

NALLAMUTHU GOUNDER MAHALINGAM COLLEGE (AUTONOMOUS)-POLLACHI

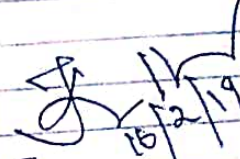
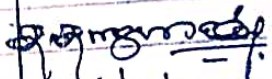
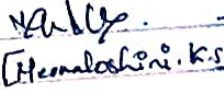
72	B.Sc.IT	Data Analytics	19UIT4N3	2019
73	B.Sc.IT	Skill Based Major Elective - Lab. I Web Programming (Python)	19UIT5S1	2019
74	B.Sc.IT	Skill Based Major Elective - Lab. II DTP Software (CorelDraw / Photoshop)	19UIT6S3/ 19UIT6S4	2019
75	B.Sc. CT	CORE VII: OPERATING SYSTEMS	19UCT309	2019
76	B.Sc. CT	CORE XIII: FRAMEWORK TECHNOLOGY	19UCT621	2019
77	B.Sc. CT	ALLIED IV: PROCESSORS	19UCT4A4	2019
78	BCA	Mathematics-II: Mathematical Foundation of Computer Applications	19UBC2A2	2019
79	BCA	Web Development	19UBC413	2019
80	BCA	Web Development Lab	19UBC416	2019
81	BCA	Storage Management	19UBC5E3	2019
82	BCA	Distributed Operating System	19UBC5S3	2019
83	BCA	Python Programming	19UBC623	2019
84	BCA	Python Programming Lab	19UBC626	2019
85	B.Com	Entrepreneurial Development	19UCO519	2019
86	B.Com	Service Marketing and Customer Relationship Marketing	19UCO625	2019
87	B.Com	Retail Management	19UCO515	2019
88	B.Com	Goods and Service Tax (GST) Accounting	19UCO518	2019
89	B.Com	Intellectual Property Rights	19UCO5S1	2019
90	B.Com	Commerce For Competitive Exams/ Business Ethics	19UCO6S3	2019
91	B.Com	Financial Management	19UCO624	2019
92	B.Com (CA)	Banking and Insurance Law	19UCC6E3	2019
93	B.Com (CA)	Services Marketing	19UCC6E4	2019
94	B.Com (CA)	Higher Corporate Accounting	19UCC410	2019
95	B.Com (CA)	Commerce and Computer Application Practical	19UCC5E1	2019
96	B.Com (CA)	Consumer Behaviour	19UCC5E2	2019

**BOS
Highlighted**



BOARD OF STUDIES IN

16.2.2019

SNO	Members	Signature
01.	Dr. J. Thilagaravathi Asso. professor & Head (Chair - person)	- Absent - (medical Leave)
02.	Dr. Vanitha Asso. professor Dept. of Comp. Science, Dr. G. R. Damodaran College of Science, Coimbatore. (University Nominee)	 16/2/19 [Dr. K. VANI]
03.	Dr. K. Kungumraj Asst. professor & Head - (BCA) Anulmigu Palani Andavar Arts College for Women, Palani. (Subject Expert & Academic Auditor)	 16/2/2019
04.	Ms. K.S. Meenaloshini Advanced Analyst Global Immigration GDS India Ernst and Young, Bangalore. (Industry Expert)	 [Meenaloshini, K.S.]
05.	Mr. S. Navin Kumar Programmer Wicode Info Tech Pvt. Ltd Coimbatore (Alumni Member)	

COMPUTER TECHNOLOGY

SATURDAY - 9.30 AM.

45

MINUTES

The Board of Studies for the Department of Computer Technology is conducted on 16.2.19, Saturday at 9.30 AM.

