



### 2.6.2 Attainment of POs and COs are evaluated

The institution is affiliated to Mother Teresa Women’s University, Kodaikanal. The institution offers OBE programmes for all programmes which strengthens students' calibre, promotes potential and ensures employability. The syllabus constitutes the core idea of promoting the status of subject learning and enhances the learning subject skills. The programme and course outcomes for all programmes offered by the institution are stated and displayed on the college website ([www.mvmwgacdgl.ac.in](http://www.mvmwgacdgl.ac.in)).

The following mechanism is followed by the institution to communicate the learning outcomes to the teachers and students.

- Hard Copy of syllabi and Learning Outcomes are available in the departments for ready reference to the teachers and students
- The importance of the learning outcomes has been communicated to the teachers in every IQAC meeting and College Council meeting
- The students are also made aware of the same through mentors and course teachers

The steps involved in attainment of COs and POs were evaluated as follows,

- **Defining the Course Objectives:**

<b>P21CST24 NoSQL DATABASES (I M.Sc., Semester-II)</b>
<p><b>Course Objectives:</b></p> <ul style="list-style-type: none"> <li>• Distinguish the different types of NoSQL databases</li> <li>• To learn the Database Terminology</li> <li>• To understand Document Database</li> <li>• To learn Column Family Database</li> </ul>

- **The Course Outcomes (COs) as outline below:**

<b>P21CST24 NoSQL DATABASES</b>
<p><b>CO1:</b> Acquire a deep knowledge on relational Database, Structured Query Language and Data Modeling K1</p> <p><b>CO2:</b> Acquire the Knowledge on MongoDB query language K2</p> <p><b>CO3:</b> Comprehend the principles of NoSQL K2</p> <p><b>CO4:</b> Differentiate NoSQL key value database and Document database K2</p> <p><b>CO5:</b> Know the concept of Column database and Understand the data modeling techniquesK2</p>

- Outline the Program Outcomes (PO) and Program Specific Outcomes (PSO):

M.Sc. Computer Science	
Program Outcomes (PO)	Program Specific Outcomes (PSO)
<p><b>PO1</b> To provide advanced and in-depth knowledge of computer science and its applications</p> <p><b>PO2</b> To prepare Post Graduates who will achieve peer-recognition; as an individual or in a team; through demonstration of good analytical, design and implementation skills.</p> <p><b>PO3</b> To enable students pursue a professional career in Information and Communication</p> <p><b>PO4</b> Technology in related industry, business and research.</p> <p><b>PO5</b> To impart professional knowledge and practical skills to the students.</p> <p><b>PO6</b> Apply computer science theory and software development concepts to construct computing-based solutions.</p>	<p><b>PSO1</b> Have the knowledge in the areas like Artificial Intelligence, Web Services, Cloud Computing, Paradigm of Programming language, Design and Analysis of Algorithms, Database Technologies Advanced Operating System, Mobile Technologies, Software Project Management and core computing subjects. Choose to study any one subject among recent trends in IT provided in the optional subjects.</p> <p><b>PSO2</b> Understand all dimensions of the concepts of software application and projects.</p> <p><b>PSO3</b> Understand the computer subjects with demonstration of all programming and theoretical concepts with the use of ICT.</p> <p><b>PSO4</b> Develop in-house applications in terms of projects.</p>

- Perform Course Outcome mapping with the Program Outcomes (PO) and Program Specific Outcomes (PSO):

P21CST24 NoSQL DATABASES										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	PSO4
CO1	3	3	2	2	2	2	2	3	3	2
CO2	3	2	3	3	3	2	3	2	2	3
CO3	3	3	3	3	3	2	2	3	3	2
CO4	3	3	2	2	3	3	2	3	3	3
CO5	3	2	3	3	2	3	2	2	3	2
Average	3.00	2.60	2.60	2.60	2.60	2.40	2.20	2.60	2.80	2.40

Here in the table, '3' corresponds to a **high correlation**; '2' corresponds to a **medium correlation**, and '1' corresponds to a **low correlation**, between CO and PO/PSO.

- Course Attainment(COA) Calculations

CO Attainment(COA) Calculation					
P21CST24 NoSQL DATABASES	Direct Assessment -1 (Internal)			Direct Assessment -2 (External)	Indirect Assessment Students/Faculty/ Employer
	CIA	Quiz	Seminar/ Assignment		Course Exit Survey
Number of students who have scored more than the target (P) (Target is 60%)	23	23	23	18	23
Percentage of students who have achieved the target = $(P/N)*100$ (N is the number of students who appeared in the exam)	100	100	100	78	100
Attainment Level (3 for >80%, 2 for >70%, 1 for > 60%)	a=3	b=3	c=3	d=2	e=3
Attainment based on internal assessment (CIA) = Average of (a, b and c);				CIA=	3
Direct CO Attainment Level (DA) =25% CIA + 75% External(d) ;				DA=	2.25      0.25*3+0.75*2
Indirect CO Attainment Level (IA) ( based on Exit Survey (e));				IA=	3
CO Attainment Level (COA) = 90 % DA+ 10 % IA;				90% of DA=	2.03
				10% of IA	0.3
CO Attainment Level(COA)= 90% DA + 10%IA				COA	2.33

<b>P21CST24 NoSQL DATABASES</b>
<b>CO Attainment Level(COA) : 2.33</b>

- Based on the Course Objectives Attainment (COA) value as calculated at the previous step, the PO/PSO Attainment Calculations as shown below:

$$\text{PO/PSO Attainment} = \text{COA} \times \text{M}/3$$

P21CST24 NoSQL DATABASES										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	PSO4
CO1	3	3	2	2	2	2	2	3	3	2
CO2	3	2	3	3	3	2	3	2	2	3
CO3	3	3	3	3	3	2	2	3	3	2
CO4	3	3	2	2	3	3	2	3	3	3
CO5	3	2	3	3	2	3	2	2	3	2
<b>Average</b>	<b>3.00</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.40</b>	<b>2.20</b>	<b>2.60</b>	<b>2.80</b>	<b>2.40</b>



PO Attainment Calculations										
P21CST24 NoSQL DATABASES										
	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	PSO4
<b>Average Mapping (M)</b>	3.00	2.60	2.60	2.60	2.60	2.40	2.20	2.60	2.80	2.40
<b>PO / PSO Attainment Level*</b>	2.33	2.02	2.02	2.02	2.02	1.86	1.71	2.02	2.18	1.86

$$* = \text{COA} \times \text{M}/3$$

## PG AND RESEARCH DEPARTMENT OF COMPUTER SCIENCE

### ATTAINMENT OF POs AND COs

I M.Sc. COMPUTER SCIENCE

SEMESTER - II

CO Mapping with PO & PSO										
Subject Code	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	PSO4
P21CST21	3.00	3.00	2.40	2.60	2.40	2.60	2.00	2.80	2.80	2.60
P21CST22	3.00	3.00	2.40	2.60	2.40	2.60	2.00	2.80	2.80	2.60
P21CST23	3.00	3.00	2.60	3.00	2.40	2.60	2.00	3.00	2.60	2.60
P21CST24	3.00	2.60	2.60	2.60	2.60	2.40	2.20	2.60	2.80	2.40



Course Objectives Attainment (COA)	
Subject Code	COA
P21CST21	3.00
P21CST22	2.33
P21CST23	2.33
P21CST24	2.33



PO/PSO Attainment										
Subject Code	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	PSO4
P21CST21	3.00	3.00	2.40	2.60	2.40	2.60	2.00	2.80	2.80	2.60
P21CST22	2.33	2.33	1.86	2.02	1.86	2.02	1.55	2.18	2.18	2.02
P21CST23	2.33	2.33	2.02	2.33	1.86	2.02	1.55	2.33	2.02	2.02
P21CST24	2.33	2.02	2.02	2.02	2.02	1.86	1.71	2.02	2.18	1.86

**MOTHER TERESA WOMEN'S UNIVERSITY  
KODAIKANAL – 624 102**

**M.Sc. COMPUTER SCIENCE**

**Syllabus  
(With Effect from 2021)**



**DEPARTMENT OF COMPUTER SCIENCE**

**MOTHER TERESA WOMEN'S UNIVERSITY  
KODAIKANAL**

**DEPARTMENT OF COMPUTER SCIENCE**

**CHOICE BASED CREDIT SYSTEM (CBCS)**

**(2021-2022 ONWARDS)**

**M.Sc. COMPUTER SCIENCE**

**1. About the Programme**

M.Sc. in Computer Science is a two-year post-graduate programme with the objective to develop human resources with core competence in various thrust areas of Computer Science. The programme includes Software Engineering, System Development, Natural Computation, Mathematical Foundation, Data Analytics and Artificial Intelligence.

Other modules include programming, data analytics, software development, applied communications, network architecture, and database design. The coursework of the programme focuses on preparing students for innovation within major tech companies or entrepreneurship within startup ventures.

Students are provided with opportunities to develop and have core competency in the field of Computer Science and encourage them to make a mark in the much sought after IT industry. Guest lectures, case studies and presentations are organized from time to time to give an insight into the latest development and happenings in the industry

**2. PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)**

<b>PEO1</b>	To provide technology-oriented students with the knowledge and ability to develop creative solutions.
<b>PEO2</b>	To develop skills to learn new technology.
<b>PEO3</b>	To apply computer science theory and software development concepts to construct computing-based solutions.
<b>PEO4</b>	To design and develop computer programs/computer-based systems in the areas related to algorithms, networking, web design, cloud computing, Artificial Intelligence, Mobile applications.

**3. Eligibility:** B.Sc. CS / B.C.A. / B.Sc. IT

**4. General Guidelines for PG Programme**

- i. **Duration:** The programme shall extend through a period of 4 consecutive semesters and the duration of a semester shall normally be 90 days or 450 hours. Examinations shall be conducted at the end of each semester for the respective subjects.
- ii. **Medium of Instruction:** English
- iii. **Evaluation:** Evaluation of the candidates shall be through Internal Assessment and External Examination.

- Evaluation Pattern**

Evaluation Pattern	Theory		Practical	
	Min	Max	Min	Max
Internal	13	25	13	25
External	38	75	38	75

- **Internal (Theory): Test (15) + Assignment (5) + Seminar/Quiz(5) = 25**
- **External Theory: 75**

- Question Paper Pattern for External examination for all course papers.**

**Max. Marks: 75**

**Time: 3 Hrs.**

S.No.	Part	Type	Marks
1	A	<b>10*1 Marks=10</b> Multiple Choice Questions (MCQs): 2 questions from each Unit	<b>10</b>
2	B	<b>5*4=20</b> Two questions from each Unit with Internal Choice (either / or)	<b>20</b>
3	C	<b>3*15=45</b> Open Choice: Any three questions out of 5 : one question from each unit	<b>45</b>
Total Marks			<b>75</b>

**\* Minimum credits required to pass: 90**

- Project Report**

A student should select a topic for the Project Work at the end of the third semester itself and submit the Project Report at the end of the fourth semester. The Project Report shall not exceed 75 typed pages in Times New Roman font with 1.5 line space.

- Project Evaluation**

There is a Viva Voce Examination for Project Work. The Guide and an External Examiner shall evaluate and conduct the Viva Voce Examination. The Project Work carries 100 marks (Internal: 25 Marks; External (Viva): 75 Marks).

## 5. Conversion of Marks to Grade Points and Letter Grade

### (Performance in a Course/Paper)

Range of Marks	Grade Points	Letter Grade	Description
90 – 100	9.0 – 10.0	O	Outstanding
80-89	8.0 – 8.9	D+	Excellent
75-79	7.5 – 7.9	D	Distinction
70-74	7.0 – 7.4	A+	Very Good
60-69	6.0 – 6.9	A	Good
50-59	5.0 – 5.9	B	Average
00-49	0.0	U	Re-appear
ABSENT	0.0	AAA	ABSENT

## 6. Attendance

Students must have earned 75% of attendance in each course for appearing for the examination. Students with 71% to 74% of attendance must apply for condonation in the Prescribed Form with prescribed fee. Students with 65% to 70% of attendance must apply for condonation in the Prescribed Form with the prescribed fee along with the Medical Certificate. Students with attendance less than 65% are not eligible to appear for the examination and they shall re-do the course with the prior permission of the Head of the Department, Principal and the Registrar of the University.

## 7. Maternity Leave

The student who avails maternity leave may be considered to appear for the examination with the approval of Staff i/c, Head of the Department, Controller of Examination and the Registrar.

## 8. Any Other Information

In addition to the above mentioned regulations, any other common regulations pertaining to the PG Programmes are also applicable for this Programme.

**PROGRAMME OUTCOMES**

After completing M.Sc. Computer Science Program, the students will be able to:

<b>PO1</b>	To provide advanced and in-depth knowledge of computer science and its applications
<b>PO2</b>	To prepare Post Graduates who will achieve peer-recognition; as an individual or in a team; through demonstration of good analytical, design and implementation skills.
<b>PO3</b>	To enable students pursue a professional career in Information and Communication
<b>PO4</b>	Technology in related industry, business and research.
<b>PO5</b>	To impart professional knowledge and practical skills to the students.
<b>PO6</b>	Apply computer science theory and software development concepts to construct computing-based solutions.

