STUDENT INFORMATION HANDBOOK

DEPARTMENT OF INFORMATION TECHNOLOGY

SEMESTER 3

2020-21

PARUL INSTITUTE OF ENGINEERING & TECHNOLOGY - FIRST SHIFT
THIRD SEMESTER INFORMATION TECHNOLOGYSTUDENTS HAND-BOOK-2020-21

ACADEMIC CALENDAR FOR ODD TERM - YEAR : 2021 - 22
Bachelor of Technology-Semesters–III, V & VII

Week No.	Teach. Week No.	Week Beginning	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	1	MAY - JUNE	31 Teaching Starts Sem 3,5,& 7	01	02	03	04	05
2	2	JUNE	07	08	9	10	11	12
3	3	JUNE	14 Weekly Subject 1 Sem 7	15 Weekly Subject 1 Sem 3 & 5	16	17 Result Weekly 1	18	19
4	4	JUNE	21 Weekly Subject 2 Sem 7	22 Weekly Subject 2 Sem 3 & 5	23	24 Result Weekly 2	25	26
5	5	JUNE-JULY	28 Weekly Subject 3 Sem 7	29 Weekly Subject 3 Sem 3 & 5	30	01 Result Weekly 3	02	03
6	6	JULY	05 Weekly Subject 4 Sem 7	6 Weekly Subject 4 Sem 3 & 5	07	08 Result Weekly 4	09	10
7	7	JULY	12	13 Weekly Subject 5 Sem 3 & 5	14	15	16	17
8	8	JULY	19	20 Weekly Subject 6 Sem 3 & 5	21	22	23	24
9	9	JULY	26 Rem MidExam Paper 1	27 Rem MidExam Paper 2	28 Rem MidExam Paper 3	29 Rem MidExam Paper 4	30 Rem MidExam Paper 5	31 Rem MidExam Paper 6
10	EXAM	AUG	02 MidExam Paper 1	03 MidExam Paper 2	04 MidExam Paper 3	05 MidExam Paper 4	06 MidExam Paper 5	07 MidExam Paper 6
11	10	AUG	09 Result Rem Mid Exam	10	11	12	13	14
12	11	AUG	16 TW SUB/REM	17 TW SUB/REM	18 TW SUB/REM	19 TW SUB/REM	20 TW SUB/REM	21 TW SUB/REM
13	12	AUG	23 Result Mid Exam	24	25	26	27	28
14	13	AUG - SEPT	30 Janmashtami	31	01	02	03	04
15	14	SEPT	06	07	08	09	10	11 Teaching Ends
16		SEPT	13	14	15	16	17	18
17		SEPT	20 ES PRACT EXAM	21 ES PRACT EXAM	22 ES PRACT EXAM	23 ES PRACT EXAM	24 ES PRACT EXAM	25 ESPRACTEXAM
18		SEPT-OCT	27 ESPRACTEXAM	28 ESPRACTEXAM	29 ESPRACTEXAM	30 ESPRACTEXAM	01 ESPRACTEXAM	02 Gandhi Jayanti
19		OCT	04 ESTHEORYEXAM & ESPRACTEXAM REM	05 ESTHEORYEXAM & ESPRACTEXAM REM	06 ESTHEORYEXAM & ESPRACTEXAM REM	07 ESTHEORYEXAM & ESPRACTEXAM REM	08 ESTHEORYEXAM & ESPRACTEXAM REM	09 ESTHEORYEXAM & ESPRACTEXAM REM
20		OCT	11 ESTHEORYEXAM & ESPRACTEXAM REM	12 ESTHEORYEXAM & ESPRACTEXAM REM	13 ESTHEORYEXAM & ESPRACTEXAM REM	14 ESTHEORYEXAM & ESPRACTEXAM REM	15 Dusshera	16 ESTHEORYEXAM & ESPRACTEXAM REM
21		OCT	18 ESTHEORYEXAM REM	19 ESTHEORYEXAM REM	20 ESTHEORYEXAM REM	21 ESTHEORYEXAM REM	22 ESTHEORYEXAM REM	23 ESTHEORYEXAM REM

* Last date for internal marks entry and locking by HOD is 10/09/2021.

* Last date for internal marks locking by HOI and Dean is 14/09/2021.

* End semester examination will start from 20th September, 2021.

* New term for 1st year students will be as per the guidelines from ACPC.

Next term for 2nd, 4th, 6th & 8th semester students will commence from 18th October, 2021.

