



**III Semester B. Tech. (Information Technology)**

Sr. No	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Continual Assessment	End Sem Examination	Total
1	AS310T	Applied Mathematics – III	4	-	-	4	30	70	100
2	IT301T	Data Structures	3	-	-	3	30	70	100
3	IT301P	Data Structures Lab	-	-	4	2	25	25	50
4	IT302T	Computer Network	3	1	-	4	30	70	100
5	IT302P	Computer Network Lab	-	-	2	1	25	25	50
6	IT303T	Computer Architecture and Organization	3	1	-	4	30	70	100
7	IT304P	Computer Lab - 1	-	-	2	1	25	25	50
8	H102	Universal Human Value - II	3	-	-	3	30	70	100
9	IT305T	Career Development - I	2	-	-	0	Audit		
<b>Total</b>			<b>18</b>	<b>2</b>	<b>8</b>	<b>22</b>	<b>225</b>	<b>425</b>	<b>650</b>

		June 2023	1.1	Applicable for 2023-24
Chairman - BoS	Dean – Academics	Date of Release	Version	



# ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

## B. Tech. Scheme of Examination & Syllabus 2023-24

### INFORMATION TECHNOLOGY

#### THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
AS310T	Applied Mathematics-III	4	0		4	30	70	100

Course Objectives	Course Outcomes
<p>The aim of this course is</p> <ul style="list-style-type: none"> <li>To introduce the essential concepts of Numerical Computational techniques &amp; Theory of Probability.</li> <li>To familiarize the students with concepts in linear algebra and statistics.</li> </ul>	<p><b>Students will be able to</b></p> <ul style="list-style-type: none"> <li>Analyze and solve problems by numerical computation method for Transcendental equations and System of linear equations.</li> <li>Identify engineering problems related to Matrices: Eigen value &amp; Eigen vectors &amp; Functions of Matrices.</li> <li>Apply various concepts of vector spaces.</li> <li>Apply various concepts of joint distribution.</li> <li>Use statistical methods and tools in engineering problems.</li> </ul>

**Unit I** [9Hrs]

**Numerical Methods:** Error in numerical calculations, Solution of Algebraic and Transcendental Equations: Method of False position, Newton–Raphson method, Solution of system of simultaneous linear equations: Gauss elimination method and Croust's method Largest Eigen value and Eigen vector by Iteration method. Euler modified method, Runge Kutta method.

**Unit II** [8Hrs]

**Matrices:** Linear dependence of vectors, Characteristics equation, Eigen values and Eigen vectors, Reduction to diagonal form, Reduction of quadratic form to canonical form by orthogonal transformation, Sylvester's theorem.

**Unit III** [10Hrs]

**Vector Space:** Subspaces, Linear Dependence/Independence, Basis, Dimension, Linear transformation, Range Space and Rank, Null Space and Nullity, Rank nullity theorem, Matrix Representation of a linear transformation, Linear Operators on  $R^n$  and their representation as square matrices.

**Unit IV** [9Hrs]

**Probability:** Baye's rule, Review of discrete and continuous random variables, Joint probability function of discrete random variable, Marginal probability function and Conditional distribution of discrete random variable, Mathematical expectation of discrete random variable, Variance and Standard deviation, and Covariance of joint distribution.

**Unit V** [9Hrs]

**Statistics:** Multiple regression analysis, Regression equation of three variables, Measures of central tendency, Mean, Median, Mode, Mean deviation, Standard deviation, Testing a hypothesis, Null hypothesis, Alternative hypothesis, t-test, F-test and Chi square test.

#### Text Books

S.N	Title	Authors	Edition	Publisher
1	Linear Algebra and Its Application (Paperback)	Gilbert Strang	2007	Nelson Engineering
2	Higher Engineering Mathematics	B.S. Grewal	40th Edition	Khanna Publication
3	Theory & problems of Probability and Statistics	Murray R. Spiegel		Schaum Series, Mc Graw Hills
4	Introductory methods of Numerical Analysis	S.S. Sastry		PHI

#### Reference Books

S.N	Title	Authors	Edition	Publisher
1	Advanced Engineering Mathematics	Erwin Kreyszig	8 <sup>th</sup> Edition	Wiley India
2	Linear Algebra	Seymour Lipschutz etal	3 <sup>rd</sup> Edition	Schaum series.
3	First course in Linear Algebra	Nagpaul,		Wiley Eastern Ltd, New Delhi
4	A Text Book of Engineering Mathematics	N. P. Bali & M. Goyal		Laxmi Publication.