**PROGRAMME SPECIFIC OUTCOMES (PSOs)**

After completing M.Sc. Computer Science Program, the students will be able to:

<b>PSO1</b>	Have the knowledge in the areas like Artificial Intelligence, Web Services, Cloud Computing, Paradigm of Programming language, Design and Analysis of Algorithms, Database Technologies Advanced Operating System, Mobile Technologies, Software Project Management and core computing subjects. Choose to study any one subject among recent trends in IT provided in the optional subjects.
<b>PSO2</b>	Understand all dimensions of the concepts of software application and projects.
<b>PSO3</b>	Understand the computer subjects with demonstration of all programming and theoretical concepts with the use of ICT.
<b>PSO4</b>	Develop in-house applications in terms of projects.

**M.SC COMPUTER SCIENCE CURRICULUM**

<b>SEMESTER- I</b>								
<b>S.No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Hours</b>		<b>Int</b>	<b>Ext</b>	<b>Total</b>
				<b>L</b>	<b>P</b>			
1.	P21CST11	<b>Core-1:</b> Advanced JAVA Programming	4	5	-	25	75	100
2.	P21CST12	<b>Core-2:</b> Data Structures and Algorithms	4	5	-	25	75	100
3.	P21CST13	<b>Core-3:</b> Discrete Mathematical Structure	4	5	-	25	75	100
4.	P21CST14	<b>Core-4:</b> Compiler Design	4	5	-	25	75	100
5.	P21CSP11	<b>Core-5: Computing-Lab1</b> (Advanced JAVA and Data Structures & Algorithms)	4	-	6	25	75	100
6.	P21CSS11	<b>Supportive Course I:</b> Computer Skills for Web Designing and Video Editing	2	-	4	25	75	100
<b>Sub Total</b>			<b>22</b>	<b>30</b>				<b>600</b>
<b>SEMESTER – II</b>								
7	P21CST21	<b>Core-6:</b> Python Programming	4	4	-	25	75	100
8	P21CST22	<b>Core-7:</b> Cryptography and Network Security	4	4	-	25	75	100
9	P21CST23	<b>Core-8:</b> Distributed Operating System	4	4	-	25	75	100
10	P21CST24	<b>Core-9:</b> NoSQL Databases	4	4	-	25	75	100
11	P21CSP22	<b>Core-10: Computing-Lab2</b> (Python Programming & Operating System)	4	-	6	25	75	100
12		<b>Non Major Elective</b>	4	-	6	25	75	100
13	P21CSS22	<b>Supportive Course – 2:</b> Web Programming	2	-	2	25	75	100
<b>Sub Total</b>			<b>26</b>	<b>30</b>				<b>700</b>
<b>SEMESTER – III</b>								
14	P21CST31	<b>Core-11:</b> Digital Image Processing	4	4	-	25	75	100
15	P21CST32	<b>Core-12:</b> Cloud Computing	4	4	-	25	75	100
16	P21CST33	<b>Core-13:</b> Artificial Intelligence and Machine Learning Algorithms	4	4	-	25	75	100
17	P21CST34	<b>Core-14:</b> Internet of things	4	4	-	25	75	100
18	P21CSP33	<b>Core-15: Computing-Lab3</b> (Image Processing)	4	-	6	25	75	100
19	P21CSP34	<b>Core-16: Computing-Lab4</b> (R Programming)	4	-	6	25	75	100
20	P21WSS33	<b>Supportive Course – 3:</b> Women Empowerment	2	2	-	25	75	100
<b>Sub Total</b>			<b>26</b>	<b>30</b>				<b>700</b>
<b>SEMESTER – IV</b>								
21	P21CSE411/	<b>Elective – I*</b>	4	4	-	25	75	100

	P21CSE412/ P21CSE413	1. Object Oriented Analysis and Design 2. Computational Linguistics 3. Client Server Computing 4. Any MOOC Course <sup>§</sup>						
22	P21CSE421/ P21CSE422/ P21CSE423/	<b>Elective – II*</b> 1. Big Data Analytics 2. Soft Computing 3. Wireless Sensor Networks 4. Any MOOC Course <sup>§</sup>	4	4	-	25	75	100
23	P21CSR41	<b>Core-17: Project</b>	8	-	22	25	75	100
		<b>Sub Total</b>	<b>16</b>	<b>30</b>				<b>300</b>
		<b>Total</b>	<b>90</b>	<b>120</b>				<b>2300</b>

### Non Major Elective

The candidates who have joined the PG Programme, can also undergo Non Major Elective offered by other Departments.

#### List of Non-Major Electives:

S.No.	Course code	Non Major Elective Course Name
1	P21CSN211	C Programming
2	P21CSN212	Photo Designing
3	P21CSN213	Big Data Analytics
4	P21CSN214	Digital Image Processing
5	P21CSN215	Mobile Computing
6	P21CSN216	Data Communication and Networking
7	P21CSN217	Cloud Computing

### ADDITIONAL CREDIT COURSES

P21CSV11	Big Data Analytics Lab	I Semester – 2 Credits
P21CSI21	Internship	II Semester – 2 Credits
P21CSO31	MOOC	III Semester – 2 Credits
P21CSV42	Soft Computing Lab	IV Semester – 2 credits

\*Those who have CGPA 9 and want to do the project in Industry / Institution during 4th semester, these two elective papers in IV semester can be opted in third semester itself.

<sup>§</sup>For Elective – I / Elective- II, the students can also take either one 4-credit course or two 2-credit courses in MOOC, with the approval of Departmental Committee.

**SEMESTER - II**

<b>COURSE CODE</b>	<b>P21CST21</b>	<b>PYTHON PROGRAMMING</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>CORE - VI</b>			<b>4</b>	<b>-</b>	<b>-</b>	<b>4</b>

<b>Cognitive Level</b>	<b>K1: Recall</b> <b>K2: Understand</b> <b>K3: Apply</b> <b>K4: Analyse</b>
<b>Objectives</b>	<ul style="list-style-type: none"> <li>To understand why Python is a useful scripting language for developers.</li> <li>To learn how to design and program Python applications.</li> <li>To learn how to use lists, tuples, and dictionaries in Python programs.</li> <li>To learn how to identify Python object types.</li> </ul>

**UNIT I : Python Programming: An Introduction**

IDLE an Interpreter for Python, Python Strings, Relational Operators, Logical Operators, Bitwise Operators, Variables and Assignment Statements, Keywords, Script Mode. **Functions** - Built-in Functions ,Function Definition and Call, Importing User-defined Module, Assert Statement, Command Line Arguments. **Control Structures** - if Conditional Statement, Iteration (for and while Statements).

**UNITII: Scope**

Objects and Object IDs, Scope of Objects and Names. **Strings:** Strings, String Processing Examples, Pattern Matching. **Mutable and Immutable Objects** – Lists, Sets, Tuples, Dictionary.

**UNIT III :Recursion**

Recursive Solutions for Problems on Numeric Data, Recursive Solutions for Problems on Strings, Recursive Solutions for Problems on Lists, Problem of Tower of Hanoi. **Files and Exceptions:** File Handling, Writing Structures to a File, Errors and Exceptions, Handling Exceptions Using try...except, File Processing Example.

**UNITIV: Classes I**

Classes and Objects, Person: An Example of Class, Class as Abstract Data Type, Date Class. **Classes II** - Polymorphism, Encapsulation, Data Hiding, and Data Abstraction, Modifier and Accessor Methods, Static Method, Adding Methods Dynamically, Composition, Inheritance, Built-in Functions for Classes.

**UNIT V: Graphics**

2D Graphics, Animation – Bouncing Ball.

**Applications of Python**

- Collecting Information from Twitter, Sharing Data Using Sockets, Managing Databases using Structured Query Language (SQL), Developing Mobile Application for Android, Integrating Java with Python.

**TEXTBOOK(S):**

1. SheetalTaneja, Naveen Kumar, Python Programming, a Modular Approach with Graphics, Database, Mobile, and Web Applications, Pearson Publication, 2018.

**REFERENCEBOOK(S):**

1. ReemaThareja, Python Programming, Oxford University Press, 2017
2. Lambert, Fundamentals of Python Programming, Cengage Publications, 2017
3. E.Balagurusamy, Problem Solving using Python, McGraw Hill Education Ltd., 2017 CRC Press.
4. Dieter Uckelmann; Mark Harrison; Architecting the Internet of Things Florian Michahelles, (Eds.) Springer, 2011.
5. Oliver Hersent, David Boswarthick, Omar Elloumi, The Internet of Things, Key Applications and Protocols, Wiley , 2017

**COURSE OUTCOMES**

- CO1: Describe the basic concepts of python programming, Functions and control structures. K2
- CO2: Understand Strings, Mutable and immutable objects. K3
- CO3: Understand Recursion and Files and exception. K2
- CO4: Discuss classes, objects, polymorphism, encapsulation and inheritance. K3
- CO5: Apply python for collecting information from twitter, sharing data using sockets, managing database, and mobile application for android. K4

**MAPPING OF COs WITH POs AND PSOs :**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	PSO4
CO1	S	S	M	M	M	M	M	S	S	M
CO2	S	S	M	S	S	S	M	S	S	S
CO3	S	S	S	M	M	M	M	S	M	M
CO4	S	S	M	S	M	S	M	S	S	S
CO5	S	S	S	S	S	S	M	M	S	S

S – Strongly Correlating - 3 Marks

M- Moderately Correlating - 2 Marks

W-Weakly Correlating - 1 Mark

<b>COURSE CODE</b>	<b>P21CST22</b>	<b>CRYPTOGRAPHY AND NETWORK SECURITY</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>CORE - VII</b>			<b>4</b>	<b>-</b>	<b>-</b>	<b>4</b>

<b>Cognitive Level</b>	<b>K1: Recall K2: Understand K3: Apply K4:Analyse</b>
<b>Objectives</b>	<ul style="list-style-type: none"> <li>To learn about the Number Theory</li> <li>To Understand the basics of Cryptography</li> <li>To Understand Hash Functions and Cryptography</li> <li>To Know about Security Procedure and System Security .</li> </ul>

### UNIT – I: Introduction& Number Theory

Services, Mechanisms and attacks – the OSI security architecture - Network security model - Classical Encryption techniques (Symmetric cipher model, substitution techniques, transposition techniques, steganography). FINITE FIELDS AND NUMBER THEORY: Groups, Rings, Fields-Modular arithmetic-Euclid’s algorithm-Finite fields - Polynomial Arithmetic – Prime numbers-Fermat’s and Euler’s theorem-Testing for primality - The Chinese remainder theorem- Discrete logarithms.

### UNIT – II: Block Ciphers & Public Key Cryptography

Data Encryption Standard-Block cipher principles-block cipher modes of operation-Advanced Encryption Standard (AES) - Triple DES – Blowfish - RC5 algorithm. Public key cryptography: Principles of public key cryptosystems-The RSA algorithm-Key management - Diffie Hellman Key exchange - Elliptic curve arithmetic - Elliptic curve cryptography.

### UNIT – III: Hash Functions and Digital Signatures

Authentication requirement – Authentication function – MAC – Hash function – Security of hash function and MAC –MD5 - SHA - HMAC – CMAC - Digital signature and authentication protocols – DSS – El Gamal – Schnorr.

### UNIT – IV: Security Practice & System Security

Authentication applications – Kerberos – X.509 Authentication services - Internet Firewalls for Trusted System: Roles of Firewalls – Firewall related terminology- Types of Firewalls - Firewall designs - SET for E-Commerce Transactions. Intruder – Intrusion detection system – Virus and related threats – Countermeasures – Firewalls design principles – Trusted systems – Practical implementation of cryptography and security.

### UNIT V: E-Mail, IP & Web Security

E-mail Security: Security Services for E-mail-attacks possible through E-mail - establishing keys privacy-authentication of the source-Message Integrity-Non-repudiation-Pretty Good Privacy-S/MIME. IPSecurity: Overview of IPsec - IP and IPv6-Authentication Header-Encapsulation Security Payload (ESP)-Internet Key Exchange (Phases of IKE, ISAKMP/IKE Encoding). Web Security: SSL/TLS Basic Protocol-computing the keys- client authentication-PKI as deployed by SSL Attacks fixed in v3- Exportability-Encoding-Secure Electronic Transaction (SET).

**Text Book(s):**

1. William Stallings, Cryptography and Network Security, 6 th Edition, Pearson Education, March, 2013.
2. Charlie Kaufman, Radia Perlman and Mike Speciner, “Network Security”, Prentice Hall of India, 2002.

**Reference Book(s):**

1. Behrouz A. Ferouzan, “Cryptography & Network Security”, Tata McGraw Hill, 2007.
2. Man Young Rhee, “Internet Security: Cryptographic Principles”, “Algorithms and Protocols”, Wiley Publications, 2003.
3. Charles P Fleeger, “Security in Computing”, 4th Edition, Prentice Hall of India, 2006.
4. Ulysess Black, “Internet Security Protocols”, Pearson Education Asia, 2000.
5. Charlie Kaufman and Radia Perlman, Mike Speciner, “Network Security, Second Edition, Private Communication in Public World”, PHI, 2002.
6. Bruce Schneier and Neils Ferguson, “Practical Cryptography”, First Edition, Wiley Dreamtech India Pvt Ltd, 2003.
7. Douglas R Simson “Cryptography – Theory and practice”, First Edition, CRC Press, 1995.