PARUL INSTITUTE OF ENGINEERING & TECHNOLOGY - FIRST SHIFT
THIRD SEMESTER INFORMATION TECHNOLOGYSTUDENTS HAND-BOOK-2020-21

BE IT SEM-3 Teaching Scheme

Subject Code	Subject	Teaching Scheme			Examination Scheme						Total
					External			Internal			
		Lect	Tut	Prac	C	T	P	T	CE	P.A (I)	
203105201	Digital Electronics	3	0	0	3	60	-	20	20	-	100
203105202	Digital Electronics Laboratory	0	0	2	1	-	30	-	-	20	50
203105251	Database Management System	3	0	0	3	60	-	20	20	-	100
203105252	Database Management System Laboratory	0	0	2	1		30			20	50
203105205	Data Structure and Algorithms	3	0	0	3	60		20	20		100
203105206	Data Structure and Algorithms Laboratory	0	0	2	1		30			20	50
203105207	Object Oriented Concepts and UML	3	0	0	3	60		20	20	20	100
203105208	Object Oriented Concepts and UML Laboratory	0	0	2	1		30			20	50
203124208	Python Programming Workshop-1	0		2	1		60			40	100
203191202	Discrete Mathematics	3	2	0	5	60			20		100
203193201	Professional Communication	1	1	0	2	-	-		100		100
	Total	**16**	**3**	**10**	**24**						**900**

Lect - Lecture, **Tut** - Tutorial, **Prac** - Lab, **T** - Theory, **P** - Practical, **CE** – Continuous Evaluation

Discrete Mathematics (203191202)

Type of Course: BTech

Prerequisite: Basic Concepts of Set Theory, Function

Rationale: The course provides mathematical background related to Computer engineering

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Scheme					Total
Lect Hrs/ Week	Tut Hrs/ Week	Lab Hrs/		External		Internal			
				T	P	T	CE	P	
3	2	0	5	60	-	20	20	-	100

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Contents:

Sr.	Topic	Weightage	Teaching Hrs.
1	**UNIT-1-Sets, Relation and Function**: Cartesian Products, Binary Relation, Partial Ordering Relation, Equivalence Relation, Size of a Set, Finite and infinite Sets, Countable and uncountable Sets, Cantor's diagonal argument and The Power Set theorem, Schroeder-Bernstein theorem	11%	5
2	**UNIT-2- Principles of Mathematical Induction**: The Well-Ordering Principle, Recursive definition, The Division algorithm: Prime Numbers, The Greatest Common Divisor: Euclidean Algorithm, The Fundamental Theorem of Arithmetic. Basic counting techniques-inclusion and exclusion, pigeon-hole principle, permutation and combination	9%	4
3	**UNIT-3-Propositional Logic**: Syntax, Semantics, Validity and Satisfiability, Basic Connectives and Truth Tables, Logical Equivalence: The Laws of Logic, Logical Implication, Rules of Inference, The use of Quantifiers Proof Techniques: Some Terminology, Proof Methods and Strategies, Forward Proof, Proof by Contradiction, Proof by Contraposition, Proof of Necessity and Sufficiency	18%	8
4	**UNIT-4-Algebraic Structures and Morphism**: Algebraic Structures with one Binary Operation, Semi Groups, Monoids, Groups, Congruence Relation and Quotient Structures, Free and Cyclic Monoids and Groups, Permutation Groups, Substructures, Normal Subgroups, Algebraic Structures with two Binary Operation, Rings, Integral Domain and Fields. Boolean Algebra and Boolean Ring, Identities of Boolean Algebra, Duality, Representation of Boolean Function, Disjunctive and Conjunctive Normal Form	40%	18

5	**UNIT-5-Graphs and Trees**: Graphs and their properties, Degree, Connectivity, Path, Cycle, Sub Graph, Isomorphism, Eulerian and Hamiltonian Walks, Graph Colouring, Colouring maps and Planar Graphs, Colouring Vertices, Colouring Edges, List Colouring, Perfect Graph, definition properties and Example, rooted trees, trees and sorting, weighted trees and prefix codes, Bi-connected component and Articulation Points, Shortest distances.	22%	10

*Continuous Evaluation:

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.

Reference Books:

1. Discrete Mathematical & it's Applications with Combinatorics and Graph Theory
Kenneth H Rosen; Tata McGraw-Hill

2. Discrete Mathematical Structure and It's Application to Computer Science
J.P. Tremblay and R. Manohar; TataMcgraw-Hill; TMG

3. Discrete Mathematics with Applications
Susanna S. Epp; Wadsworth Publishing Co. Inc.; 4

4. Elements of Discrete Mathematics A Computer Oriented Approach
C. L. Liu and D P Mohapatra; Tata McGraw – Hill; 3

Course Outcome:

After Learning the course the students shall be able to:

After learning the course the students can be able to:
1. Express logical sentences in terms of predicates, quantifiers, and logical connectives.
2. Derive the solution of a given problem using deductive logic and prove the solution based on logical inference.
3. Classify an algebraic structure of any mathematical problem.
4. Evaluate Boolean functions and simplify expressions using the properties of Boolean algebra.
5. Develop the given problem as graph networks and solve with techniques of graph theory

Digital Electronics (203105201)

Type of Course: BTech

Prerequisite: Basic Electronics

Rationale: This course is design to provide basic ideas of computer architecture. This course also makes help to understand organization and architecture of computer. It will help to develop their logical abilities.