The following Points were discussed:

- * The Board framed the Courses of Study, Scheme of Examinations and Syllabus for B.Sc.(CT) course (2019-22) Batch I to VI Semester.
- * Course Code 18UCTxxx is changed as 19UCTxxx for all part III Courses.
- * Course title of "programming in C++" can be renamed as "programming in C++ with Data Structures".
- * University Nominee suggested to include the sub-titles such as "new" operator & Serialization in the course Java Programming.
- * The Course titled "J2EE Technologies" can be renamed as "Advanced Java programming" and Syllabus can be devised.
- * The Course title "Software Testing Lab" can be renamed as "Software Engineering and Testing Lab".
- * BOS resolved to recommend elective papers can be shared by departments in IT Cluster and can give option to Students to choose Paper on their own.
- * Major Electives will be mutually exchanged b/w CT and IT Departments.

S.No	Members	Signature
06	MS. C. Keerthana Asst. professor - Dept. of CT NGMC	C. S. 16/11/19
07	MS. K.S. Leelavathi Asst. professor Dept. of CT NGMC	K.S. 16/12/19
08	Mr. R. Jayaprakash Asst. professor Dept. of CT NGMC	R. Jayaprakash 16/12/19
09	MS. A. Kalairani Asst. professor Dept. of CT NGMC	A. Kalairani 16/12/19
10	MS. H. Sharmitha, (16CT52) D3 - CT, 2016 - 19 Batch. (Student Member)	H. Sharmitha 16/02/2019
11	Mr. A. Vinayagaraj (16CT24) D3 - CT, 2016 - 19 Batch. (Student Member)	A. Vinayagaraj 16/02/2019

- * Industrial expert suggested to rename the course title "RDBMS with ORACLE" as "Database Management System" and cursors can be excluded.
- * As per Subject expert's suggestion, the following topics were excluded in the Course Operating System
 - System Components
 - System Call.
 - System Programs.
 and included topics are
 - What is operating system?
 - Types of operating system.
- * Based on the Alumni suggestion, files and streams were excluded and Asp.net can be included in unit IV of the Course Framework Technology.
- * Based on the Students feed back, the few of the subtitles were excluded in the Course "processors".
 - Assembly Language programs for 8086 in unit II.
 - Gates, Pin Configuration in unit - II.
 - Motorola microprocessor in unit - IV.
 - Bipolar to unipolar Converter, Sample and Hold Circuit, LF 398 in unit V.
- * The Board suggested that Course Data Communication Syllabus can be revised.
- * Board suggested to rename the course title "Introduction to Computer Graphics and multimedia" as "Multimedia Techniques". and Course e-commerce can be revised.

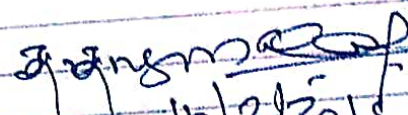
1. Dr. J. Thilagarathu .
 Asso. Professor & Head.
 Dept. of Computer Technology
 Altm College,
 (Chair-person)

- Absent -
 (medical
 Leave)

Dr. K. Vanitha
 Asso. Professor
 Dept. of Comp. Science
 Dr. G.R.D College of Science
 Coimbatore
 (University Nominee)

 16/2/19

Dr. K. Kungumraj
 Asst. Professor & Head (BCW)
 Amalraj Palani Andal Arts
 College for Women, Palani.

 16/2/2019

Ms. K.S. Meenalashini
 Advanced Analyst,
 Global Immigration & India.
 Ernst & Young, Bangalore.