**COURSEOUTCOMES**

CO1: Understand the Number Theory	K1
CO2: Understand the basics of Cryptography	K2
CO3: Understand Hash Functions and Cryptography	K3
CO4: Understand Security Procedure and System Security	K3
CO5: Understand the various Security Services	K4

**MAPPING OF COs WITH POs AND PSOs :**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	PSO4
CO1	S	S	M	S	M	M	M	S	S	M
CO2	S	S	M	S	M	S	M	S	S	S
CO3	S	S	S	S	M	M	M	S	M	M
CO4	S	S	S	S	S	S	M	S	M	S
CO5	S	S	M	S	S	S	M	S	S	S

S – Strongly Correlating - 3 Marks

M- Moderately Correlating - 2 Marks

W-Weakly Correlating - 1 Mark

<b>COURSE CODE</b>	<b>P21CST23</b>	<b>DISTRIBUTED OPERATING SYSTEM</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>CORE - VIII</b>			<b>4</b>	<b>-</b>	<b>-</b>	<b>4</b>

<b>Cognitive Level</b>	<b>K1: Recall</b> <b>K2: Understand</b> <b>K3: Apply</b> <b>K4: Analyze</b>
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• To study features of Distributed operating system.</li> <li>• To understand the communication of different hardware and software in distributed environment.</li> <li>• To learn the distributed resource management components.</li> <li>• To gain knowledge on modern operating system working principles.</li> </ul>

### UNIT - I: Introduction

Introduction – Operating System Definition – Functions of Operating System – Types of Advanced Operating System – Design Approaches – Synchronization Mechanisms – concepts of a Process – Critical Section Problem – Process Deadlock – Models of Deadlock – Conditions for Deadlock – System with single-unit requests, Consumable Resources , Reusable Resources.

### UNIT - II: Distributed Operating Systems

Distributed Operating Systems: Introduction- Issues – Communication Primitives – Inherent Limitations –Lamport’s Logical Clock, Vector Clock, Global State , Cuts – Termination Detection – Distributed Mutual Exclusion – Non Token Based Algorithms – Lamport’sAlgorithm - Token Based Algorithms –Distributed Deadlock Detection – Distributed Deadlock Detection Algorithms – Agreement protocols.

### UNIT - III Distributed Resource Management

Distributed Resource Management – Distributed File Systems – Architecture – Mechanisms – Design Issues – Distributed shared Memory – Architecture – Algorithm – Protocols – Design Issues – Distributed Scheduling – Issues – Components – Algorithms.

### UNIT - IV Failure Recovery and Fault Tolerance

Failure Recovery and Fault Tolerance – Concepts – Failure Classifications – Approaches to Recovery – Recovery in Concurrent Systems – Synchronous and Asynchronous Check pointing and Recovery –Check pointing in Distributed Database Systems – Fault Tolerance Issues – Two-Phase and Non-blocking Commit Protocols – Voting Protocols – Dynamic Voting Protocols.

### UNIT - V: Multiprocessor and Database OS

Multiprocessor and Database Operating Systems –Structures – Design Issues – Threads – Process Synchronization – Processor Scheduling – Memory management – Reliability/Fault Tolerance – Database Operating Systems – concepts – Features of Android OS, Ubuntu, Google Chrome OS and Linux operating systems.

#### Text Book(s):

1. MukeshSinghalN.G.Shivaratri, “Advanced Concepts in Operating Systems”, McGraw Hill, 2000.
2. Andrew S.Tanenbaum, Distributed Operating System, PHI, 1994.

**Reference Book(s):**

1. Abraham Silberschatz, Peter B.Galvin, G.Gagne, "Operating Concepts", 6th Edition Addison Wesley publications, 2003.
2. Andrew S.Tanenbaum, "Modern Operating Systems", 2nd Edition Addison Wesley, 2001

**COURSE OUTCOMES**

- CO1: Understand the Operating System Structure and its Services K1
- CO2: Understand the efficient Scheduling of Multiple Process Execution. K2
- CO3: Understand the efficient allocation of available memory among multiple processes K3
- CO4: Understand the Device Management System K3
- CO5: Compare and Contrast the features of Windows and LINUX operating Systems in terms of their services. K4

**MAPPING OF COs WITH POs AND PSOs :**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PSO 1	PSO 2	PSO 3	PSO 4
CO1	S	S	M	M	M	M	M	S	S	M
CO2	S	S	M	S	S	S	M	S	S	S
CO3	S	S	S	M	M	M	M	S	M	M
CO4	S	S	M	S	M	S	M	S	S	S
CO5	S	S	S	S	S	S	M	M	S	S

S – Strongly Correlating - 3 Marks

M- Moderately Correlating - 2 Marks

W-Weakly Correlating - 1 Mark

<b>COURSE CODE</b>	<b>P21CST24</b>	<b>NoSQL DATABASES</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>CORE – IX</b>			<b>4</b>	<b>-</b>	<b>-</b>	<b>4</b>

<b>Cognitive Level</b>	<b>K1: Recall</b>	<b>K2: Understand</b>	<b>K3: Apply</b>	<b>K4: Analyze</b>
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• Distinguish the different types of NoSQL databases</li> <li>• To learn the Database Terminology</li> <li>• To understand Document Database</li> <li>• To learn Column Family Database.</li> </ul>			

### UNIT I: Introduction

Database System Applications - View of Data - Database Languages - Relational Databases - Database Design - Data Storage and Querying - Transaction Management - Database Architecture - Data Mining and Information Retrieval - Specialty Databases - Database Users and Administrators - History of Database Systems.

**Relational Databases: Introduction to the Relational Model:** Structure of Relational Databases - Database Schema - Keys - Schema Diagrams - Relational Query Languages –Relational Operations.

### UNIT II: Variety of NoSQL Databases :

Data Management with Distributed Databases - ACID and BASE - Four Types of NoSQL Databases. **Key-Value Databases:** From Arrays to Key-Value Databases - Essential Features of Key-Value Databases - Keys: More Than Meaningless Identifiers.

**Key-Value Database Terminology:** Key-Value Database Modeling Terms - Key-Value Architecture Terms - Key-Value Implementation Terms.

### UNIT III: Document Databases:

What is a Document - Avoid Explicit Schema Definitions - Basic Operations on Document Databases. **Document Database Terminology:** Document and Collection Terms - Types of Partitions - Data Modeling and Query Processing.

**Designing for Document Databases:** Normalization, Denormalization, and the Search for Proper Balance - Planning for Mutable Documents - The Goldilocks Zone of Indexes - Modeling Common Relations.

### UNIT IV: Family Databases

**Column Family Databases:** In the Beginning, There was Google Big Table - Differences and Similarities to Key-Value and Document - Architectures Used in Column Family Databases - When to Use Column Family Databases.

**Column Family Database Terminology:** Basic Components of Column Family Databases - Structures and Processes: Implementing Column Family -Processes and Protocols.

**Designing for Column Family Databases:** Guidelines for Designing Tables-Guidelines for Indexing-Tools for Working with Big Data

### UNIT V: Graph Database

**Graph Databases:** What is a Graph - Graphs and Network Modeling - Advantages of Graph Databases.

**Graph Database Terminology:** Elements of Graphs - Operations on Graphs - Properties of Graphs and Nodes - Types of Graphs.

**Designing for Graph Databases:** Getting Started with Graph Design - Querying a Graph - Tips and Traps of Graph Database Design.

**BOOKS FOR STUDY:**

1. Abraham Silberschatz, Henry F. Korth, S. Sudarshan, “**Database System Concepts**”, Sixth Edition, McGrawHill,2016.  
**UNITI** : Chapters: 1, 2
2. Dan Sullivan, Addison-Wesley, “**NoSQL for Mere Mortals**”, Pearson India Education Services Pvt. Ltd.,2016.

**BOOKS FOR REFERENCE:**

1. SAMS, Brad Dayley, “**NoSQL with MongoDB in 24 Hours**”, Pearson Education, First Edition,2015.
2. Kyle Banker, Peter Bakkum, Shaun Verch, Douglas Garrett, Tim Hawkins, “**MongoDB in Action**”, Dreamtech Press, Second Edition,2017.

**COURSE OUTCOMES**

CO1: Acquire a deep knowledge on relational Database, Structured Query Language and Data Modeling K1

CO2: Acquire the Knowledge on MongoDB query language K2

CO3: Comprehend the principles of NoSQL K2

CO4: Differentiate NoSQL key value database and Document database K2

CO5: Know the concept of Column database and Understand the data modeling techniquesK2

**MAPPING OF COs WITH POs AND PSOs :**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	PSO4
CO1	S	S	M	M	M	M	M	S	S	M
CO2	S	M	S	S	S	M	S	M	M	S
CO3	S	S	S	S	S	M	M	S	S	M
CO4	S	S	M	M	S	S	M	S	S	S
CO5	S	M	S	M	M	S	M	M	S	M

S – Strongly Correlating - 3 Marks

M- Moderately Correlating - 2 Marks

W-Weakly Correlating - 1 Mark



**Mother Teresa Women's University, Kodaikanal**  
**PG PROGRAMME : CHOICE BASED CREDIT SYSTEM**  
**GRADE SHEET**

Degree : **M. SC**

Programme : **COMPUTER SCIENCE**

MEDIUM: ENGLISH

Name of Examinee & Date of Birth	Register Number	Folio Number	Month & Year
PRIYADHARSINI. T 30/05/2001	214326ER018	<b>002069</b>	APR 2022
Name of the College/ Univ. Dept.	M.V. MUTHIAH GOVERNMENT ARTS COLLEGE FOR WOMEN, DINDIGUL.		Date of Result
			01/09/2022

SEMESTER	COURSE CODE	COURSE TITLE	CREDIT	MAXIMUM			MARKS SECURED			GRADE POINT	GRADE	RESULT
				ESE	CIA	TOTAL	ESE	CIA	TOTAL			
II	P21CST21	PYTHON PROGRAMMING	4	75	25	100	44	23	67	6.7	A	P
II	P21CST22	CRYPTOGRAPHY AND NETWORK SECURITY	4	75	25	100	38	24	62	6.2	A	P
II	P21CST23	DISTRIBUTED OPERATING SYSTEM	4	75	25	100	55	24	79	7.9	D	P
II	P21CST24	NOSQL DATABASES	4	75	25	100	46	24	70	7.0	A+	P
II	P21CSP22	COMPUTING-LAB-II (PYTHON PROGRAMMING AND OPERATING SYSTEM)	4	75	25	100	75	25	100	10.0	O	P
II	P21CSS22	COMPUTER SKILLS FOR WEB DESIGNING AND VIDEO EDITING	2	75	25	100	73	24	97	9.7	O	P
II	P21CSNNN	ELEMENTS OF NANOSCIENCE AND NANOTECHNOLOGY	4	75	25	100	44	25	69	6.9	A	P
II	P21CSI21	INTERNSHIP	2	100	-	100	95	-	95	9.5	O	P
*** END OF STATEMENT ***												

<b>PERFORMANCE IN THE CURRENT SEMESTER</b>			
CREDITS EARNED :	26	GPA :	7.623
	2*		

**\*Extra Credits**  
 Change(s) / Overscripts should bear competent attestation of the Mother Teresa Women's University, Kodaikanal with Official seal, else the Certificate is Invalid.

Signature of the Student

DATE : 23/02/2023

DETAILS OVERLEAF



*A. Clara Dhyana*  
 CONTROLLER OF EXAMINATIONS



**COURSE ATTAINMENT CALCULATION (UG PROGRAMME)  
PG AND RESEARCH DEPARTMENT OF COMPUTER SCIENCE  
III B.SC COMPUTER SCIENCE**

CONTINUOUS INTERNAL ASSESSMENT										EXTERNAL - UNIVERSITY ASSESSMENT					
SUBJECT CODE	REGISTER NO	TEST 1 (15)	TEST 2 (15)	TEST 3 (15)	AVERAGE OF TWO TESTS (15)	ASSIGNMENT (5)	ATTENDANCE (5)	ROUND OFF (25)	INTERNAL (25)	EXTERNAL (75)	TOTAL (100)	GRADE POINT	GRADE	RESULT	MONTH & YEAR
UCST61	19326ER028	14.5	14.5	13	14.5	5	5	25	25	45	70	7	A+	P	A 22
	19326ER047	10	8	14	12	5	5	22	22	52	74	7.4	A+	P	A 22
	19326ER049	11	9	A	10	5	5	20	20	51	71	7.1	A+	P	A 22
UCST62	19326ER028	15	14	13	14.5	5	5	25	25	52	77	7.7	D	P	A 22
	19326ER047	12	14.1	12.3	13	5	5	23	23	53	76	7.6	D	P	A 22
	19326ER049	11.5	12	11.7	11.9	5	5	22	22	45	67	6.7	A	P	A 22
UCST63	19326ER028	3.5	13	11.5	12.3	5	5	22	22	31	53	5.3	B	P	A 22
	19326ER047	9	13	15	14	5	5	24	24	54	78	7.8	D	P	A 22
	19326ER049	2.5	12.5	14	13.3	5	5	23	23	57	80	8	D+	P	A 22

Conversion of Marks to Grade Points and Letter Grade (Performance in a Course/Paper)			
RANGE OF MARKS	GRADE POINTS	LETTER GRADE	DESCRIPTION
90-100	9.0-10.0	O	Outstanding
80-89	8.0-8.9	D+	Excellent
75-79	7.5-7.9	D	Distinction
70-74	7.0-7.4	A+	Very Good
60-69	6.0-6.9	A	Good
50-59	5.0-5.9	B	Average
40-49	4.0-4.9	C	Satisfactory
00-39	0	U	Re-appear
ABSENT	0	AAA	ABSENT

ATTENDANCE CALCULATION	
Working Days (90)	Marks (5)
85-90	5
75-85	4
75 below	3

*D. Lakshmi*  
Principal  
M.V. Muthiah Govt.  
Arts College (W)  
Dindigul - 1.