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Scheme					Total
				External		Internal			
Lect Hrs/	Tut Hrs/	Lab Hrs/		T	P	T	CE	P	
3	0	0	3	60	-	20	20	-	100

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Contents:

Sr.	Topic	Weightage	Teaching Hrs.
1	**UNIT-1**: **Fundamentals of Digital Systems and logicfamilies :** Digital signals, digital circuits, Number Systems:binary, signed binary, octal, hexadecimal number, binary arithmetic, one's and two's complements arithmetic, codes, BCD arithmetic ,error detecting and correcting codes, AND, OR, NOT, NAND, NOR and Exclusive-OR operations, examples of IC gates, characteristics of digital ICs, Digital Logic families:TTL and CMOS logic, interfacing CMOS and TTL.	15%	7
2	**UNIT-2**: **Minimization Techniques**: Boolean Algebra, Boolean postulates and laws, De-Morgan's Theorem, Principle of Duality, Boolean expression, Minterm, Maxterm, Sum of Products (SOP), Product of Sums (POS),K-map representation, simplification and minimization of logic functions using K-map. Don't care conditions and Quine-McCluskey Method of minimization. Variable Entered Maps, Realizing Logic Function with Gates.	20%	8
3	**UNIT-3**: **Combinational Digital Circuits**: Binary Adders and Subtractors, Parallel binary adder & subtractor, Serial adder, BCD adder, Carry look ahead adder, Multiplexer/De Multiplexer, Encoder/Decoders, Popular MSI chips, Magnitude comparator, parity checker/generator, code converters, priority encoders, decoders/drivers for display devices.	20%	9

4	**UNIT-4**: **SEQUENTIAL CIRCUITS**: A 1-bit memory, the circuit properties of Bi-stable latch, the clocked SR flip flop, J- K-T and Dtypesflip flops, applications of flipflops, shift registers, Applications of shift registers, ring counter, sequence generator, ripple (Asynchronous) counters, synchronous counters,special counter IC's, asynchronous sequential counters, applications ofcounters.	20%	9
5	**UNIT-5**: **A/D and D/A Converters:** Digital to analog converters: weighted resistor/converter, R-2R Ladder, examples of D to A converters IC's, Analog to Digital converters: successive approximation, A/D converter, dual slope A/D Converter, Example of A/DConverterICs.	10%	5
6	**UNIT-6**: **Semiconductor Memories And Programmable Logic Devices:** Classification and characteristics of memories, Content addressable memory (CAM), commonly used memory chips, Introduction of PLD,ROM as a PLD, Programmable logic array, Programmable array logic, Complex Programmable logic devices (CPLDS), Field Programmable Gate Array (FPGA).	15%	7

*Continuous Evaluation:

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.

Reference Books:

1. Modern Digital Electronics (TextBook)
R. P. Jain; Tata McGraw-Hill Education

2. Digital Logic and Computer Design
Morris Mano; PHI

3. Fundamentals of Digital Circuits
Anand Kumar; Prentice-Hall of India Private Limited, New Delhi (2006)

Course Outcome:

After Learning the course the students shall be able to:

After Learning the course the students shall be able to:
1. Identify and Explain the digital number system and also able to justify the practical application of number system.
2. Understand and Explain different logic gates and codes and also how to use them in real word application.
3. Realize the minimization techniques of digital Circuits.
4. Design different Adders, Subtracters, Multiplexers, decoders and many more circuits
5. Apply the theoretical knowledge to design flip-flops, counters and many more sequential circuits.
6. Identify and illustrate specifications of different logic families and memories and analyze them in critical way.

Digital Electronics Laboratory (203105202)

Type of Course: BTech

Prerequisite: Basic Electronics

Rationale: This course is design to provide basic ideas of computer architecture. This course also makes help to understand organization and architecture of computer. It will help to develop their logical abilities.

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Scheme					Total
				External		Internal			
Lect Hrs/	Tut Hrs/	Lab Hrs/		T	P	T	CE	P	
0	0	2	1	-	30	-	-	20	50

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Course Outcome:

After Learning the course the students shall be able to:

After Learning the course the students shall be able to:
1. Identify and Explain the digital number system and also able to justify the practical application of number system.
2. Understand and Explain different logic gates and codes and also how to use them in real word application.
3. Realize the minimization techniques of digital Circuits.
4. Design different Adders, Subtracters, Multiplexers, decoders and many more circuits
5. Apply the theoretical knowledge to design flip-flops, counters and many more sequential circuits.
6. Identify and illustrate specifications of different logic families and memories and analyze them in critical way.