		June 2023	1.1	Applicable for 2023-24
Chairman - BoS	Dean – Academics	Date of Release	Version	



# ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

## B. Tech. Scheme of Examination & Syllabus 2023-24

### INFORMATION TECHNOLOGY

#### THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
IT301T	Data Structures	3	-		3	30	70	100

Course Objectives	Course Outcomes
<p><b>This course is intended</b></p> <ul style="list-style-type: none"> <li>To imbibe basic data structures for searching and sorting – hash tables, trees, heaps, and the computational complexity of the searching and sorting algorithms that use these structures.</li> <li>To make intelligent decisions about alternative data structures and algorithmic techniques in the context of practical software problems</li> <li>To give emphasis on design and implementation of abstract data structures.</li> <li>To give emphasis on design and implementation of abstract data structures.</li> <li>To use appropriate data structures for solving various applications depending on behavioral properties.</li> </ul>	<p><b>Students will be able to</b></p> <ul style="list-style-type: none"> <li>Demonstrate the concept of analysis of algorithms, and implement various sorting searching algorithm</li> <li>Implement ADT such as Stack &amp; Queue</li> <li>Illustrate the operation on linked list through implementation</li> <li>Select and use appropriate non Linear data structures like tree for data representation</li> <li>Use an appropriate non Linear data structures like graph and hashing techniques for data representation for solving data organization problem</li> </ul>
<b>Unit I: Algorithm, Searching &amp; Sorting</b>	<b>[8Hrs]</b>
An introduction to algorithm, time and space analysis of algorithm, general concept of data structure, types of data structures. asymptotic notations-Big O notations, omega notation & theta notation. Average, Best, Worst case analysis, Searching-Linear and Binary search, Selection sort, Bubble sort, Insertion sort, Shell sort, quick sort	
<b>Unit II: Stacks and Queues</b>	<b>[8Hrs]</b>
Definition and Terminology, ADT stack and its operations, applications of stacks: Expression conversion and evaluation. ADT queue and its operation, Types of queue: Simple queue, circular queue, priority queue, double ended queue. Application of queues.	
<b>Unit III: Linked Lists</b>	<b>[8Hrs]</b>
Singly linked lists: Representation in memory, operation on linked list, algorithms of several operations: Traversing, searching, insertion into, deletion from linked list. Linked list representation of Stack and Queue, Types of linked list: Singly linked list, Circular linked list, Doubly linked list, Circular doubly linked list; Application of Linked Lists.	
<b>Unit IV: Trees Data Structure</b>	<b>[6Hrs]</b>
Trees: Basic Tree Terminologies, representation of tree. Different types of Trees: Binary Tree, Threaded Binary Tree, Binary Search Tree, AVL Tree, B Tree, B+ Tree. Tree traversals algorithm-Inorder, Preorder & Postorder traversal, Tree operations on each of the trees. Applications of trees.	
<b>Unit V: Graph &amp; Hashing Techniques</b>	<b>[6Hrs]</b>
Graph: Basic Terminologies and Representations, Types of Graph, Traversal algorithms: Depth First search and Breadth First Search Algorithms, Spanning trees: Minimum cost spanning tree. Introduction to Hashing, Hashing Techniques & Collision handling Mechanism, Problem based on hashing.	

#### Text Books

SN	Title	Authors	Edition	Publisher
1	Fundamentals of Data Structures in C++	E. Horowitz, D. Mehta, S. Sahni	2nd	Silicon Press
2	Programming with C and Data structures	R.S. Bichkar	1st	Universities Press

#### Reference Books

SN	Title	Authors	Edition	Publisher
1	Data Structures and Algorithm in Java	Goodrich, Tamassia	6th	Wiley publication
2	Introduction to Algorithms	T. H. Cormen, C. E. Leiserson, R.L. Rivest,	3rd	MIT Press
3	Data structures using Java	Y. Langsam, M. J. Augenstein, A. MTanenbaum		Pearson Education
4	Murach's Java Programming	J. Murach	4th	Shroff Publishers
5	A Simplified Approach to Data Structures	V. Goyal, L. Goyal, P. Kumar	1st	Shroff Publishers