*J. Lakshmi*  
HEAD  
DEPT. OF COMPUTER SCIENCE  
M.V. MUTHIAH GOVT ARTS COLLEGE FOR WOMEN  
DINDIGUL

**COURSE ATTAINMENT CALCULATION (UG - PROGRAMME)  
PG DEPARTMENT OF ZOOLOGY**

**PROGRAMME: B.Sc., ZOOLOGY**

**NAME: K . ABITIHA**

**REG NO: 19338ER002**

COURSE ATTAINMENT CALCULATION (UG - PROGRAMME)															
S.NO	SUBJECT CODE	TEST 1 (15)/(25)	TEST 2 (15)/(25)	TEST 3 (15)/(25)	AVERAGE OF TWO TESTS (15)	ASSIGNMENT (5)	ATTENDANCE (5)	ROUND OFF (25)	INTERNAL (25)	EXTERNAL (75)	TOTAL (100)	GRADE POINT	GRADE	RESULT	MONTH & YEAR
1.	UZOT11	14.75	14	14.5	14.6	5	5	25	25	66	91	9.1	O	P	N 2019
2.	UZOT12	13.5	13.5	14	13.8	5	5	24	24	58	82	8.2	D+	P	N 2019
3.	UZOT21	13.5	14.25	14	14.12	5	5	24	24	62	86	8.6	D+	P	A 2020
4.	UZOP21	-	-	-	-	-	-	24	24	72	96	9.6	O	P	A 2020
5.	UZOT31	13.25	13.75	14	13.8	5	5	24	24	66	90	9.0	O	P	A 2020
6.	UZOE31	10	12	11.5	14.1	5	5	24	24	70	94	9.4	O	P	N 2020
7.	UZOS31	20	23	21	-	-	-	23	23	68	91	9.1	O	P	N 2020
8.	UZOT41	11.75	13.75	15	14.62	5	5	25	25	73	98	9.8	O	P	A 2021

9.	UZOP42	-	-	-	-	-	-	25	25	75	100	10.00	O	P	A 2021
10.	UZOE42	15	14.5	13.5	14.75	5	5	25	25	75	100	10.00	O	P	A 2021
11.	UZOS42	19	22	23	-	-	-	23	23	68	91	9.1	O	P	A 2021
12.	UZOT51	12.75	14.5	14	14.25	5	5	24	24	65	89	8.9	D+	P	N 2021
13.	UZOT52	14.5	14.5	14	14.5	5	5	25	25	70	95	9.5	O	P	N 2021
14.	UZOT53	10	11.5	11.7	11.62	5	5	22	22	68	90	9.0	O	P	N 2021
15.	UZOT54	14.5	14.5	11.25	14.50	5	5	25	25	71	96	9.6	O	P	N 2021
16.	UZOT55	13.25	12.75	13	13.1	5	5	23	23	67	90	9.0	O	P	N 2021
17.	UZOE53	14	13.5	14	14	5	5	24	24	68	92	9.2	O	P	N 2021
18.	UZOS53	23	21	21.5	-	-	-	23	23	51	74	7.4	A+	P	N 2021
19.	UZOT61	14	12.5		14	5	5	24	24	70	94	9.4	O	P	A 2022
20.	UZOT62	12.5	10.5	12.5	12.5	5	5	23	23	64	87	8.7	D+	P	A 2022
21.	UZOT63	13.75	11	13.5	13.6	5	5	24	24	66	90	9.0	O	P	A 2022
22.	UZOP63	-	-	-	-	-	-	24	24	74	98	9.8	O	P	A 2022
23.	UZOP64	-	-	-	-	-	-	24	24	75	99	9.9	O	P	A 2022
24.	UZOE64	12	13.25	13	13.1	5	5	23	23	70	93	9.3	O	P	A 2022
25.	UZOS64	21.5	23.5	24	-	-	-	24	24	72	96	9.6	O	P	A 2022

HIGHER STUDIES	M.Sc- HOME COLLEGE
PLACEMENT	-
EXTRA CURRICULUR ACTIVITY	-

RANGE OF MARKS	GRADE POINTS	LETTER GRADE	DESCRIPTION
90-100	9.0-10.0	O	Outstanding
80-89	8.0-8.9	D+	Excellent
75-79	7.5-7.9	D	Distinction
70-74	7.0-7.4	A+	Very Good
60-69	6.0-6.9	A	Good
50-59	5.0-5.9	B	Average
00-49	0	U	Re-appear
ABSENT	0	AAA	ABSENT

ATTENDANCE CALCULATION	
Days (90)	Marks (5)
85-90	5
75-85	4
75 below	3

Dr.P. SATHIYA BAMA, M.Sc., M.Phil., Ph.D.  
ASSOCIATE PROFESSOR AND HEAD  
DEPT OF ZOOLOGY,  
M.V.MUTHIAH GOVT ARTS COLLEGE(W)  
DINDIGUL - 1

Principal  
M.V. Muthiah Govt.  
Arts College (W)  
Dindigul - 1.

**PROGRAMME: B.Sc., ZOOLOGY**

**NAME: A. MARIA AUXILIA**

**REG NO: 19338ER018**

**COURSE ATTAINMENT CALCULATION (UG - PROGRAMME)**

S.NO	SUBJECT CODE	TEST 1 (15)/(25)	TEST 2 (15)/(25)	TEST 3 (15)/(25)	AVERAGE OF TWO TESTS (15)	ASSIGNMENT (5)	ATTENDANCE (5)	ROUND OFF (25)	INTERNAL (25)	EXTERNAL (75)	TOTAL (100)	GRADE POINT	GRADE	RESULT	MONTH & YEAR
1.	UZOT11	8.25	9.5	13.25	11.4	5	4	20	20	30	50	5.0	B	P	N 2019
2.	UZOT12	7.25	9	12.25	10.6	5	5	21	21	41	62	6.2	A	P	N 2019
3.	UZOT21	12.5	8	7.5	10.3	4.5	4.5	19	19	45	64	6.4	A	P	A 2020
4.	UZOP21	-	-	-	-	-	-	20	20	60	80	8.0	D+	P	A 2020
5.	UZOT31	10.5	12.25	12.25	12.3	4	5	21	21	66	87	8.7	D+	P	A 2020
6.	UZOE31	9	10	9.5	11.7	5	5	22	22	63	85	8.5	D+	P	N 2020
7.	UZOS31	18	17	17	-	-	-	18	18	60	78	7.8	D+	P	N 2020
8.	UZOT41	11	11.75	12.25	12	5	5	22	22	68	90	9.0	O	P	A 2021
9.	UZOP42	-	-	-	-	-	-	19	19	68	87	8.7	D+	P	A 2021
10.	UZOE42	14	10.5	12.5	13.25	4	4	21	21	68	89	8.9	D+	P	A 2021

11.	UZOS42	15	20	17	-	-	-	20	20	54	74	7.4	A+	P	A 2021
12.	UZOT51	10.25	10	8.5	10.12	5	5	20	20	64	84	8.4	D+	P	N 2021
13.	UZOT52	10	12	11.75	11.87	5	5	22	22	66	88	8.8	D+	P	N 2021
14.	UZOT53	9	11.75	10	10.87	5	4.5	20	20	63	83	8.3	D+	P	N 2021
15.	UZOT54	11.5	11.5	12	11.8	5	5	22	22	65	87	8.7	D+	P	N 2021
16.	UZOT55	12.75	11.25	12.75	12.8	5	5	23	23	63	86	8.6	D+	P	N 2021
17.	UZOE53	12	9	12.5	12.2	5	4	21	21	52	73	7.3	A+	P	N 2021
18.	UZOS53	22	17	20	-	-	-	22	22	67	89	8.9	D+	P	N 2021
19.	UZOT61	11.5	9.25	11	11.25	5	4	20	20	58	78	7.8	D	P	A 2022
20.	UZOT62	9.5	7.5	11	10.2	5	5	20	20	50	70	7.0	A+	P	A 2022
21.	UZOT63	63	10	11	10.8	5	5	21	21	52	73	7.3	A+	P	A 2022
22.	UZOP63	-	-	-	-	-	-	19	19	69	88	8.8	B+	P	A 2022
23.	UZOP64	-	-	-	-	-	-	21	21	72	93	9.3	O	P	A 2022
24.	UZOE64	10.5	11.5	9.5	11	5	5	21	21	63	84	8.4	D+	P	A 2022
25.	UZOS64	18	21	22	-	-	-	22	22	67	89	8.9	D+	P	A 2022

<b>HIGHER STUDIES</b>	<b>M.Sc</b>
<b>PLACEMENT</b>	-
<b>EXTRA CURRICULUR ACTIVITY</b>	-

<b>RANGE OF MARKS</b>	<b>GRADE POINTS</b>	<b>LETTER GRADE</b>	<b>DESCRIPTION</b>
90-100	9.0-10.0	O	Outstanding
80-89	8.0-8.9	D+	Excellent
75-79	7.5-7.9	D	Distinction
70-74	7.0-7.4	A+	Very Good
60-69	6.0-6.9	A	Good
50-59	5.0-5.9	B	Average
00-49	0	U	Re-appear
ABSENT	0	AAA	ABSENT

<b>ATTENDANCE CALCULATION</b>	
<b>Days (90)</b>	<b>Marks (5)</b>
85-90	5
75-85	4
75 below	3

Dr.P. SATHIYA BAMA, M.Sc., M.Phil., Ph.D.  
ASSOCIATE PROFESSOR AND HEAD  
DEPT OF ZOOLOGY,  
M.V.MUTHIAH GOVT ARTS COLLEGE(W)  
DINDIGUL - 1

Principal  
M.V. Muthiah Govt.  
Arts College (W)  
Dindigul - 1.

PROGRAMME: B.Sc., ZOOLOGY

NAME: A.THULASI

REG NO: 19338ER032

**COURSE ATTAINMENT CALCULATION (UG - PROGRAMME)**

S.NO	SUBJECT CODE	TEST 1 (15)/(25)	TEST 2 (15)/(25)	TEST 3 (15)/(25)	AVERAGE OF TWO TESTS (15)	ASSIGNMENT (5)	ATTENDANCE (5)	ROUND OFF (25)	INTERNAL (25)	EXTERNAL (75)	TOTAL (100)	GRADE POINT	GRADE	RESULT	MONTH & YEAR
1.	UZOT11	13	11	13.2	13.1	4	5	22	22	43	65	6.5	A	P	N 2019
2.	UZOT12	13.5	10.5	14	13.8	5	5	24	24	39	63	6.3	A	P	N 2019
3.	UZOT21	12	9.5	13	12.5	5	5	23	23	53	76	7.6	D	P	A 2020
4.	UZOP21	-	-	-	-	-	-	23	23	69	92	9.2	O	P	A 2020
5.	UZOT31	12.5	11.2	8	11.87	5	5	22	22	61	83	8.3	D+	P	N 2020
6.	UZOE31	9	10	10.5	12.3	5	5	21	21	61	82	8.2	D+	P	N 2020
7.	UZOS31	20	18	17	-	-	-	20	20	61	81	8.1	D+	P	N 2020
8.	UZOT41	12	12	13.2	12.62	5	5	23	23	68	91	9.1	O	P	A 2021

9.	UZOP42	-	-	-	-	-	-	23	23	73	96	9.6	O	P	A 2021
10.	UZOE42	13.5	11.75	12	12.75	5	4	23	23	67	90	9.0	O	P	A 2021
11.	UZOS42	15	20	15	-	-	-	20	20	55	75	7.5	D	P	A 2021
12.	UZOT51	10.75	11.5	9.5	11.12	4	5	20	20	65	85	8.5	D+	P	N 2021
13.	UZOT52	13.25	12	13.5	13.37	5	5	23	23	65	88	8.8	D+	P	N 2021
14.	UZOT53	9.25	10.25	9.75	10	4	5	19	19	69	88	8.8	D+	P	N 2021
15.	UZOT54	11.5	11	12.25	11.8	5	5	22	22	62	84	8.4	D+	P	N 2021
16.	UZOT55	12.25	12	12	12.1	5	5	22	22	62	84	8.4	D+	P	N 2021
17.	UZOE53	10.5	14	12.5	13.2	5	5	23	23	64	87	8.7	D+	P	N 2021
18.	UZOS53	23	20	20.5	-	-	-	23	23	59	82	8.2	D+	P	N 2021
19.	UZOT61	12.25	10.5	14	13.12	5	5	23	23	62	85	8.5	D+	P	A 2022
20.	UZOT62	10	12.5	-	11.2	5	5	21	21	46	67	6.7	A	P	A 2022
21.	UZOT63	-	12	13	12.5	5	5	23	23	65	78	7.8	D	P	A 2022
22.	UZOP63	-	-	-	-	-	-	23	23	72	95	9.5	O	P	A 2022
23.	UZOP64	-	-	-	-	-	-	22	22	72	94	9.4	O	P	A 2022
24.	UZOE64	11.5	12	10.5	11.8	5	5	22	22	64	86	8.6	D+	P	A 2022
25.	UZOS64	19.5	19.5	21.5	-	-	-	22	22	66	88	8.8	D+	P	A 2022

HIGHER STUDIES	-
PLACEMENT	DANCE - TEACHER
EXTRA CURRICULUR ACTIVITY	DANCE - FINE ARTS WINNER

RANGE OF MARKS	GRADE POINTS	LETTER GRADE	DESCRIPTION
90-100	9.0-10.0	O	Outstanding
80-89	8.0-8.9	D+	Excellent
75-79	7.5-7.9	D	Distinction
70-74	7.0-7.4	A+	Very Good
60-69	6.0-6.9	A	Good
50-59	5.0-5.9	B	Average
00-49	0	U	Re-appear
ABSENT	0	AAA	ABSENT

ATTENDANCE CALCULATION	
Days (90)	Marks (5)
85-90	5
75-85	4
75 below	3



Dr. P. SATHIYAMOORTHY, M.Sc., M.Phil., Ph.D.  
ASSOCIATE PROFESSOR AND HEAD  
DEPT OF ZOOLOGY,  
M.V.MUTHIAH GOVT ARTS COLLEGE(W)  
DINDIGUL - 1

*P. Lakshmi*  
Principal  
M.V. Muthiah Govt.  
Arts College (W)  
Dindigul - 1.

