admitted from the year 2015-16 onwards)

SOFTWARE DEVELOPMENT LAB

Developing the packages for

1. Design of Text editor like note pad.
2. Library management system
3. Student data processing
4. Employee payroll processing
5. Inventory control system.
6. Bank data processing

CHAIRMAN-BOS

COE

Sl. No.:

Subject Code:

U15CS6C14

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – VI SEMESTER – CORE COURSE - XIV

(For the candidates admitted from 2015-16 onwards)

COMPUTER GRAPHICS

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 – Line, polygon and text clipping.

UNIT-III

3D Concepts: 3D Display Methods – 3D Graphics Packages. **3D Object Representations:** Polygon Surfaces – Curved lines and Surfaces – Quadric Surfaces – Super quadrics – Blobby Objects – Spline representations. **3D Geometric and Modeling Transformations:** Translation – Rotation – Scaling – Other Transformations – Composite Transformations – 3D Transformation translation functions..

UNIT IV

3D viewing – viewing pip line – viewing co-ordinates – projections – projection transformation – parallel projection transformations – perspective projection transformations – clipping – Hardware implementations – 3D viewing functions

UNIT-V

Visible-Surface Detection Methods: Classification of Visible-Surface detection algorithms – Back-Face Detection – Depth-Buffer Method – A-Buffer method- Scan-Line Method – Depth-Sorting Method – BSP-Tree Method – Area-Subdivision Method – Octree Methods – Ray-casting Methods – Curved surfaces – Wire frame Methods – Visibility-Detection functions.

TEXT BOOK:

1. Computer Graphics – Donald Hearn, M. Pauline Baker, 2nd edition, PHI.

REFERENCE BOOK:

1. Computer Graphics-Zhigang Xiang, Roy P lastock, 2nd edition , Tata Mcgraw Hill

Sl. No.:

Subject Code:

U15CS6C15

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – VI SEMESTER – CORE COURSE - XV

(For the candidates admitted from the year 2015-16 onwards)

SOFTWARE ENGINEERING

UNIT- I

Software process : A generic process model – Process assessment and improvement – Prescriptive process models – Specialized process models – The unified process – Personal and Team process models – Process technology – Product and Process .

Agile development: What is agility – Agility and the cost of change – What is an agile process – Extreme programming.

UNIT- II

Modeling: Requirements engineering – Establishing the Groundwork – Eliciting requirements – Developing use cases –Building the Requirements model – Negotiating Requirements – Validating Requirements.

Requirements modeling: Requirements analysis – Scenario based modeling – UML models that supplement the use case – Data modeling concepts – Class-based modeling.

UNIT- III

Design concepts: Design within the context of software engineering – The design process – Design concepts – The design model.

UNIT -IV

Quality management: What is quality – Software quality – The software quality dilemma – Achieving software quality.

Software quality assurance: Background issues – Elements of software quality assurance – SQA Tasks, Goals and Metrics – Formal approaches to SQA – Statistical software quality assurance – Software Reliability – The ISO 9000 Quality standards – The SQA plan.

UNIT- V

Managing software projects :

Risk Management: Reactive versus Proactive risk strategies – Software risks – Risk identification – Risk projection – Risk refinement – Risk mitigation, monitoring and management – The RMMM Plan.

Maintenance and Reengineering: Software maintenance – Software supportability – Reengineering – Business process Reengineering – Software Reengineering – Reverse Engineering – Restructuring – Forward Engineering – The Economics of Reengineering.

TEXT BOOK:

1. “Software Engineering - A Practitioner’s Approach”, Roger s. Pressman, McGrawHill, 7th edn.

REFERENCE BOOK:

1. “Software Engineering Concepts”, Richard E. Fairley, McGrawHill,edn.

Sl. No.:

Subject Code:

U15CS6E2

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – VI SEMESTER – ELECTIVE COURSE -II

(For the candidates admitted from the year 2015-16 onwards)

MANAGEMENT INFORMATION SYSTEM

UNIT: I

Definition of Management Information System – MIS support for planning, organizing and controlling –Structure of MIS –Information for decision –making.

UNIT: II

Concept of system – Characteristics of System – System classification – categories of Information systems – Strategic information system and competitive advantage.

UNIT: III

Computers and Information processing – Classification of computers- Input devices – Output devices – Storage devices =Batch and online processing. Hardware – Software - .Database Management Systems.

UNIT: IV

System analysis and Design –SDLC – Role of System Analyst – Functional Information system – Personnel, production, material marketing.

UNIT: V

Decision support System –Definition. Group Decision Support System – Business Process Outsourcing –Definition and function.

TEXT BOOK:

1. Management Information System – Dr. S. P. Rajagopalan

REFERENCE BOOKS:

1. “Management Information System”, Prentice – Hall of India – Mudick & Ross.
2. “Management Information System”, -Gordan B.Davis.
3. “Management Information System”, Prentice – Hall of India –Sadagopan.
4. “Management Information System”, -CSV Murthy –Himalaya publicati
5. “Information systems Analysis and Design “-Jame A.Senn.

Sl. No.:

Subject Code:

U15CS6E3

GOVERNMENT ARTS COLLEGE (AUTONOMOUS) KARUR-05

B.Sc ., Computer Science – VI SEMESTER – ELECTIVE COURSE -III

(For the candidates admitted from 2015-16 onwards)

DATA COMMUNICATION AND NETWORKS

UNIT- I

Data Communication – Networks – Protocols and Standard – Line configuration – Topology – Transmission Mode – Categories of networks – Internet works.