Mr. S. Aravin Kumar
 Programmer.
 Hi Code Info Tech Pvt. Ltd
 Coimbatore



Ms. C. Keerthana
 Asst. prof, Dept of CT
 Name

C. J.  16/2/19

Ms. K. S. Leelavathi
Asst. prof, Dept of CT
NGMC

K.S. 16/2/19

Ms. R. Jayaprakash
Asst. prof, Dept of CT
NGMC

R. 16/2/19

Ms. A. Kalavani
Asst. prof, Dept of CT
NGMC

A. 16/2/19

Ms. H. Shunitha
DB - CT,
NGMC

H. 16/2/19

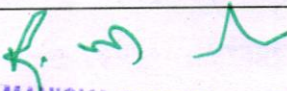
Mr. A. Vinayagaraj
DB - CT
NGMC

A. 16/2/19

Department of Computer Technology
Scheme of Examination

Part	Subject Code	Subject	Ins.Hours Per Week	Exam				Credit
				Hours	CIA	ESE	Total	
SEMESTER I								
I	19 UTL 101	TAMIL - I	6	3	25	75	100	3
	19 UHN 101	HINDI - I						
II	19 UEN 101	ENGLISH - I	5	3	25	75	100	3
III	19 UCT 101	CORE I: PROGRAMMING IN C	4	3	25	75	100	3
	19 UCT 102	CORE II: DIGITAL COMPUTER FUNDAMENTALS	4	3	25	75	100	3
	19 UCT 1A1	ALLIED I: MATHEMATICAL STRUCTURES FOR COMPUTER SCIENCE	5	3	25	75	100	4
	19 UCT 103	LAB - I:PROGRAMMING IN C	4	3	20	30	50	2
IV	19 UHR 101	HUMAN RIGHTS	1	2	-	50	50	2
	19 HEC 101	HUMAN EXCELLENCE-PERSONAL VALUES & SKY YOGA PRACTICE-I	1	2	25	25	50	1
V	EXTENSION ACTIVITIES - ANNEXURE I		-					
TOTAL			30	-	170	480	650	21
SEMESTER II								
I	19 UTL 202	TAMIL - II	6	3	25	75	100	3
	19 UHN 202	HINDI - II						
II	19 UEN 202	ENGLISH - II	5	3	25	75	100	3
III	19 UCT 204	CORE III: OBJECT ORIENTED PROGRAMMING WITH 'C++'	4	3	25	75	100	3
	19 UCT 205	CORE IV: DATA STRUCTURES	4	3	25	75	100	3
	19 UCT 2A2	ALLIED II: DISCRETE MATHEMATICS	4	3	25	75	100	4
	19 UCT 206	LAB - II : PROGRAMMING IN C++ WITH DATA STRUCTURES	4	3	20	30	50	2
IV	19 EVS 201	ENVIRONMENTAL STUDIES	2	2	-	50	50	2
	19 HEC 202	HUMAN EXCELLENCE - FAMILY VALUES & SKY YOGA PRACTICE - II	1	2	25	25	50	1
V	EXTENSION ACTIVITIES - ANNEXURE I		-					
TOTAL			30	-	170	480	650	21

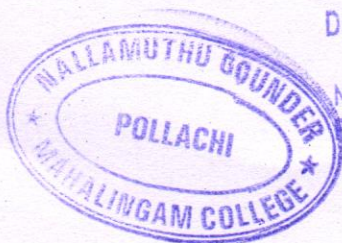



Dr. R. MANICKA CHEZIAN M.Sc., M.S., Ph.D.
 PRINCIPAL i/c
 Nallamuthu Gounder Mahalingam College
 Pollachi - 642 001, Coimbatore District.