## COURSE ATTAINMENT CALCULATION (PG - PROGRAMME)

PROGRAMME: M.Sc., ZOOLOGY

NAME: R.DEEPIKA

REG NO: 204338ER005

COURSE ATTAINMENT CALCULATION (PG - PROGRAMME)															
S.NO	SUBJECT CODE	TEST 1 (15)/(25)	TEST2 (15)/(25)	TEST 3 (15)/(25)	AVERAGE OF TWO TESTS (15)	ASSIGNMENT (5)	ATTENDANCE (5)	ROUND OFF (25)	INTERNAL (25)	EXTERNAL (75)	TOTAL (100)	GRADE POINT	GRADE	RESULT	MONTH & YEAR
1.	PZOT11	13.5	13.25	13.5	13.5	5	5	24	24	54	78	7.8	D	P	N 2020
2.	PZOT12	13.25	13	13	13.12	5	5	23	23	52	75	7.5	D	P	N 2020
3.	PZOT13	14.	14	14.25	14.12	5	5	24	24	58	82	8.2	D+	P	N 2020
4.	PZOE11	8.75	10	10.5	12.3	5	5	22	22	61	83	8.3	D+	P	N 2020
5.	PZOP11	-	-	-	-	-	-	-	23	75	98	9.8	O	P	N 2020
6.	PZOT21	12	13	12.5	12.8	5	5	23	23	61	84	8.4	D+	P	A 2021

7.	PZOT22	13.5	13	12.75	13.25	5	5	23	23	61	84	8.4	D+	P	A 2021
8.	PZOT23	13.5	14	14	14	5	5	24	24	61	85	8.5	D+	P	A 2021
9.	PZOP22	-	-	-	-	-	-	-	25	72	97	9.7	O	P	A 2021
10.	PZOA22	11.5	13	14	13.5	5	5	24	24	58	82	8.2	D+	P	A 2021
11.	PZOT31	13.5	13.5	10.5	13.5	5	5	24	24	54	78	7.8	D	P	N 2021
12.	PZOT32	9.75	12.25	14.25	13.25	5	5	23	23	41	64	6.4	D+	P	N 2021
13.	PZOT33	14.5	12.75	14	14.25	5	5	24	24	65	89	8.9	D+	P	N 2021
14.	PZOE33	13.5	13.5	7	13.5	5	5	24	24	65	89	8.9	D+	P	N 2021
15.	PZOP33	-	-	-	-	-	-	-	25	75	100	10.0	O	P	N 2021
16.	PZOT41	11.5	12	11.5	11.7	5	5	22	22	51	73	7.3	A+	P	A 2022
17.	PZOT42	11.25	11.5	12	11.75	5	5	22	22	54	76	7.6	D	P	A 2022
18.	PZOP41	-	-	-	-	-	-	-	24	71	95	9.5	O	P	A 2022

<b>HIGHER STUDIES</b>	-
<b>PLACEMENT</b>	<b>LAB ASSISTANT</b>
<b>EXTRA CURRICULAR ACTIVITY</b>	-

<b>RANGE OF MARKS</b>	<b>GRADE POINTS</b>	<b>LETTER GRADE</b>	<b>DESCRIPTION</b>
90-100	9.0-10.0	O	Outstanding
80-89	8.0-8.9	D+	Excellent
75-79	7.5-7.9	D	Distinction
70-74	7.0-7.4	A+	Very Good
60-69	6.0-6.9	A	Good
50-59	5.0-5.9	B	Average
00-49	0	U	Re-appear
<b>ABSENT</b>	<b>0</b>	<b>AAA</b>	<b>ABSENT</b>

<b>ATTENDANCE CALCULATION</b>	
<b>Days (90)</b>	<b>Marks (5)</b>
85-90	5
75-85	4
75 below	3

Dr. P. SATHIYA BAMA, M.Sc., M.Phil., Ph.D.  
 ASSOCIATE PROFESSOR AND HEAD  
 DEPT OF ZOOLOGY  
 M.V.MUTHIAH GOVT ARTS COLLEGE(W)  
 DINDIGUL - 1

*D. Lakshmi*  
 Principal  
 M.V. Muthiah Govt.  
 Arts College (W)  
 Dindigul - 1.

PROGRAMME: M.Sc., ZOOLOGY

NAME: S. JAMUNA

REG NO: 204338ER008

COURSE ATTAINMENT CALCULATION (PG - PROGRAMME)

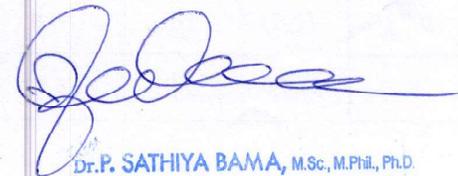
S.NO	SUBJECT CODE	TEST 1 (15)/(25)	TEST 2 (15)/(25)	TEST 3 (15)/(25)	AVERAGE OF TWO TESTS (15)	ASSIGNMENT (5)	ATTENDANCE (5)	ROUND OFF (25)	INTERNAL (25)	EXTERNAL (75)	TOTAL (100)	GRADE POINT	GRADE	RESULT	MONTH & YEAR
1.	PZOT11	11	11.5	12	11.8	4	4	20	20	43	63	6.3	A	P	N 2020
2.	PZOT12	12	12	9.75	12	4	4.5	21	21	50	71	7.1	A+	P	N 2020
3.	PZOT13	12.5	13.5	12.5	13	5	4	22	22	38	60	6.0	A	P	N 2020
4.	PZOE11	8.5	8	9	10.5	5	4	20	20	58	78	7.8	D	P	N 2020
5.	PZOP11	-	-	-	-	-	-	-	22	73	95	9.5	O	P	N 2020
6.	PZOT21	9	11.5	10	10.8	5	5	21	21	61	82	8.2	D+	P	A 2021
7.	PZOT22	12	12.75	13	12.88	5	5	23	23	61	84	8.4	D+	P	A 2021

7.	PZOT22	12	12.75	13	12.88	5	5	23	23	61	84	8.4	D+	P	A 2021
8.	PZOT23	12.5	13	12.5	12.7	5	5	23	23	61	84	8.4	D+	P	A 2021
9.	PZOP22	-	-	-	-	-	-	-	22	73	95	9.5	O	P	A 2021
10.	PZOA22	11.5	12	12.5	12.25	4	5	22	22	47	69	6.9	A	P	A 2021
11.	PZOT31	9.5	8	12	10.75	5	5	21	21	41	62	6.2	A	P	N 2021
12.	PZOT32	10.5	7	7.75	9.12	5	5	19	19	41	60	6.0	A	P	N 2021
13.	PZOT33	12	12	11	12	5	5	22	22	51	73	7.3	A+	P	N 2021
14.	PZOE33	8	9.5	9.5	9.5	5	5	20	20	50	70	7.0	A+	P	N 2021
15.	PZOP33	-	-	-	-	-	-	-	21	73	94	9.4	O	P	N 2021
16.	PZOT41	10	4.5	11	10.5	4.5	5	20	20	52	74	7.4	A+	P	A2022
17.	PZOT42	10.75	11.5	-	11.12	5	5	21	21	53	74	7.4	A+	P	A 2022
18.	PZOP41	-	-	-	-	-	-	-	23	71	94	9.4	O	P	A 2022

HIGHER STUDIES	PGDCA
PLACEMENT	-
EXTRA CURRICULUR ACTIVITY	-

RANGE OF MARKS	GRADE POINTS	LETTER GRADE	DESCRIPTION
90-100	9.0-10.0	O	Outstanding
80-89	8.0-8.9	D+	Excellent
75-79	7.5-7.9	D	Distinction
70-74	7.0-7.4	A+	Very Good
60-69	6.0-6.9	A	Good
50-59	5.0-5.9	B	Average
00-49	0	U	Re-appear
ABSENT	0	AAA	ABSENT

ATTENDANCE CALCULATION	
Days (90)	Marks (5)
85-90	5
75-85	4
75 below	3



Dr. P. SATHIYA BAMA, M.Sc., M.Phil., Ph.D.  
ASSOCIATE PROFESSOR AND HEAD  
DEPT OF ZOOLOGY  
M.V.MUTHIAH GOVT ARTS COLLEGE(W)  
DINDIGUL - 1

*D. Lakshmi*  
Principal  
M.V. Muthiah Govt.  
Arts College (W)  
Dindigul - 1.

PROGRAMME: M.Sc., ZOOLOGY

NAME: C. ANGAMMAL

REG NO: 204338ER002

COURSE ATTAINMENT CALCULATION (PG - PROGRAMME)

S.NO	SUBJECT CODE	TEST 1 (15)/(25)	TEST2 (15)/(25)	TEST3 (15)/(25)	AVERAGE OF TWO TESTS (15)	ASSIGNMENT (5)	ATTENDANCE (5)	ROUND OFF (25)	INTERNAL (25)	EXTERNAL (75)	TOTAL (100)	GRADE POINT	GRADE	RESULT	MONTH & YEAR
1.	PZOT11	10.25	9	9	9.6	4.5	4	18	18	40	58	5.8	B	P	N 2020
2.	PZOT12	8.25	11.75	9.25	10.5	4	4	19	19	38	57	5.7	B	P	N 2020
3.	PZOT13	12	12.5	11	12.25	5	4	21	21	38	59	5.9	B	P	N 2020
4.	PZOE11	8.25	8	9	8.4	5	4	19	19	46	65	6.5	A	P	N 2020
5.	PZOP11	-	-	-	-	-	-	-	20	65	85	8.5	D	P	N 2020
6.	PZOT21	9.75	11.5	10	10.8	5	3	19	19	59	78	7.8	D	P	A 2021
7.	PZOT22	12	13.75	14	13.87	4	3	20	20	55	75	7.5	D	P	A 2021

7.	PZOT22	12	13.75	14	13.87	4	3	20	20	55	75	7.5	D	P	A 2021
8.	PZOT23	12.5	12.25	-	12.3	5	3	20	20	55	75	7.5	D	P	A 2021
9.	PZOP22	-	-	-	-	-	-	-	22	72	94	9.4	O	P	A 2021
10.	PZOA22	9	11.5	12	11.75	4	3	19	19	51	70	7.0	A+	P	A 2021
11.	PZOT31	10.5	11.5	10	11	3	3	17	17	42	59	5.9	B	P	N 2021
12.	PZOT32	7	9.25	-	8.12	4	3	18	18	45	63	6.3	A	P	N 2021
13.	PZOT33	10.75	9.5	9.5	10.12	4	3	17	17	44	61	6.1	A	P	N 2021
14.	PZOE33	7	10.25	8.5	9.3	5	3	17	17	42	59	5.9	B	P	N 2021
15.	PZOP33	-	-	-	-	-	-	-	21	70	91	9.1	O	P	N 2021
16.	PZOT41	10.5	9.5	10.5	10.5	3	4	18	18	56	74	7.4	A+	P	A 2022
17.	PZOT42	11.25	6.25	10	10.6	4	5	20	20	53	73	7.3	A+	P	A 2022
18.	PZOP41	-	-	-	-	-	-	-	23	71	94	9.4	O	P	A 2022

<b>HIGHER STUDIES</b>	-
<b>PLACEMENT</b>	SCHOOL OFFICE ASSISTANT
<b>EXTRA CURRICULAR ACTIVITY</b>	-

RANGE OF MARKS	GRADE POINTS	LETTER GRADE	DESCRIPTION
90-100	9.0-10.0	O	Outstanding
80-89	8.0-8.9	D+	Excellent
75-79	7.5-7.9	D	Distinction
70-74	7.0-7.4	A+	Very Good
60-69	6.0-6.9	A	Good
50-59	5.0-5.9	B	Average
00-49	0	U	Re-appear
ABSENT	0	AAA	ABSENT

ATTENDANCE CALCULATION	
Days (90)	Marks (5)
85-90	5
75-85	4
75 below	3

D.P. SATHIYA BAMA, M.Sc., M.Phil., Ph.D.  
 ASSOCIATE PROFESSOR AND HEAD  
 DEPT OF ZOOLOGY  
 M.V.MUTHIAH GOVT ARTS COLLEGE(W)  
 DINDIGUL - 1

Principal  
 M.V. Muthiah Govt.  
 Arts College (W)  
 Dindigul - 1.