UNIT- II

The OSI Model – Functions of the layers – TCP/IP Protocols suite – Signals – Analog and Digital Signal – Data Transmission – Data Terminal Equipment – Data Circuit Terminals equipment – Modems.

UNIT- III

Transmission of Media – Guided Media – Unguided Media – Transmission Impairments – Media Comparison – Multiplexing – FDM – TDM – WDM. Error Detection and Correction – Types of errors – Detection – Vertical Redundancy Check (VRC) – Longitudinal Redundancy Check (LRC) – Cyclic Redundancy Check (CRC). Check Sum – Error Correction.

UNIT- IV

Switching – Circuit Switching – Packet Switching – Message Switching Networking and Internetworking Devices – Repeaters – Bridges – Routers – Gateways. Routing Algorithm – Distance Vector Routing – Link State Routing – Data Link Control – Discipline – Flow Control.

UNIT- V

Internetworking : TCP/IP Protocol Suite – Client Server Model – Domain Name System – File Transfer Protocol (FTP) – Simple Mail Transfer Protocol (SMTP) – World Wide Web (WWW) – Hyper Text Transfer Protocol (HTTP).

TEXT BOOK:

1. “Data Communications and Networks” – Behrouz A.Forouzan Second Edition, Tata McGraw Hill Edition.

REFERENCE BOOKS:

1. “Introduction to Networking” – Barry Nance, Fourth Indian Eastern Economy Edition.
2. “Computer Networks” – Andrew S. Tanenbaum 4th Edition Eastern Economy Edition, 2003.

Sl. No.:

Subject Code:

U15EA4

அரசு கலைக் கல்லூரி (தன்னாட்சி), ஈரூர் - 639005
அனைத்து இளநிலை - ஆறாம் பருவம் - பகுதி - 5
(2015 - 2016 கல்வியாண்டு முதல் பயிலும் மாணவர்களுக்கு உரியது)

பாலின சமத்துவம்

அலகு 1

பாலினம்தொடர்பான கோட்பாடுகள் : பாலியல் - பாலினம் - உடற்கூறு ரீதியில் நிருணயித்தல் - ஆணாதிக்கம் - பெண்ணியம் - பாலின பாகுபாடு - பாலின வேலைப் பாகுபாடு - பாலின ஒருபடித்தானவர்கள் - பாலின உணர்வூட்டல் - பாலின சமவாய்ப்பு - பாலின சமத்துவம் - பாலின மையநீரோட்டமாக்கல் - அதிகாரப்படுத்துதல்.

அலகு 2

மகளிரியல் : பாலினசமத்துவக்கல்வி - பல்கலைக்கழக மானியக்குழுவின் வழிகாட்டுதல்கள் - ஏழாவது ஐந்தாண்டு திட்டம் முதல் பதினோராவது ஐந்தாண்டுத்திட்டம் வரை - பெய்ஜிங் மாநாடு - பெண்களுக்கு எதிரான அனைத்தவகையான பாகுபாடுகளையும் நீக்கும் ஒப்பந்தம் - 1979 (CEDAW) - சட்டத்தில் பெண்களுக்கு ஆதரவானவற்றை இணைத்தல் அல்லது உட்படுத்துதல் - பெண்களுக்கு எதிரானவற்றை ஒதுக்குதல்.

அலகு 3

பாலியல் பாகுபாட்டிற்கான தளங்கள் : குடும்பம் - பாலின விகிதாச்சாரம் - கல்வி - ஆரோக்கியம் - ஆளுமை - மதம் - வேலைவாய்ப்பு - ஊடகங்கள் - அரசியல் - சட்டம் - பாலியல் துன்புறுத்தல்கள்.

அலகு 4

பெண்கள் மேம்பாடு மற்றும் பாலின சமத்துவ மேம்பாடு : பெண்களுக்கான சமத்துவ முயற்சிகள் - சர்வதேச பெண்களுக்கான சகாப்தம் - சர்வதேச பெண்களுக்கான ஆண்டு - பெண்களின் மேம்பாட்டிற்கான தேசியக் கொள்கைகள் - பெண்கள் அதிகார ஆண்டு 2001 - சர்வதேசக் கொள்கைகளை மையநீரோட்டமாக்கல்.

அலகு 5

பெண்கள் இயக்கங்கள் மற்றும் பாதுகாப்பு நிறுவன ஏற்பாடுகள் : தேசிய மகளிர் ஆணையம் - மாநில மகளிர் ஆணையம் - அனைத்து மகளிர் காவல் நிலையங்கள் - குடும்ப நீதிமன்றங்கள் - குடும்ப வன்முறையிலிருந்து பெண்களைப் பாதுகாக்கும் சட்டம் 2005 - பணியிடங்களில் பெண்கள் மீதான பாலியல் துன்புறுத்தல்களைத் தடுப்பதற்கான உச்சநீதிமன்ற வழிகாட்டுதல்கள் - விசாகா தீர்ப்பு - தாய் சேய் சேம நலச்சட்டம் - பெண் சிசுவை கருவில் கண்டறிவதைத் தடை செய்யும் சட்டம் 1994 - ஈவ்டிசிங் - பெண்களைத் தொல்லை செய்தல் தடுப்புச் சட்டம் - மகளிர் சுயஉதவிக்குழுக்கள் - பஞ்சாயத்து அமைப்புகளுக்கான 73வது மற்றும் 74வது சட்டத்திருத்தம்.

Text Book:

1. பாலின சமத்துவம் - முனைவர். ஆ. ஜெகதீசன் - ராஜா பதிப்பகம், திருச்சி.

CHAIRMAN – BOS

COE