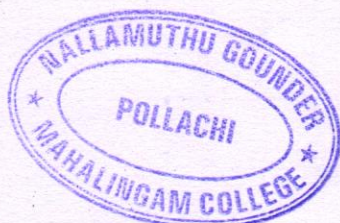
Part	Subject Code	Subject	Ins.Hours Per Week	Exam				Credit
				Hours	CIA	ESE	Total	
SEMESTER III								
III	19 UCT 307	CORE V: JAVA PROGRAMMING	5	3	25	75	100	4
	19 UCT 308	CORE VI: DATABASE MANAGEMENT SYSTEM	5	3	25	75	100	4
	19 UCT 309	CORE VII: OPERATING SYSTEMS	5	3	25	75	100	4
	19 UCT 3A3	ALLIED III: COMPUTER SYSTEM ARCHITECTURE	5	3	25	75	100	4
	19 UCT 310	LAB - III :JAVA PROGRAMMING	4	3	20	30	50	2
	19 UCT311	LAB - IV: DATABASE MANAGEMENT SYSTEM	4	3	20	30	50	2
IV	19 HEC 303	HUMAN EXCELLENCE - PROFESSIONAL VALUES & SKY YOGA PRACTICE - III	1	2	25	25	50	1
	19 UCT 3N1/ 19 UCT3N2	SKILL BASED NON- MAJOR ELECTIVE I - HTML LAB / MULTIMEDIA LAB	1	2	-	50	50	2
V	EXTENSION ACTIVITIES - ANNEXURE I		-					
TOTAL			30	-	165	435	600	23
SEMESTER IV								
III	19 UCT 412	CORE VIII: ADVANCED JAVA PROGRAMMING	5	3	25	75	100	4
	19 UCT 413	CORE IX: SOFTWARE ENGINEERING	5	3	25	75	100	4
	19 UCT 414	CORE X: DATA COMMUNICATION AND NETWORKS	5	3	25	75	100	4
	19 UCT 4A4	ALLIED IV: PROCESSORS	5	3	25	75	100	4
	19 UCT 415	LAB - V: ADVANCED JAVA PROGRAMMING	4	3	40	60	100	4
	19 UCT 416	LAB - VI : SOFTWARE ENGINEERING AND TESTING	4	3	40	60	100	4
IV	19 HEC 404	HUMAN EXCELLENCE - SOCIAL VALUES & SKY YOGA PRACTICE - IV	1	2	25	25	50	1
	19 UCT 4N3/ 19 UCT4N4	SKILL BASED NON-MAJOR ELECTIVE II - OFFICE AUTOMATION LAB / CORELDRAW LAB	1	2	-	50	50	2
V	EXTENSION ACTIVITIES - ANNEXURE I		-	-	-	50	50	1
TOTAL			30	-	205	545	750	28

Dr. R. MANICKA CHEZIAN M.Sc.,M.S.,Ph.D.,
PRINCIPAL i/c

Nallamuthu Gounder Mahalingam College
Pollachi - 642 001, Coimbatore District.



Part	Subject Code	Subject	Ins.Hours Per Week	Exam				Credit
				Hours	CIA	ESE	Total	
SEMESTER V								
III	19 UCT 517	CORE XI: OPEN SOURCE TECHNOLOGIES	6	3	25	75	100	4
	19 UCT 518	CORE XII: INFORMATION SECURITY	6	3	25	75	100	4
	19 UCT 5E1 / 19 UCT 5E2 / 19 UCT 5E3	ELECTIVE I	6	3	25	75	100	5
	19 UCT 519	LAB -VII: OPEN SOURCE TECHNOLOGIES	5	3	40	60	100	3
	19 UCT 520	LAB - VIII: WEB DESIGNING	5	3	40	60	100	3
IV	19 HEC 505	HUMAN EXCELLENCE - NATIONAL VALUES & SKY YOGA PRACTICE - V	1	2	25	25	50	1
	19 GKL 501	GENERAL KNOWLEDGE AND GENERAL AWARENESS	SS	2	-	50	50	2
	19 UCT 5S1/ 19 UCT 5S2	SKILL BASED MAJOR ELECTIVE I - PYTHON LAB /HTML 5 with CSS	1	2	-	50	50	2
TOTAL			30	-	205	545	650	24
SEMESTER VI								
III	19 UCT 621	CORE XIII: FRAMEWORK TECHNOLOGY	6	3	25	75	100	4
	19 UCT 6E4 / 19 UCT 6E5 / 19 UCT 6E6	ELECTIVE-II	6	3	25	75	100	4
	19 UCT 6E7 / 19 UCT 6E8 / 19 UCT 6E9	ELECTIVE-III	6	3	25	75	100	5
	19 UCT 622	LAB - IX: FRAMEWORK TECHNOLOGY	5	3	40	60	100	3
	19 UCT 623	INDUSTRY ORIENTED PRACTICALS	5	3	40	60	100	4
IV	19 HEC 606	HUMAN EXCELLENCE - GLOBAL VALUES & SKY YOGA PRACTICE - VI	1	2	25	25	50	1
	19 UCT 6S3/ 19 UCT 6S4	SKILL BASED MAJOR ELECTIVE II - DATA ANALYTICS(BIG DATA) LAB / DREAMWEAVER LAB	1	2	-	50	50	2
TOTAL			30	-	180	420	600	23
GRAND TOTAL			180	-	1095	2905	3900	140



[Handwritten signature]

Dr. R. MANICKA CHEZIAN M.Sc., M.S., Ph.D.,
PRINCIPAL i/c
Nallamuthu Gounder Mahalingam College
Pollachi - 642 001, Coimbatore District.