**COURSE ATTAINMENT CALCULATION (PG PROGRAMME)**  
**PG AND RESEARCH DEPARTMENT OF COMPUTER SCIENCE**  
**II M.SC COMPUTER SCIENCE**

CONTINUOUS INTERNAL ASSESSMENT										EXTERNAL - UNIVERSITY ASSESSMENT					
SUBJECT CODE	REGISTER NO	TEST 1 (15)	TEST 2 (15)	TEST 3 (15)	AVERAGE OF TWO TESTS (15)	ASSIGNMENT (5)	ATTENDANCE (5)	ROUND OFF (25)	INTERNAL (25)	EXTERNAL (75)	TOTAL (100)	GRADE POINT	GRADE	RESULT	MONTH & YEAR
PCST41	204326ER005	11	13.5	13	13.3	5	5	23	23	48	71	7.1	A+	P	A 22
	204326ER014	14	12.2	13	13.5	5	5	24	24	50	74	7.4	A+	P	A 22
PCST42	204326ER005	11.5	14	12	13	5	5	23	23	48	71	7.1	A+	P	A 22
	204326ER014	11	14	14	14	5	5	24	24	50	74	7.4	A+	P	A 22
PCSD41	204326ER005	-	-	-	-	-	5	24	24	73	97	9.7	O	P	A 22
	204326ER014	-	-	-	-	-	5	25	25	75	100	10	O	P	A 22

RANGE OF MARKS	GRADE POINTS	LETTER GRADE	DESCRIPTION
90-100	9.0-10.0	O	Outstanding
80-89	8.0-8.9	D+	Excellent
75-79	7.5-7.9	D	Distinction
70-74	7.0-7.4	A+	Very Good
60-69	6.0-6.9	A	Good
50-59	5.0-5.9	B	Average
00-49	0.0	U	Re-appear
ABSENT	0.0	AAA	ABSENT

Working Days (90)	Marks (5)
85-90	5
75-85	4
75 below	3

*D. Lakshmi*  
Principal  
M.V. Muthiah Govt.  
Arts College (W)  
Dindigul - 1.

*J. Lakshmi*  
HEAD  
DEPT. OF COMPUTER SCIENCE  
M.V. MUTHIAH GOVT ARTS COLLEGE FOR WOMEN  
DINDIGUL

# Mother Teresa Women's University, Kodaikanal



B. SC-COMPUTER SCIENCE

## STATEMENT OF MARKS AND GRADES (CHOICE BASED CREDIT SYSTEM)



Name of the Examinee & Date of Birth	Register Number	Folio Number	Exam Year
PRIYANKA. A 15/07/2002	19326ER028	<b>97190</b>	APRIL 2022
Name of the College	M.V. MUTHIAH GOVERNMENT ARTS COLLEGE FOR WOMEN, DINDIGUL.	Date of Result	17/08/2022

PART	SEMESTER	SUBJECT CODE	SUBJECT TITLE	CREDIT	MAXIMUM			MARKS SECURED			GRADE POINT	GRADE	RESULT	Month & Year
					ESE	CIA	TOTAL	ESE	CIA	TOTAL				
I	1	ULTA11	TAMIL - IKKAALA ILAKKIYAM	3	75	25	100	32	23	55	5.5	B	P	N 19
I	2	ULTA22	TAMIL - IDAIKAALA ILAKKIYAM	3	75	25	100	42	18	60	6.0	A	P	A 20
I	3	ULTA33	TAMIL - KAAPPIYA ILAKKIYAM	3	75	25	100	48	23	71	7.1	A+	P	N 20
I	4	ULTA44	TAMIL - PAZHANTHAMIZH ILAKKIYAM	3	75	25	100	46	21	67	6.7	A	P	A 21
II	1	ULEN11	ENGLISH FOR INFOTAINMENT - I	3	75	25	100	35	21	56	5.6	B	P	N 19
II	2	ULEN22	ENGLISH FOR INFOTAINMENT - II	3	75	25	100	46	20	66	6.6	A	P	A 20
II	3	ULEN33	ENGLISH FOR INFOTAINMENT - III	3	75	25	100	53	24	77	7.7	D	P	N 20
II	4	ULEN44	ENGLISH FOR INFOTAINMENT - IV	3	75	25	100	46	20	66	6.6	A	P	A 21
III	1	UCST11	PROGRAMMING IN C	4	75	25	100	38	22	60	6.0	A	P	N 19
III	1	UCST12	DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION	4	75	25	100	43	22	65	6.5	A	P	N 19
III	1	UCSA11	DISCRETE MATHEMATICS	4	75	25	100	51	24	75	7.5	D	P	N 19
III	2	UCST21	PROGRAMMING IN C++	4	75	25	100	48	20	68	6.8	A	P	A 20
III	2	UCSP21	PROGRAMMING IN C AND C++ - LAB	4	75	25	100	70	25	95	9.5	O	P	A 20
III	2	UCSP22	WEB DESIGNING - LAB	4	75	25	100	72	24	96	9.6	O	P	A 20
III	3	UCST31	FUNDAMENTALS OF DATA STRUCTURES	4	75	25	100	62	24	86	8.6	D+	P	N 20
III	3	UCSA32	OPERATIONS RESEARCH	4	75	25	100	60	25	85	8.5	D+	P	N 20
III	3	UCSE31	FUNDAMENTALS OF COMPUTER ALGORITHMS	3	75	25	100	56	24	80	8.0	D+	P	N 20
III	4	UCST41	RELATIONAL DATABASE MANAGEMENT SYSTEMS	4	75	25	100	59	24	83	8.3	D+	P	A 21
III	4	UCSP42	RELATIONAL DATABASE MANAGEMENT SYSTEMS - LAB	4	75	25	100	75	25	100	10.0	O	P	A 21
III	4	UCSA42	DTP - LAB	4	75	25	100	75	25	100	10.0	O	P	A 21
III	4	UCSE42	NUMERICAL METHODS	4	75	25	100	74	23	97	9.7	O	P	A 21
III	5	UCST51	SYSTEM SOFTWARE	4	75	25	100	60	22	82	8.2	D+	P	N 21
III	5	UCST52	DATA MINING	4	75	25	100	54	24	78	7.8	D	P	N 21
III	5	UCST53	SOFTWARE ENGINEERING	4	75	25	100	56	23	79	7.9	D	P	N 21
III	5	UCST54	COMPUTER NETWORKS	4	75	25	100	58	24	82	8.2	D+	P	N 21
III	5	UCST55	MULTIMEDIA AND ITS APPLICATIONS	4	75	25	100	54	24	78	7.8	D	P	N 21
III	5	UCSE53	VISUAL BASIC - LAB	3	75	25	100	73	25	98	9.8	O	P	N 21
III	6	UCST61	JAVA AND INTERNET PROGRAMMING	4	75	25	100	45	25	70	7.0	A+	P	A 22
III	6	UCST62	WEB TECHNOLOGY	4	75	25	100	52	25	77	7.7	D	P	A 22
III	6	UCST63	COMPUTER GRAPHICS	4	75	25	100	31	22	53	5.3	B	P	A 22
III	6	UCSP63	JAVA AND INTERNET PROGRAMMING - LAB	4	75	25	100	75	25	100	10.0	O	P	A 22
III	6	UCSP64	WEB TECHNOLOGY LAB	4	75	25	100	70	25	95	9.5	O	P	A 22
III	6	UCSE64	MINI PROJECT	3	75	25	100	68	25	93	9.3	O	P	A 22
IV	1	UVAE11	VALUE EDUCATION	3	75	25	100	46	22	68	6.8	A	P	N 19
IV	2	UEVS21	ENVIRONMENTAL STUDIES	2	75	25	100	63	21	84	8.4	D+	P	A 20
IV	3	UCSS31	OFFICE AUTOMATION - LAB	2	75	25	100	73	25	98	9.8	O	P	N 20
IV	3	UCSNGE	GENDER AND ECONOMICS	2	75	25	100	48	23	71	7.1	A+	P	N 20
IV	4	UCSS42	LINUX/UNIX - LAB	2	75	25	100	75	25	100	10.0	O	P	A 21
IV	4	UCSNEC	ECONOMICS FOR COMPETITIVE EXAMINATIONS	2	75	25	100	60	20	80	8.0	D+	P	A 21
IV	5	UCSS53	PYTHON - LAB	2	75	25	100	70	25	95	9.5	O	P	N 21
IV	6	UCSS64	COMPUTER GRAPHICS - LAB	2	75	25	100	75	25	100	10.0	O	P	A 22
V	6	USEA61	EXTENSION ACTIVITY	3	100	-	100	99	-	99	9.9	O	P	A 22

\*\*\* END OF STATEMENT \*\*\*

CUMULATIVE PERFORMANCE						
PART	CREDITS EARNED : (IN THE CURRENT SEMESTER)	GPA :	PART	CREDITS EARNED (IN ALL SEMESTERS)	CGPA	GRADE CLASSIFICATIONS
			I	12.00	6.325	First Class
			II	12.00	6.625	First Class
III	23	8.083	III	96.00	8.262	First Class with
IV	2	10.00	IV	17.00	8.588	Distinction*
V	3	9.900	V	3.00	9.900	O+

Change(s) / Overscripts should bear competent attestation of the Mother Teresa Women's University, Kodaikanal with Official seal, else the Certificate is Invalid.

*A. Priyanka*  
Signature of the Student

DATE : 15/10/2022

DETAILS OVERLEAF



*A. Clea Dhyana*  
CONTROLLER OF EXAMINATIONS

## U.G. DEGREE PROGRAMME

Conversion of Marks to Grade Points and Letter Grade (Performance in a Course/Paper)

RANGE OF MARKS	GRADE POINTS	LETTER GRADE	DESCRIPTION
90 - 100	9.0 - 10.0	O	Outstanding
80 - 89	8.0 - 8.9	D+	Excellent
75 - 79	7.5 - 7.9	D	Distinction
70 - 74	7.0 - 7.4	A+	Very Good
60 - 69	6.0 - 6.9	A	Good
50 - 59	5.0 - 5.9	B	Average
40 - 49	4.0 - 4.9	C	Satisfactory
00 - 39	0.0	U	Re-appear
ABSENT	0.0	AAA	ABSENT

PASSING MINIMUM : 40% of the Maximum (in ESE and Total Separately)

For a Semester :

$$\text{GRADE POINT AVERAGE [GPA]} = \frac{\sum_i C_i G_i}{\sum_i C_i}$$

$$\text{GPA} = \frac{\text{Sum of the multiplication of grade points by the credits of the courses}}{\text{Sum of the credits of the courses in a semester}}$$

$C_i$  - Credits earned for Course  $i$  in any semester

$G_i$  - Grade Point obtained for course  $i$  in any Semester

ESE - End Semester Examination

CIA - Continuous Internal Assessment

P - Pass RA - Re-appear AAA - Absent \*\*\* - Not secured passing minimum

For the Entire Programme :

$$\text{CUMULATIVE GRADE POINT AVERAGE [CGPA]} = \frac{\sum_n \sum_i C_{ni} G_{ni}}{\sum_n \sum_i C_{ni}}$$

$$\text{CGPA} = \frac{\text{Sum of the multiplication of grade points by the credits of the entire programme}}{\text{Sum of the credits of the courses of the entire programme}}$$

CGPA	GRADE	CLASSIFICATION OF FINAL RESULT
9.5 - 10.0	O+	First Class - Exemplary*
9.0 and above but below 9.5	O	
8.5 and above but below 9.0	D++	First Class with Distinction*
8.0 and above but below 8.5	D+	
7.5 and above but below 8.0	D	
7.0 and above but below 7.5	A++	First Class
6.5 and above but below 7.0	A+	
6.0 and above but below 6.5	A	
5.5 and above but below 6.0	B+	Second Class
5.0 and above but below 5.5	B	
4.5 and above but below 5.0	C+	Third Class
4.0 and above but below 4.5	C	
0.0 and above but below 4.0	U	Re-appear

\* The Candidates who have passed in the first appearance and within the prescribed semester of the UG Programme (Core, Elective, Non-major Electives and Extra-Disciplinary courses alone) are eligible.