		June 2023	1.1	Applicable for 2023-24
Chairman - BoS	Dean – Academics	Date of Release	Version	



# ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

## B. Tech. Scheme of Examination & Syllabus 2023-24

### INFORMATION TECHNOLOGY

#### THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
IT301P	Data Structures Lab		-	4	2	25	25	50

Course Objectives	Course Outcomes
<p><b>This course is intended</b></p> <ul style="list-style-type: none"><li>To imbibe basic data structures for searching and sorting – hash tables, trees, heaps, and the computational complexity of the searching and sorting algorithms that use these structures.</li><li>To make intelligent decisions about alternative data structures and algorithmic techniques in the context of practical software problems</li><li>To give emphasis on design and implementation of abstract data structures.</li><li>To compare the efficiency of various sorting algorithms in terms of both time and space.</li><li>To use appropriated structures for solving various applications depending on behavioural properties.</li></ul>	<p><b>Students will be able to</b></p> <ul style="list-style-type: none"><li>Demonstrate the concept of analysis of algorithms, and implement various sorting searching algorithm</li><li>Implement ADT such as Stack &amp; Queue</li><li>Illustrate the operation on linked list through implementation</li><li>Select and use appropriate non Linear data structures like tree for data representation</li><li>Use an appropriate non Linear data structures like graph and hashing techniques for data representation for solving data organization problem</li></ul>

Expt. No.	Experiments based on
1	Implementation of Searching Sorting algorithm
2	Implementation of ADT-Stack
3	Implementation of ADT-Queue
4	Implementation of Linked & its operation
5	Implementation of non linear data structure-TREE
6	Implementation of non linear data structure-Graph

#### Reference Books

SN	Title	Authors	Edition	Publisher
1	Data Structures and Algorithm in Java	Goodrich, Tamassia	6th	Wiley publication
2	Introduction to Algorithms	T. H. Cormen, C. E. Leiserson, R. L. Rivest, C. Stein	3rd	MIT Press
3	Data structures using Java	Y. Langsam, M. J. Augenstein and A.M. Tanenbaum		Pearson Education
4	Murach's Java Programming	J. Murach	4th	Shroff Publishers
5	A Simplified Approach to Data Structures	V. Goyal, L. Goyal, P. Kumar	1st	Shroff Publishers

		June 2023	1.1	Applicable for 2023-24
Chairman - BoS	Dean – Academics	Date of Release	Version	



# ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

## B. Tech. Scheme of Examination & Syllabus 2023-24

### INFORMATION TECHNOLOGY

#### THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
IT302P	Computer Network Lab			2	1	CA	ESE	Total
						25	25	50

Course Objectives	Course Outcomes
<p><b>This course is intended</b></p> <ul style="list-style-type: none"> <li>To delivers the fundamentals of computer network</li> <li>To discuss and focuses on network architectures, protocols and applications, techniques for encoding and modulation.</li> </ul>	<p><b>Students will be able to</b></p> <ul style="list-style-type: none"> <li>Learn and apply the concepts of computer network for real time system connection and communication.</li> <li>Analyze data link layer protocol peer to peer mode for handling data.</li> <li>Apply the knowledge of network layer concepts for subnetting.</li> <li>Implement the routing protocols for network route identification.</li> <li>Interpret and apply the concepts for installing and configuring DHCP.</li> </ul>

Expt. No.	Experiments based on
1	Study of different types of Network cables and Network Devices practically implement the cross wired cable and straight through cable using clamping tool
2	Connect the computers in Local Area Network and demonstrate the data sharing and hardware sharing
3	Write a program for error detection and correction Hamming Codes or CRC.
4	Write a program to simulate Go back N and Selective Repeat Modes of Sliding Window Protocol in peer to peer mode and demonstrate the packets captured traces using Wireshark Packet Analyzer Tool for peer to peer mode
5	Write a program to demonstrate subnetting and find the subnet masks.
6	Demonstrate the packets captured traces using Wireshark Packet Analyzer Tool for peer to peer mode
7	Write a program for encryption decryption technique.