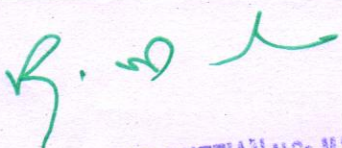
LIST OF MAJOR ELECTIVE PAPERS

S.No	Elective	Subject Code	Subject Name
1	Elective – I (V Sem)	19UCT5E1	Cloud Computing
2		19UCT5E2	Data Mining and Analytics
3		19UCT5E3	Artificial Intelligence
4	Elective – II (VI Sem)	19UCT6E4	Embedded Systems
5		19UCT6E5	E-Commerce
6		19UCT6E6	Underwater Communication
7	Elective – III (VI Sem)	19UCT6E7	Multimedia Techniques
8		19UCT6E8	Mobile Computing
9		19UCT6E9	Internet of Things (IoT)

EXTENSION ACTIVITIES - ANNEXURE I

S.No	Subject Code	Subjects
1	19 UNC 401	NCC
2	19 UNS 402	NSS
3	19 USG 403	Sports and Games
4	19 URO 404	Rotract Club
5	19 URR 405	Red Ribbon Club
6	19 UYR 406	Youth Red Cross
7	19 UCA 407	Consumer Awareness Club
8	19 UED 408	Entrepreneurship Development Club
9	19 UCR 409	Center for Rural Development
10	19 USS 410	Student Guild Of Service
11	19 UGS 411	Green Society
12	19 UEO 412	Equal Opportunity Cell
13	19 UFA 413	Fine Arts Club




Dr. R. MANICKA CHEZIAN M.Sc., M.S., Ph.D.,
 PRINCIPAL i/c
 Nallamuthu Gounder Mahalingam College
 Pollachi - 642 001, Coimbatore District.

Programme Code:	B. Sc	Programme Title:	Bachelor of Science (Computer Technology)	
Course Code:	19UCT309	Title	Batch:	2019 - 22
		CORE VII:	Semester	III
		OPERATING SYSTEMS		
Hrs/Week:	05		Credits:	04

Course Objective

To gain insight on to the fundamentals of Operating Systems and explore on Process, Storage and File management of Operating Systems.

Course Outcomes (CO)

K1	CO1	To keep in mind about operating system services, process, scheduling and memory allocations
K2	CO2	To comprehend the various process management concepts including scheduling, synchronization, and deadlocks
K3	CO3	To implement CPU Scheduling algorithms for process scheduling and deploy a deep knowledge about the memory management concepts including swapping, paging and segmentation
K4	CO4	To review synchronization problems, accessing methods in Files, Disk scheduling

Syllabus

Unit - I

[13 Hours]

Operating-System Structures: Introduction of Operating System – Evolution of Operating System – Types of Operating System.

Unit - II**[13 Hours]**

Process Management: Process Concept – Process scheduling – Operations on Process – Cooperating Processes – Inter-process Communication **CPU Scheduling :** Basic Concepts – Scheduling Criteria – Scheduling Algorithms – Multiple-Processor Scheduling – Real Time Scheduling – **Process Synchronization:** The Critical-Section Problem – Semaphores – Classic problems of Synchronization.

Unit - III**[13 Hours]**

Deadlocks: Deadlock Characterization – Methods for handling Deadlock – Deadlock prevention – Deadlock avoidance – Deadlock detection – Recovery from Deadlock – **Memory Management:** Storage Management – Swapping – Contiguous Memory allocation – Paging – Segmentation.

Unit - IV**[13 Hours]**

Storage Management: Virtual memory – Demand Paging –Page Replacement: FIFO Page Replacement – Optimal Page Replacement – LRU Page Replacement – File concept – *Access methods** – Directory Structure .

Unit - V**[13 Hours]**

File System Structure – Allocation methods - Disk Structure – Disk Scheduling – Disk management – **Case study:** Linux, Windows XP, *Android OS (Memory management)**.