NOTE:

Part I and Part II : Languages

Part IV : Skill based Elective and Non Major Elective

Ranks are based on the performance in Part III only

Part III : Core and Elective

Part V : Extension Activities

Entered By

Read By

Examined by

K. R. P. M.  
P. S. J.  
D. P. M.





# Mother Teresa Women's University, Kodaikanal

B.SC-COMPUTER SCIENCE

## STATEMENT OF MARKS AND GRADES (CHOICE BASED CREDIT SYSTEM)



Name of the Examinee & Date of Birth		Register Number	Folio Number	Exam Year										
JEYA ROSLIN PREETA. J 07/10/2001		19326ER047	97237	APRIL 2022										
Name of the College		Date of Result												
M.V. MUTHIAH GOVERNMENT ARTS COLLEGE FOR WOMEN, DINDIGUL.		17/08/2022												
PART	SEMESTER	SUBJECT CODE	SUBJECT TITLE	CREDIT	MAXIMUM			MARKS SECURED			GRADE POINT	GRADE	RESULT	Month & Year
					ESE	CIA	TOTAL	ESE	CIA	TOTAL				
I	1	ULTA11	TAMIL - IKKAALA ILAKKIYAM	3	75	25	100	32	22	54	5.4	B	P	N 19
I	2	ULTA22	TAMIL - IDAIKAALA ILAKKIYAM	3	75	25	100	50	22	72	7.2	A+	P	A 20
I	3	ULTA33	TAMIL - KAAPPIYA ILAKKIYAM	3	75	25	100	48	23	71	7.1	A+	P	N 20
I	4	ULTA44	TAMIL - PAZHANTHAMIZH ILAKKIYAM	3	75	25	100	56	23	79	7.9	D	P	A 21
II	1	ULEN11	ENGLISH FOR INFOTAINMENT - I	3	75	25	100	41	21	62	6.2	A	P	N 19
II	2	ULEN22	ENGLISH FOR INFOTAINMENT - II	3	75	25	100	48	20	68	6.8	A	P	A 20
II	3	ULEN33	ENGLISH FOR INFOTAINMENT - III	3	75	25	100	48	22	70	7.0	A+	P	N 20
II	4	ULEN44	ENGLISH FOR INFOTAINMENT - IV	3	75	25	100	36	22	58	5.8	B	P	A 21
III	1	UCST11	PROGRAMMING IN C	4	75	25	100	47	22	69	6.9	A	P	N 19
III	1	UCST12	DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION	4	75	25	100	46	25	71	7.1	A+	P	N 19
III	1	UCSA11	DISCRETE MATHEMATICS	4	75	25	100	53	24	77	7.7	D	P	N 19
III	2	UCST21	PROGRAMMING IN C++	4	75	25	100	54	22	76	7.6	D	P	A 20
III	2	UCSP21	PROGRAMMING IN C AND C++ - LAB	4	75	25	100	75	25	100	10.0	O	P	A 20
III	2	UCSP22	WEB DESIGNING - LAB	4	75	25	100	75	25	100	10.0	O	P	A 20
III	3	UCST31	FUNDAMENTALS OF DATA STRUCTURES	4	75	25	100	60	24	84	8.4	D+	P	N 20
III	3	UCSA32	OPERATIONS RESEARCH	4	75	25	100	58	25	83	8.3	D+	P	N 20
III	3	UCSE31	FUNDAMENTALS OF COMPUTER ALGORITHMS	3	75	25	100	62	24	86	8.6	D+	P	N 20
III	4	UCST41	RELATIONAL DATABASE MANAGEMENT SYSTEMS	4	75	25	100	60	24	84	8.4	D+	P	A 21
III	4	UCSP42	RELATIONAL DATABASE MANAGEMENT SYSTEMS - LAB	4	75	25	100	75	25	100	10.0	O	P	A 21
III	4	UCSA42	DTP - LAB	4	75	25	100	75	25	100	10.0	O	P	A 21
III	4	UCSE42	NUMERICAL METHODS	4	75	25	100	75	25	100	10.0	O	P	A 21
III	5	UCST51	SYSTEM SOFTWARE	3	75	25	100	73	24	97	9.7	O	P	A 21
III	5	UCST52	DATA MINING	4	75	25	100	67	24	91	9.1	O	P	N 21
III	5	UCST53	SOFTWARE ENGINEERING	4	75	25	100	52	24	76	7.6	D	P	N 21
III	5	UCST54	COMPUTER NETWORKS	4	75	25	100	58	24	82	8.2	D+	P	N 21
III	5	UCST55	MULTIMEDIA AND ITS APPLICATIONS	4	75	25	100	65	24	89	8.9	D+	P	N 21
III	5	UCSE53	VISUAL BASIC - LAB	4	75	25	100	61	23	84	8.4	D+	P	N 21
III	6	UCST61	JAVA AND INTERNET PROGRAMMING	3	75	25	100	75	25	100	10.0	O	P	N 21
III	6	UCST62	WEB TECHNOLOGY	4	75	25	100	52	22	74	7.4	A+	P	A 22
III	6	UCST63	COMPUTER GRAPHICS	4	75	25	100	53	23	76	7.6	D	P	A 22
III	6	UCSP63	JAVA AND INTERNET PROGRAMMING - LAB	4	75	25	100	54	24	78	7.8	D	P	A 22
III	6	UCSP64	WEB TECHNOLOGY LAB	4	75	25	100	75	25	100	10.0	O	P	A 22
III	6	UCSE64	MINI PROJECT	4	75	25	100	75	25	100	10.0	O	P	A 22
IV	1	UVAE11	VALUE EDUCATION	3	75	25	100	74	25	99	9.9	O	P	A 22
IV	2	UEVS21	ENVIRONMENTAL STUDIES	3	75	25	100	50	24	74	7.4	A+	P	N 19
IV	3	UCSS31	OFFICE AUTOMATION - LAB	2	75	25	100	69	23	92	9.2	O	P	A 20
IV	3	UCSNGA	GENERAL APPLICATION SKILLS IN ENGLISH USAGE	2	75	25	100	75	25	100	10.0	O	P	N 20
IV	4	UCSS42	LINUX/UNIX - LAB	2	75	25	100	60	23	83	8.3	D+	P	N 20
IV	4	UCSNPS	PRESENTATION SKILLS	2	75	25	100	75	25	100	10.0	O	P	A 21
IV	5	UCSS53	PYTHON - LAB	2	75	25	100	59	23	82	8.2	D+	P	A 21
IV	6	UCSS64	COMPUTER GRAPHICS - LAB	2	75	25	100	67	25	92	9.2	O	P	N 21
V	6	USEA61	EXTENSION ACTIVITY	2	75	25	100	75	25	100	10.0	O	P	A 22
				3	100	-	100	100	-	100	10.0	O	P	A 22

\*\*\* END OF STATEMENT \*\*\*

PART	CREDITS EARNED : (IN THE CURRENT SEMESTER)	GPA :	CUMULATIVE PERFORMANCE				
			PART	CREDITS EARNED (IN ALL SEMESTERS)	CGPA	GRADE	CLASSIFICATIONS
			I	12.00	6.900	A+	First Class
III	23	8.735	II	12.00	6.450	A	First Class
IV	2	10.00	III	96.00	8.669	D++	First Class with Distinction*
V	3	10.00	IV	17.00	8.941	D++	First Class with Distinction*
			V	3.00	10.000	O+	

Change(s) Overcripts should bear competent attestation of the Mother Teresa Women's University, Kodaikanal with Official seal, else the Certificate is Invalid.

J Jeya Roslin Preeta  
Signature of the Student

DATE: 15/10/2022

DETAILS OVERLEAF



A. Clea Dhyani  
CONTROLLER OF EXAMINATIONS

## U.G. DEGREE PROGRAMME

Conversion of Marks to Grade Points and Letter Grade (Performance in a Course/Paper)

RANGE OF MARKS	GRADE POINTS	LETTER GRADE	DESCRIPTION
90 - 100	9.0 - 10.0	O	Outstanding
80 - 89	8.0 - 8.9	D+	Excellent
75 - 79	7.5 - 7.9	D	Distinction
70 - 74	7.0 - 7.4	A+	Very Good
60 - 69	6.0 - 6.9	A	Good
50 - 59	5.0 - 5.9	B	Average
40 - 49	4.0 - 4.9	C	Satisfactory
00 - 39	0.0	U	Re-appear
ABSENT	0.0	AAA	ABSENT

PASSING MINIMUM : 40% of the Maximum (in ESE and Total Separately)

For a Semester :

$$\text{GRADE POINT AVERAGE [GPA]} = \frac{\sum_i C_i G_i}{\sum_i C_i}$$

GPA =  $\frac{\text{Sum of the multiplication of grade points by the credits of the courses}}{\text{Sum of the credits of the courses in a semester}}$

C<sub>i</sub> - Credits earned for Course i in any semester

G<sub>i</sub> - Grade Point obtained for course i in any Semester

ESE - End Semester Examination

CIA - Continuous Internal Assessment

P - Pass RA - Re-appear AAA - Absent \*\*\* - Not secured passing minimum

For the Entire Programme :

$$\text{CUMULATIVE GRADE POINT AVERAGE [CGPA]} = \frac{\sum_n \sum_i C_{ni} G_{ni}}{\sum_n \sum_i C_{ni}}$$

CGPA =  $\frac{\text{Sum of the multiplication of grade points by the credits of the entire programme}}{\text{Sum of the credits of the courses of the entire programme}}$

CGPA	GRADE	CLASSIFICATION OF FINAL RESULT
9.5 - 10.0	O+	First Class - Exemplary*
9.0 and above but below 9.5	O	
8.5 and above but below 9.0	D++	First Class with Distinction*
8.0 and above but below 8.5	D+	
7.5 and above but below 8.0	D	
7.0 and above but below 7.5	A++	First Class
6.5 and above but below 7.0	A+	
6.0 and above but below 6.5	A	
5.5 and above but below 6.0	B+	Second Class
5.0 and above but below 5.5	B	
4.5 and above but below 5.0	C+	Third Class
4.0 and above but below 4.5	C	
0.0 and above but below 4.0	U	Re-appear

\* The Candidates who have passed in the first appearance and within the prescribed semester of the UG Programme (Core, Elective, Non-major Electives and Extra-Disciplinary courses alone) are eligible.

NOTE:

Part I and Part II : Languages

Part III : Core and Elective

Part IV : Skill based Elective and Non Major Elective

Part V : Extension Activities

Ranks are based on the performance in Part III only

Entered By :

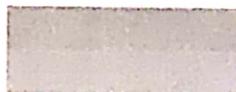
*K.H.M.*

Read By :

*P.H.*

Examined by :

*A.M.*





# Mother Teresa Women's University, Kodaikanal

B. SC-COMPUTER SCIENCE

## STATEMENT OF MARKS AND GRADES (CHOICE BASED CREDIT SYSTEM)



Name of the Examinee & Date of Birth	Register Number	Folio Number	Exam Year
KARTHIGA. M 03/12/2001	19326ER049	97236	APRIL 2022
Name of the College	M.V. MUTHIAH GOVERNMENT ARTS COLLEGE FOR WOMEN, DINDIGUL.	Date of Result	17/08/2022

PART	SEMESTER	SUBJECT CODE	SUBJECT TITLE	CREDIT	MAXIMUM			MARKS SECURED			GRADE POINT	GRADE	RESULT	Month & Year
					ESE	CIA	TOTAL	ESE	CIA	TOTAL				
I	1	ULTA11	TAMIL - IKKAALA ILAKKIYAM	3	75	25	100	36	23	59	5.9	B	P	N 19
I	2	ULTA22	TAMIL - IDAIKAALA ILAKKIYAM	3	75	25	100	51	22	73	7.3	A+	P	A 20
I	3	ULTA33	TAMIL - KAAPPIYA ILAKKIYAM	3	75	25	100	49	23	72	7.2	A+	P	N 20
I	4	ULTA44	TAMIL - PAZHANTHAMIZH ILAKKIYAM	3	75	25	100	50	22	72	7.2	A+	P	A 21
II	1	ULEN11	ENGLISH FOR INFOTAINMENT - I	3	75	25	100	44	21	65	6.5	A	P	N 19
II	2	ULEN22	ENGLISH FOR INFOTAINMENT - II	3	75	25	100	47	19	66	6.6	A	P	A 20
II	3	ULEN33	ENGLISH FOR INFOTAINMENT - III	3	75	25	100	43	22	65	6.5	A	P	N 20
II	4	ULEN44	ENGLISH FOR INFOTAINMENT - IV	3	75	25	100	40	22	62	6.2	A	P	A 21
III	1	UCST11	PROGRAMMING IN C	4	75	25	100	33	21	54	5.4	B	P	N 19
III	1	UCST12	DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION	4	75	25	100	52	23	75	7.5	D	P	N 19
III	1	UCSA11	DISCRETE MATHEMATICS	4	75	25	100	50	24	74	7.4	A+	P	N 19
III	2	UCST21	PROGRAMMING IN C++	4	75	25	100	53	22	75	7.5	D	P	A 20
III	2	UCSP21	PROGRAMMING IN C AND C++ - LAB	4	75	25	100	69	25	94	9.4	O	P	A 20
III	2	UCSP22	WEB DESIGNING - LAB	4	75	25	100	72	25	97	9.7	O	P	A 20
III	3	UCST31	FUNDAMENTALS OF DATA STRUCTURES	4	75	25	100	53	24	77	7.7	D	P	N 20
III	3	UCSA32	OPERATIONS RESEARCH	4	75	25	100	62	24	86	8.6	D+	P	N 20
III	3	UCSE31	FUNDAMENTALS OF COMPUTER ALGORITHMS	3	75	25	100	61	24	85	8.5	D+	P	N 20
III	4	UCST41	RELATIONAL DATABASE MANAGEMENT SYSTEMS	4	75	25	100	60	22	82	8.2	D+	P	A 21
III	4	UCSP42	RELATIONAL DATABASE MANAGEMENT SYSTEMS - LAB	4	75	25	100	75	25	100	10.0	O	P	A 21
III	4	UCSA42	DTP - LAB	4	75	25	100	74	25	99	9.9	O	P	A 21
III	4	UCSE42	NUMERICAL METHODS	3	75	25	100	74	21	95	9.5	O	P	A 21
III	5	UCST51	SYSTEM SOFTWARE	4	75	25	100	66	24	90	9.0	O	P	N 21
III	5	UCST52	DATA MINING	4	75	25	100	51	24	75	7.5	D	P	N 21
III	5	UCST53	SOFTWARE ENGINEERING	4	75	25	100	59	24	83	8.3	D+	P	N 21
III	5	UCST54	COMPUTER NETWORKS	4	75	25	100	61	23	84	8.4	D+	P	N 21
III	5	UCST55	MULTIMEDIA AND ITS APPLICATIONS	4	75	25	100	58	23	81	8.1	D+	P	N 21
III	5	UCSE53	VISUAL BASIC - LAB	3	75	25	100	74	25	99	9.9	O	P	N 21
III	6	UCST61	JAVA AND INTERNET PROGRAMMING	4	75	25	100	51	20	71	7.1	A+	P	A 22
III	6	UCST62	WEB TECHNOLOGY	4	75	25	100	45	22	67	6.7	A	P	A 22
III	6	UCST63	COMPUTER GRAPHICS	4	75	25	100	57	23	80	8.0	D+	P	A 22
III	6	UCSP63	JAVA AND INTERNET PROGRAMMING - LAB	4	75	25	100	72	24	96	9.6	O	P	A 22
III	6	UCSP64	WEB TECHNOLOGY LAB	4	75	25	100	73	25	98	9.8	O	P	A 22
III	6	UCSE64	MINI PROJECT	3	75	25	100	73	25	98	9.8	O	P	A 22
IV	1	UVAE11	VALUE EDUCATION	3	75	25	100	40	24	64	6.4	A	P	N 19
IV	2	UEVS21	ENVIRONMENTAL STUDIES	2	75	25	100	69	23	92	9.2	O	P	A 20
IV	3	UCSS31	OFFICE AUTOMATION - LAB	2	75	25	100	73	24	97	9.7	O	P	N 20
IV	3	UCSNGA	GENERAL APPLICATION SKILLS IN ENGLISH USAGE	2	75	25	100	62	23	85	8.5	D+	P	N 20
IV	4	UCSS42	LINUX/UNIX - LAB	2	75	25	100	73	25	98	9.8	O	P	A 21
IV	4	UCSNPS	PRESENTATION SKILLS	2	75	25	100	56	23	79	7.9	D	P	A 21
IV	5	UCSS53	PYTHON - LAB	2	75	25	100	71	25	96	9.6	O	P	N 21
IV	6	UCSS64	COMPUTER GRAPHICS - LAB	2	75	25	100	75	25	100	10.0	O	P	A 22
V	6	USEA61	EXTENSION ACTIVITY	3	100	-	100	100	-	100	10.0	O	P	A 22