#### Text Books

SN	Title	Authors	Edition	Publisher
1	Computer Networking -A Top-Down Approach,	James F. Kurose	7 <sup>th</sup>	Pearson Publication
2	Data Communications and Networking	Fourauzan B.	3 <sup>rd</sup>	Tata McGraw-Hill Publications,
3	Computer Networks	Tanenbaum A.	4 <sup>th</sup>	PHI

#### Reference Books

SN	Title	Authors	Edition	Publisher
1	An Engineering Approach to Computer Networking	Keshav S	2 <sup>nd</sup>	Pearson Education,
2	Computer Networks and Internet	Comer D.,	2 <sup>nd</sup>	Pearson Education,
3	Local Area Networks	S.K.Basandra & S. Jaiswal	3 <sup>rd</sup>	Galgotia Publications
4	Data and Computer Communication			

		June 2023	1.1	Applicable for 2023-24
Chairman - BoS	Dean – Academics	Date of Release	Version	



# ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

## B. Tech. Scheme of Examination & Syllabus 2023-24

### INFORMATION TECHNOLOGY

#### THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
IT302T	Computer Network	3			3	30	70	100
<b>Course Objectives</b>		<b>Course Outcomes</b>						
<b>This course is intended</b> <ul style="list-style-type: none"> <li>To deliver the fundamentals of computer network</li> <li>To discuss and focus on network architectures, protocols and applications, techniques for encoding and modulation.</li> </ul>		<b>Students will be able to</b> <ul style="list-style-type: none"> <li>Learn broad overview of computer networking and the Internet</li> <li>Interpret several important link-layer concepts and technologies</li> <li>Reflects a modern view of the network layer's role in computer networking.</li> <li>Use pedagogic approach to discuss transport-layer principles and how these principles are implemented in existing protocols</li> <li>Study in-depth secure communication and how computer networks can be defended from intruders</li> </ul>						

<b>Unit I: Computer Networks and the Internet</b>	<b>[8Hrs]</b>
What Is the Internet? The Network Edge , The Network Core, Delay, Loss, and Throughput in Packet-Switched Networks, Protocol Layers and Their Service Models , Encapsulation, Networks Under Attack, History of Computer Networking and the Internet, Wireless Links and Network Characteristics ,WiFi: 802.11 Wireless LANs ,Cellular Internet access, Mobility Management: Principles, Mobile IP ,Managing Mobility in Cellular Networks ,Wireless and Mobility: Impact on Higher-Layer Protocols.	
<b>Unit II: The Link Layer and LANs</b>	<b>[6Hrs]</b>
Introduction to the Link Layer, Error-Detection and -Correction Techniques, Multiple Access Links and Protocols, Switched Local Area Networks, Link Virtualization: A Network as a Link Layer ,Data Center Networking ,Retrospective: A Day in the Life of a Web Page Request.	
<b>Unit III: Network Layer</b>	<b>[6Hrs]</b>
Overview of Network Layer ,What's Inside a Router?, The Internet Protocol (IP): IPv4, Addressing, IPv6, and More, Generalized Forwarding and SDN ,Routing Algorithms ,Intra-AS Routing in the Internet: OSPF ,Routing Among the ISPs: BGP ,The SDN Control Plane, ICMP: The Internet Control Message Protocol ,Network Management and SNMP.	
<b>Unit IV: Transport and Application Layer</b>	<b>[8Hrs]</b>
Introduction and Transport-Layer Services, Multiplexing and Demultiplexing , Connectionless Transport: UDP ,Principles of Reliable Data Transfer, Connection-Oriented Transport: TCP ,TCP Congestion Control ,Principles of Network Applications, The Web and HTTP ,Electronic Mail in the Internet, DNS—The Internet's Directory Service ,Peer-to-Peer Applications, Video Streaming and Content Distribution Networks,	
<b>Unit V: Security in Computer Networks</b>	<b>[8Hrs]</b>
What Is Network Security? Principles of Cryptography, Message Integrity and Digital Signatures ,Cryptographic Hash Functions, Message Authentication Code, Digital Signatures ,End-Point Authentication ,Securing E-Mail ,Securing TCP Connections, Network-Layer Security: IPsec and Virtual Private Networks (VPN), Securing Wireless LANs ,Operational Security: Firewalls and Intrusion Detection Systems	

#### Text Books

SN	Title	Authors	Edition	Publisher
1	Computer Networking -A Top-Down Approach,	James F. Kurose	7th	Pearson Publication
2	Data Communications and Networking	Fourauzan B.	3rd	TataMcGraw-Hill Publications,
3	Computer Networks	Tanenbaum A.	4th	PHI