Note: **Italicized texts are for self study*

Power point Presentations, Group Discussions, Seminar, Quiz, Assignment, Case Study

Books for Study

1. Abraham Silberschatz, Peter Baer Galvin, Greg Gagne (2011), "Operating System Concepts" 6th Edition, John Wiley and Sons, ISBN-13 9789812530554.

Books for Reference

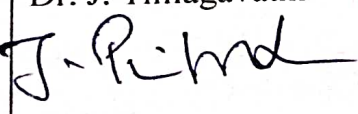
1. Achyut.S Godbole(2002), "Operating Systems", 1st Edition, TMH Publications, ISBN-139780070483736.
2. H. M Deitel (2003), "Operating Systems", 2nd Edition, Pearson Education Publication.

3. D.M. Dhamdhere (2008), "Systems Programming and Operating Systems ", 2nd Revised Edition.
4. <http://www.faadooengineers.com/threads/9773-Operating-system-by-galvin-pdf-Free-Download>
5. <http://nptel.ac.in/courses/106108101/13>
6. <https://developer.android.com/topic/performance/memory-overview.html>
7. <https://www.geeksforgeeks.org/operating-system-types-operating-systems-awaiting-author/>

Mapping

CO \ PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	M	H	S	H	H
CO2	H	H	S	S	H
CO3	H	H	S	S	H
CO4	M	H	H	H	H

S-Strong H-High M-Medium L-Low

Course Designed by	Verified by HOD	Checked by	Approved by
Name and Signature	Name and Signature	CDC	COE
Name: Ms. A. Kalaivani  Signature:	Name: Dr. J. Thilagavathi  Signature:	Name: Dr. M. Durairaju  Signature:	Name: Dr. R. Muthukumaran  Signature:

Dr. J. THILAGAVATHI M.C.A., M.Phil., Ph.D.,
Associate Professor & Head
Department of Computer Technology
N.G.M. College, Pollachi - 642 001

Dr. M. DURAIRAJU, M.Sc., M.Phil., Ph.D., PGCDC, Ph.D.,
Associate Professor / Co-ordinator,
Curriculum Development Cell (CDC)
NGM College (Autonomous)
Pollachi - 642 001.

Dr. R. MUTHUKUMARAN
Controller of Examinations
NGM College (Autonomous)
POLLACHI - 642 001.

Programme Code:	B. Sc	Programme Title:	Bachelor of Science (Computer Technology)	
Course Code:	19UCT4A4	Title	Batch:	2019 - 22
		ALLIED IV: PROCESSORS	Semester	IV
Hrs/Week:	05		Credits:	04

Course Objective

To know about Intel 8086, Intel 386 and 486 microprocessors, Memory and I/O addressing and MOTOROLA microprocessors.

Course Outcomes (CO)

K1	CO1	To remember the microprocessor basic concepts, types of processors and instruction sets
K2	CO2	To get the idea of assembly language program for 8086
K3	CO3	To deploy designing of memory and I/O addressing of various microprocessors
K4	CO4	To review interfacing of A/D converter and applications

Syllabus

Unit - I

[13 Hours]

Introduction to Microprocessors: Evolution of Microprocessors – Single- chip Microcomputer – Embedded Microprocessors – Bit-Slice Processors – Microprogramming – RISC and CISC Processors – Scalar and Superscalar Processors – Vector Processors – Array Processors – Digital Signal Processors.

Unit - II

[13 Hours]

16-Bit Intel Microprocessors: Intel 8086 – Pin Description of Intel 8086 – Register organization of 8086 – BIU and EU – Interrupts – 8086 Based Computer System – Addressing Modes of 8086. **8086 Instruction Set** – Instruction Groups – Addressing Mode Byte – Segment Register Selection – Segment Override – 8086 Instructions.

Unit - III

[13 Hours]

Intel 386 and 486 Microprocessors: Intel 386 and 486 Microprocessor – 486DX Architecture – Register Organization of 486 Microprocessor – Memory Organization – Operating Modes of Intel 486 – Virtual Memory – Memory Management Unit – Interrupts and Exceptions – Addressing Modes of 80486 – *Input devices** – Output devices.