\*\*\* END OF STATEMENT \*\*\*

PART	CREDITS EARNED : (IN THE CURRENT SEMESTER)	GPA :	CUMULATIVE PERFORMANCE				
			PART	CREDITS EARNED (IN ALL SEMESTERS)	CGPA	GRADE	CLASSIFICATIONS
III	23	8.443	I	12.00	6.900	A+	First Class
IV	2	10.00	II	12.00	6.450	A	First Class
V	3	10.00	III	96.00	8.420	D+	First Class with Distinction*
			IV	17.00	8.741	D++	
			V	3.00	10.000	O+	

Change(s) / Overscripts should bear competent attestation of the Mother Teresa Women's University, Kodaikanal with Official seal, else the Certificate is Invalid.

SHOT ON REDMI Y3  
AI DUAL CAMERA



A. Clea Dhyani

DETAILS OVERLEAF

## U.G. DEGREE PROGRAMME

Conversion of Marks to Grade Points and Letter Grade (Performance in a Course/Paper)

RANGE OF MARKS	GRADE POINTS	LETTER GRADE	DESCRIPTION
90 - 100	9.0 - 10.0	O	Outstanding
80 - 89	8.0 - 8.9	D+	Excellent
75 - 79	7.5 - 7.9	D	Distinction
70 - 74	7.0 - 7.4	A+	Very Good
60 - 69	6.0 - 6.9	A	Good
50 - 59	5.0 - 5.9	B	Average
40 - 49	4.0 - 4.9	C	Satisfactory
00 - 39	0.0	U	Re-appear
ABSENT	0.0	AAA	ABSENT

PASSING MINIMUM : 40% of the Maximum (in ESE and Total Separately)

For a Semester :

$$\text{GRADE POINT AVERAGE [GPA]} = \frac{\sum_i C_i G_i}{\sum_i C_i}$$

$$\text{GPA} = \frac{\text{Sum of the multiplication of grade points by the credits of the courses}}{\text{Sum of the credits of the courses in a semester}}$$

$C_i$  - Credits earned for Course  $i$  in any semester

$G_i$  - Grade Point obtained for course  $i$  in any Semester

ESE - End Semester Examination

CIA - Continuous Internal Assessment

P - Pass RA - Re-appear AAA - Absent \*\*\* - Not secured passing minimum

For the Entire Programme :

$$\text{CUMULATIVE GRADE POINT AVERAGE [CGPA]} = \frac{\sum_n \sum_i C_{ni} G_{ni}}{\sum_n \sum_i C_{ni}}$$

$$\text{CGPA} = \frac{\text{Sum of the multiplication of grade points by the credits of the entire programme}}{\text{Sum of the credits of the courses of the entire programme}}$$

CGPA	GRADE	CLASSIFICATION OF FINAL RESULT
9.5 - 10.0	O+	First Class - Exemplary*
9.0 and above but below 9.5	O	
8.5 and above but below 9.0	D++	First Class with Distinction*
8.0 and above but below 8.5	D+	
7.5 and above but below 8.0	D	
7.0 and above but below 7.5	A++	First Class
6.5 and above but below 7.0	A+	
6.0 and above but below 6.5	A	
5.5 and above but below 6.0	B+	Second Class
5.0 and above but below 5.5	B	
4.5 and above but below 5.0	C+	
4.0 and above but below 4.5	C	Third Class
0.0 and above but below 4.0	U	Re-appear

\* The Candidates who have passed in the first appearance and within the prescribed semester of the UG Programme (Core, Elective, Non-major Electives and Extra-Disciplinary courses alone) are eligible.

NOTE:

Part I and Part II : Languages

Part IV : Skill based Elective and Non Major Elective

Ranks are based on the performance in Part III only

Part III : Core and Elective

Part V : Extension Activities

Entered By

: KAPm

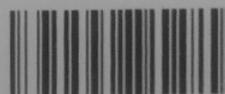
Read By

: S...

Examined By

: S...

SHOT ON REDMI Y3  
AI DUAL CAMERA



# Mother Teresa Women's University, Kodaikanal



M. SC-COMPUTER SCIENCE



## STATEMENT OF MARKS AND GRADES (CHOICE BASED CREDIT SYSTEM)

Name of the Examinee & Date of Birth		Register Number	Folio Number	Exam Year									
JEYALAKSHMI . R		10/01/2000	204326ER005	17025	APRIL 2022								
Name of the College Univ. Dept.		M. V. MUTHIAH GOVERNMENT ARTS COLLEGE FOR WOMEN, DINDIGUL.		Date of Result	17/08/2022								
SEMESTER	SUBJECT CODE	SUBJECT TITLE	CREDIT	MAXIMUM			MARKS SECURED			GRADE POINT	GRADE	RESULT	Month & Year
				ESE	CLA	TOTAL	ESE	CLA	TOTAL				
1	PCBT11	ADVANCED JAVA PROGRAMMING	5	75	25	100	42	23	65	6.5	A	P	N 20
1	PCBT12	DATA STRUCTURE AND ALGORITHMS	5	75	25	100	40	23	63	6.3	A	P	N 20
1	PCBT13	MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE	5	75	25	100	38	23	61	6.1	A	P	N 20
1	PCBE11	COMPUTER GRAPHICS	5	75	25	100	48	24	72	7.2	A+	P	N 20
1	PCBP11	ADVANCED JAVA PROGRAMMING - LAB	5	75	25	100	75	25	100	10.0	O	P	N 20
2	PCBT21	ADVANCED OPERATING SYSTEM	5	75	25	100	63	24	87	8.7	D+	P	A 21
2	PCBT22	RELATIONAL DATABASE MANAGEMENT SYSTEMS	5	75	25	100	50	23	73	7.3	A+	P	A 21
2	PCBT23	COMPUTER NETWORKS	5	75	25	100	57	24	81	8.1	D+	P	A 21
2	PCSE22	CRYPTOGRAPHY AND NETWORK SECURITY	5	75	25	100	62	23	85	8.5	D+	P	A 21
2	PCSP22	RELATIONAL DATABASE MANAGEMENT SYSTEMS LAB	5	75	25	100	75	25	100	10.0	O	P	A 21
3	PCBT31	COMPILER DESIGN	5	75	25	100	59	22	81	8.1	D+	P	N 21
3	PCBT32	SOFTWARE ENGINEERING	5	75	25	100	64	23	87	8.7	D+	P	N 21
3	PCBT33	WEB PROGRAMMING	5	75	25	100	65	24	89	8.9	D+	P	N 21
3	PCBP33	WEB PROGRAMMING - LAB	5	75	25	100	75	25	100	10.0	O	P	N 21
3	PCBE33	BIG DATA ANALYTICS	5	75	25	100	55	23	78	7.8	D	P	N 21
4	PCBT41	DIGITAL IMAGE PROCESSING	5	75	25	100	48	23	71	7.1	A+	P	A 22
4	PCBT42	MOBILE COMPUTING	5	75	25	100	48	23	71	7.1	A+	P	A 22
4	PCED41	PROJECT	5	75	25	100	73	24	97	9.7	O	P	A 22

\*\*\* END OF STATEMENT \*\*\*

PART	CREDITS EARNED (IN THE CURRENT SEMESTER)	GPA	CUMULATIVE PERFORMANCE			
			PART	CREDITS EARNED (IN ALL SEMESTERS)	CGPA	GRADE CLASSIFICATIONS
A	15	7.967	A	90	8.117	D+ First Class with Distinction*

Comments / Observations should bear competent attention of the Mother Teresa Women's University, Kodaikanal with Official seal, else the Certificate is Invalid

*P. Jeyalakshmi*  
Signature of the Student

DATE: 30/09/2022

DETAILS OVERLEAF



*A. An. Debnath*  
CONTROLLER OF EXAMINATIONS

# Mother Teresa Women's University, Kodaikanal



M. SC-COMPUTER SCIENCE

## STATEMENT OF MARKS AND GRADES (CHOICE BASED CREDIT SYSTEM)



Name of the Examinee & Date of Birth	Register Number	Folio Number	Exam Year
RAMYAPRABA. M 19/04/2000	204326ER014	17013	APRIL 2022
Name of the College Univ. Dept.	M.V. MUTHIAH GOVERNMENT ARTS COLLEGE FOR WOMEN, DINDIGUL.	Date of Result	17/08/2022

SEMESTER	SUBJECT CODE	SUBJECT TITLE	CREDIT	MAXIMUM			MARKS SECURED			GRADE POINT	GRADE	RESULT	Month & Year
				ESE	CIA	TOTAL	ESE	CIA	TOTAL				
1	PCST11	ADVANCED JAVA PROGRAMMING	5	75	25	100	46	23	69	6.9	A	P	M 20
1	PCST12	DATA STRUCTURE AND ALGORITHMS	5	75	25	100	58	23	81	8.1	D+	P	M 20
1	PCST13	MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE	5	75	25	100	51	24	75	7.5	D	P	M 20
1	PCSE11	COMPUTER GRAPHICS	5	75	25	100	60	24	84	8.4	D+	P	M 20
1	PCSP11	ADVANCED JAVA PROGRAMMING - LAB	5	75	25	100	75	25	100	10.0	O	P	M 20
2	PCST21	ADVANCED OPERATING SYSTEM	5	75	25	100	64	24	88	8.8	D+	P	A 21
2	PCST22	RELATIONAL DATABASE MANAGEMENT SYSTEMS	5	75	25	100	65	22	87	8.7	D+	P	A 21
2	PCST23	COMPUTER NETWORKS	5	75	25	100	66	24	90	9.0	O	P	A 21
2	PCSE22	CRYPTOGRAPHY AND NETWORK SECURITY	5	75	25	100	66	24	90	9.0	O	P	A 21
2	PCSP22	RELATIONAL DATABASE MANAGEMENT SYSTEMS LAB	5	75	25	100	75	25	100	10.0	O	P	A 21
3	PCST31	COMPILER DESIGN	5	75	25	100	60	23	83	8.3	D+	P	M 21
3	PCST32	SOFTWARE ENGINEERING	5	75	25	100	65	24	89	8.9	D+	P	M 21
3	PCST33	WEB PROGRAMMING	5	75	25	100	66	25	91	9.1	O	P	M 21
3	PCSP33	WEB PROGRAMMING - LAB	5	75	25	100	70	25	95	9.5	O	P	M 21
3	PCSE33	BIG DATA ANALYTICS	5	75	25	100	58	24	82	8.2	D+	P	M 21
4	PCST41	DIGITAL IMAGE PROCESSING	5	75	25	100	50	24	74	7.4	A+	P	A 22
4	PCST42	MOBILE COMPUTING	5	75	25	100	50	24	74	7.4	A+	P	A 22
4	PCSD41	PROJECT	5	75	25	100	75	25	100	10.0	O	P	A 22

\*\*\* END OF STATEMENT \*\*\*

CUMULATIVE PERFORMANCE							
PART	CREDITS EARNED : (IN THE CURRENT SEMESTER)	GPA :	PART	CREDITS EARNED (IN ALL SEMESTERS)	CGPA	GRADE	CLASSIFICATIONS
A	15	8.267	A	90	8.622	D++	First Class with Distinction*

Change(s) / Overscripts should bear competent attestation of the Mother Teresa Women's University, Kodaikanal with Official seal, else the Certificate is Invalid.

*M. Ramyaprabha*  
Signature of the Student

DATE : 30/09/2022



*A. Cleo Dhyah*  
CONTROLLER OF EXAMINATIONS

DETAILS OVERLEAF