#### Reference Books

SN	Title	Authors	Edition	Publisher
1	An Engineering Approach to Computer Networking	Keshav S	2nd	PearsonEducation,
2	Computer Networks and Internet	Comer D.,	2nd	PearsonEducation,
3	Local Area Networks	S.K.Basandra & S. Jaiswal	3rd	Galgotia Publications
4	Data and Computer Communication			

		June 2023	1.1	Applicable for 2023-24
Chairman - BoS	Dean – Academics	Date of Release	Version	



# ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

## B. Tech. Scheme of Examination & Syllabus 2023-24

### INFORMATION TECHNOLOGY

#### THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
IT303T	Computer Architecture and Organization	3	-	-	3	30	70	100

Course Objectives	Course Outcomes
<p><b>This course is intended</b></p> <ul style="list-style-type: none"><li>To understand the design of the various functional units and components of computers.</li><li>To make the students understand the basic operations involved in execution of an instruction.</li><li>To Explain the basic concept of interrupts and their usage to implement I/O control and data transfers.</li><li>To explain the function of each element of a memory hierarchy.</li></ul>	<p><b>Students will be able to</b></p> <ul style="list-style-type: none"><li>Summarize the organization and operation of digital computers.</li><li>Study and apply knowledge of processor instruction sets and its execution.</li><li>Demonstrate computer arithmetic operations on integer and floating-point numbers.</li><li>Describe the organization of memory system.</li><li>Explain concepts of I/O organization and pipelining of a processor.</li></ul>

<b>Unit I: Basic structure of computer</b>	[8Hrs]
Functional Units , Architecture of a small accumulator based CPU, A typical CPU with general register organization, Instruction execution cycle, Addressing modes , Instruction Format. <b>Processing Unit:</b> Execution of a complete instruction, Sequencing of control Signals, types of Buses, Single, Two, multiple bus structure	
<b>Unit II: Computer Arithmetic</b>	[6Hrs]
Binary Addition, Addition and subtraction, Multiplication of unsigned binary integers, Booth's algorithm for Two's complement multiplication unsigned, Unsigned binary division, IEEE Floating-Point representation, Floating Point arithmetic.	
<b>Unit III: Control Unit</b>	[6Hrs]
Control Unit operation: Introduction, Micro-operations, Control of the Processor, Hardwired implementation, <b>Micro programmed control:</b> Microinstruction formats, Micro programmed control unit, Functioning of micro programmed control unit, Microinstruction sequencing techniques.	
<b>Unit IV: The Memory System</b>	[8Hrs]
Internal organization of memory chip, Static memories, Dynamic RAMs, Read-Only Memories, Memory interleaving, Cache Memory, Mapping techniques, Virtual memory, Memory Management requirements, I/O modules, Programmed I/O, Interrupt-Driven I/O, DMA.	
<b>Unit V: Pipelining and parallel Processing</b>	[8Hrs]
Pipelining: Introduction, Pipeline organization, Pipelining issues, Memory delays, Branch delays, Parallel Processing, Types of parallel processor systems, Vector processing <b>Processors:</b> RISC & CISC Processors, Pentium processor, superscalar processor	

#### Text Books

SN	Title	Authors	Edition	Publisher
1	Computer Organization	V. Carl Hamacher	4th	Mc GrawHill
2	Computer Organization and Design	David A.Patterson & John L. Hennessy Morg.	4th	

#### Reference Books

SN	Title	Authors	Edition	Publisher
1	Computer Architecture & Organization	William Stallings		
2	Computer Architecture & Organization	John P Hayes	3rd	Mc GrawHil

		June 2023	1.1	Applicable for 2023-24
Chairman - BoS	Dean – Academics	Date of Release	Version	





# ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

## B. Tech. Scheme of Examination & Syllabus 2023-24

### INFORMATION TECHNOLOGY

#### THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
IT304P	Computer Lab - 1	-	-	2	1	25	25	50

Course Objectives	Course Outcomes
<p><b>This course is intended</b> To develop required computer hardware skills in students so that they are able to acquire the competency such as Identify faults, troubleshoot, repair and do preventive maintenance of computer system and its Peripherals.</p>	<p><b>Students will be able to</b></p> <ul style="list-style-type: none"><li>• Learn &amp; Identify computer peripherals and Microprocessor kit.</li><li>• Demonstrate the installation of Operating Systems and device drivers.</li><li>• Interpret the configuring and maintenance process of various components in computer system and peripheral devices.</li><li>• Identify various faults, repair them and learn how to maintain computer system and its peripherals.</li></ul>