Unit - IV

[13 Hours]

Memory and I/O Addressing – 8086 Addressing and Address Decoding: Address decoders – ROM addressing decoding - RAM address decoding. **Programmable I/O Ports:** PPI Intel 8255 and Intel 82C55 – Operating modes of 8255 – BSR – Control groups – Control word – DMA Data Transfer.

Unit - V

[13 Hours]

An Interfacing of A/D Converter and Applications: Introduction – Interfacing of ADC 0808 or ADC 0809 to Intel 8086 – Microprocessor-based Measurement and Control of Physical Quantities. **Other Processors :** Pentium Microprocessors – Pentium Pro Microprocessor – *Comparsion of core i3 vs core i5 vs core i7**.

Note: **Italicized texts are for self study*

Power point Presentations, Group Discussions, Seminar, Quiz, Assignment, Case Study

Books for Study

1. Badri Ram, (2009), "Advanced Microprocessors and Interfacing", Tata McGraw-Hill Publishing Company Limited, ISBN-13:9780070434486.

2. <https://techtimely.wordpress.com/2011/07/01/difference-between-intel-core-i3-i5-i7-processors/> (Unit V - Comparison of core i3 vs core i5 vs core i7)

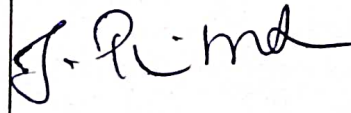
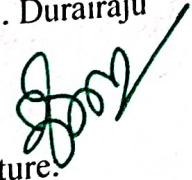
Books for Reference

1. Ray A.K, Bhurchandi K.M, (2007), "Advanced Microprocessors and Peripherals", 2nd Edition, Tata McGraw-Hill Publishing Company Limited, ISBN: 13-9780070140622.
2. Douglas Hall, (2006), "Microprocessors & Interfacing", McGraw Hill, 2nd Edition, ISBN-13:9781259006159.
3. John Uffenbeck, "The 8086/88 Family: Design, Programming & Interfacing", 1st Edition, PHI, ISBN-13: 9788120309333.
4. http://www.nptel.ac.in/courses/Webcourse-contents/IISc-BANG/Microprocessors%20and%20Microcontrollers/pdf/Lecture_Notes/LNm1.pdf

Mapping

PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO					
CO1	M	L	H	M	M
CO2	L	M	M	S	M
CO3	S	H	M	S	M
CO4	M	H	M	M	M

S-Strong H-High M-Medium L-Low

Course Designed by	Verified by HOD	Checked by	Approved by
Name and Signature	Name and Signature	CDC	COE
Name: Ms. C. Keerthana 	Name: Dr. J. Thilagavathi 	Name: Dr. M. Durairaju 	Name: Dr. R. Muthukumaran 
Signature:	Signature:	Signature:	Signature:

Dr. J. THILAGAVATHI M.C.A., M.Phil., Ph.D.,
Associate Professor & Head
Department of Computer Technology
N.G.M. College, Pollachi - 642 001

Dr. M. DURAIRAJU, M.Sc., M.Phil., Ph.D.,
Associate Professor / Co-ordinator,
Curriculum Development Cell (CDC)
NGM College (Autonomous)
Pollachi - 642 001.

Dr. R. MUTHUKUMARAN
Controller of Examinations
NGM College (Autonomous)
POLLACHI - 642 001.

Programme Code:	B. Sc	Programme Title:	Bachelor of Science (Computer Technology)	
Course Code:	19UCT621	Title	Batch:	2019 - 22
		CORE XIII - FRAMEWORK TECHNOLOGY	Semester	VI
Hrs/Week:	06		Credits:	04

Course Objective

To address the requirements of developers to become experts in .NET environment.