Expt. No.	Experiments based on
1	Study of computer peripherals. Processor, Motherboard, Harddisk, CD/DVD ROM, Monitor, SMPS, Safety Precautions.
2	Study and Configuration of BIOS.
3	Assembling of Personal Computer.
4	Partitioning Hard disk
5	Installation of Operating System (windows, linux, ubuntu etc).
6	Execution of basic commands (unix, linux, ubuntu etc).
7	Study Networking Basics and execution of networking commands.
8	File and Printer Sharing in Network.
9	Structured Cabling.
10	Building a Small Home Network.
11	WI-FI Basics.
12	Protecting PC From Virus, Spyware and Malware.
13	Study of cache memory, memory mapping by using simulators.

#### Text Books

S N	Title	Authors	Edition	Publisher
1	Computer Installation and Servicing	D Bala Subramanian		Tata McGraw Hill Education Private Limited
2	The complete PC Upgrade & Maintenance Guide	Mark Minasi		BPB Publications
3	IBM PC and clones	Govind Rajalu		Tata McGraw Hill Education Private Limited

		June 2023	1.1	Applicable for 2023-24
Chairman - BoS	Dean – Academics	Date of Release	Version	





# ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

## B. Tech. Scheme of Examination & Syllabus 2023-24

### INFORMATION TECHNOLOGY

#### THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
IT305T	Career Development-I	2	-	-	0			
						Audit		

Course Objectives	Course Outcomes
<b>This course is intended</b> to suit the need of the outgoing students and to acquaint them with frequently asked patterns in quantitative aptitude and logical reasoning during various examinations and campus interviews	<b>Students will be able to</b> <ul style="list-style-type: none"> <li>Enhance personality to deal with the various problems of a professional world</li> <li>Express and demonstrate the right soft skills</li> <li>Solve basic and complex mathematical problems in short time.</li> <li>perform well in various competitive exams and placement drives</li> <li>Compete in various competitive exams like CAT, CMAT, GATE, GRE, GATE, UPSC, GPSC etc</li> </ul>
<b>Unit I</b>	[6Hrs]
Introduction to Numbers(Part-1: Divisibility Test, LCM/HCF Problems)Numbers(Part-2: Factorization, Remainder Theorem)Numbers (Part-3 Power Cycle, Successive Division, Puzzles).	
<b>Unit-II</b>	[6Hrs]
Introduction to Simple Equations , Ratio , Proportion & variation, Percentage, Clocks and Calendars	
<b>Unit-III</b>	[6Hrs]
Analogy(number/Letter/ Word./Figure Analogy, Cube & Dice Problems, Extempore Speaking.	
<b>Unit-IV</b>	[6Hrs]
Vocabulary Building Synonyms & Antonyms (Letter A to H).Vocabulary Building Synonyms & Antonyms (Letter I to P),Vocabulary Building Synonyms & Antonyms (Letter R to Z)	
<b>Unit-V</b>	[4Hrs]
Group Discussion & Debate, Body Language Dynamics, MS Word	

#### Text Books

SN	Title	Authors	Edition	Publisher
1	Personality Development and Soft Skills	Barun K. Mitra	2nd	OUP India
2	The 55 Soft Skills That Guide Employee and Organizational Success	Bob Graham and Tobin Edward Porterfield Kiser Randall		Mason-WEST
3	Verbal Reasoning, LSAT Material	GL Barrons	14th	Barrons Educational Series
4	A modern approach to logical Reasoning	R S Agarwal	4th	S.Chand
5	Quantitative Aptitude	R S Agarwal	4th	S.Chand

#### Reference Books

SN	Title	Authors	Edition	Publisher
1	The Hard Truth About Soft Skills: Workplace Lessons Smart People Wish They would Learned Sooner	Peggy Klause	1st	University of Houston-Downtown, OpenStax
2	Bridging the Soft Skills Gap: How to Teach the Missing Basics to Today Young Talent	Bruce Tulgan	2nd	Wiley Publication

		June 2023	1.1	Applicable for 2023-24
Chairman - BoS	Dean – Academics	Date of Release	Version	