Course Outcomes (CO)

K1	CO1	To keep in mind about .NET framework fundamentals
K2	CO2	To understand the control statements, arrays and procedures
K3	CO3	To implement the concept of GUI, files and streams
K4	CO4	To analyze about database connectivity with .NET framework

Syllabus

Unit – I

[13 Hours]

Introduction to Visual Basic .NET: Visual Basic .NET- Introduction to Microsoft.NET- .NET Framework and the common language runtime.

Introduction to the Visual Studio.NET IDE: Introduction – Overview of the visual studio .NET IDE - Menu bar and Toolbar –Visual Studio.NET IDE windows.

Introduction to Visual Basic Programming: Introduction – simple programs – memory concepts- Arithmetic - Decision Making – Using a dialog to display a message.

[13 Hours]

Unit – II

Control Structures: Introduction – Control Structures- if/then selection structure-if/then/else Selection Structure – While, Do while/loop, Do Until/Loop Repetition Structures – Assignment Operators* – For Next – Select Case – do/loop while – do/loop until – exit key word – logical operators.

[17007621]

Procedures: Introduction – Modules, classes and procedures – sub procedures – function procedures – methods – Arguments Promotion – Option Strict and Data type conversions – value types and reference types – passing arguments: pass – by-value vs. pass-by-reference – duration of identifiers – scope rules.

Unit – III

[13 Hours]

Arrays: Introduction - arrays - declaring and allocating arrays - examples - passing arrays to procedures - By Val vs By Ref. – for each/next repetition structure.

Graphical user interface concepts: Introduction – windows forms – event handling model – control properties and layout – labels, textboxes and buttons – group boxes and panels – *checkboxes and radio buttons** – picture boxes – mouse event handling – keyboard event handling.

Menus – Link labels – List boxes and checked list boxes – Combo boxes – Tree views – List views – Tab control – MDI windows – Visual inheritance – User defined controls.

Unit – IV

[13 Hours]

Database, SQL and ADO. NET: Introduction – relational database model- SQL – ADO.NET object model – programming with ADO.NET – extracting from a database – modifying a database

Unit – V

[13 Hours]

ASP.NET, web forms and web controls: Introduction – simple HTTP transaction – system architecture – web controls – session tracking.

Note: **Italicized texts are for self study*

Power point Presentations, Seminar, Assignment

- [19 OCT 621]
1. Deitel H.M, Deitel P.J, Nieto T.R, "Visual Basic.NET How to Program", 2nd Edition, Pearson Education, ISBN-13: 9780130389374.

Books for Reference

1. Kogent Learning Solutions Inc., (2010), ".Net 3.5 Programming: Covering .Net Framework", 1st Edition, DreamTech Press, ISBN-13:9788177228342.
2. Bill Evjen, Jason Beres, et.al, (2002), "Visual Basic.Net Programming – Black Book", Wiley Dream Tech India (p) Ltd. ISBN: 81-265-0254-1.
3. Tim Anderson, "VB.Net programming in Easy Steps", 1st Edition, Dream Tech, ISBN-13: 9788177221930.
4. <https://www.syncfusion.com/resources/techportal/details/ebooks/aspnetmultitenant>

Mapping

PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO					
CO1	H	S	S	H	L
CO2	S	S	S	M	M
CO3	H	H	S	M	S
CO4	H	S	H	H	M

S-Strong H-High M-Medium L-Low

Course Designed by	Verified by HOD	Checked by	Approved by
Name and Signature	Name and Signature	CDC	COE
Name: Ms. A. Kalaivani Signature:	Name: Dr. J. Thilagavathi Signature:	Name: Dr. M. Durairaju Signature:	Name: Dr. R. Muthukumar Signature:

Dr. J. THILAGAVATHI M.C.A., M.Phil., Ph.D.,
Associate Professor & Head
Department of Computer Technology
N.G.M. College, Pollachi - 642 001

Dr. M. DURAIRAJU, M.Sc., M.Phil., B.Ed., PGDCC, Ph.D.,
Associate Professor / Co-ordinator,
Curriculum Development Cell (CDC)
NGM College (Autonomous)
Pollachi - 642 001.

Dr. R. MUTHUKUMARAN
Controller of Examinations
NGM College (Autonomous)
POLLACHI - 642 001.