List of Practical:

1. **To Study and Testing of various Logic Gates ICs.**

2. **Configuring NAND and NOR logic gates as universal gates.**

3. **Design Logic Gates using TTL Logic Gamily.**

4. **Study and Implementation of Boolean Logic Functions and combinational circuits like Adder/ Subtractor, Code Converters, using Logic Gates.**

5. **Study and Implementation of Boolean Logic Functions and combinational circuits like Multiplexers/De-Multiplexres using Logic Gates.**

6. **Study and Implementation of Boolean Logic Functions and combinational circuits like Encoders/ Decoders, using Logic Gates.**

7. **Study and configure of flip-flop using digital ICs. Design digital system using these circuits.**

8. **Study and configure of registers and counters using digital ICs. Design digital system using these circuits.**

9. **Study and Design A to D / D to A converters.**

10. **Introduction to FPGA / CPLD. Implementation of digital circuits studied in previous sessions using PLD/ CPLD / FPGA.**

Type of Course: BTech

Prerequisite: The students should have a good understanding of basic computer concepts such a Memory concepts, data, information and data structures.

Rationale: The purpose of this subject is to cover the underlying concepts and techniques used in creating a Data Base System. These techniques can be used in Software Developments. Data management involves both defining structures for storing information and providing mechanisms for manipulating the information. In addition, the database system must provide for the safety of the stored information, despite system crashes or attempts at unauthorized access. If data are to be shared among several users, the system must avoid possible anomalous results due to multiple users concurrently accessing the same data.

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Scheme					Total
				External		Internal			
,L ct Hrs/	Tut Hrs.	..b H.,.		T	P	T	CE	P	
3	0	0	3	60		20	20		100

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Contents:

Sr.	Topic	Weightage	Teaching Hrs.
1	Unit 1: Database system architecture: Data Abstraction, Data Independence, Data DefinitionLanguage (DDL), Data Manipulation Language (DML). Data models: Entity-relationship model, network model, relational and object oriented datamodels, integrity constraints, data manipulation operations.	15%	7
2	Unit 2: Relational query languages: Relational algebra, Tuple and domain relationalcalculus, SQL3, DDL and DML constructs, Open source and Commercial DBMS -MYSQL, ORACLE, DB2, SQL server Relational database design: Domain and data dependency,Armstrong's axioms,Normal forms, Dependency preservation, Lossless design. Query processing and optimization: Evaluation of relational algebra expressions,Query equivalence, Join strategies, Query optimization algorithms.	30%	14
3	**Unit 3**: Storage strategies: Indices, B-trees, hashing.	10%	5

4	Unit 4: **Transaction processing:** Concurrency control, ACID property, Serializability of scheduling, Locking and timestamp based schedulers, Multi-version and optimisticConcurrency Control schemes, Database recovery.	16%	8
5	**Unit 5**: **Database Security:** Authentication, Authorization and access control, DAC, MAC and RBAC models, Intrusion detection, SQL injection.	13%	6
	Unit 6: **Advanced topics:** Object oriented and object relational databases, Logical databases, Web databases, Distributed databases, Data warehousing and data mining.	16%	8

*Continuous Evaluation:

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.

Reference Books:

1. Database System Concepts
   Silberschatz, Korth, Sudarshan; McGraw Hill Publication; 4th Edition
2. Fundamentals of DatabaseSystems
   Elmsari, Navathe; Pearson Education (2008); 5th Edition
3. Fundamentals of Database Management SystemsMark
   L. Gillenson; Wiley— Latest Edition
4. Database Management Systems
   Raghu Ramkrishnan, Johannes Gehrke; McGraw Hill International; Second Edition

Course Outcome:

After Learning the course the students shall be able to:

1. For a given query write relational algebra expressions for that query and optimize the developed expressions
2. For a given specification of the requirement design the databases using EnR method and normalization.
3. For a given specification construct the SQL queries for Open source and Commercial DBMS-MYSQL, ORACLE, and DB2.
4. For a given query optimize its execution using Query optimization algorithms
5. For a given transaction-processing system, determine the transaction atomicity, consistency, isolation, and durability.
6. Implement the isolation property, including locking, time stamping based on concurrency control and Serializability of scheduling.

Type of Course: BTech

Prerequisite: The students should have a good understanding of basic computer concepts such a Memory concepts, data, information and data structures.

Rationale: The purpose of this subject is to cover the underlying concepts and techniques used in creating a Data Base System. These techniques can be used in Software Developments. Data management involves both defining structures for storing information and providing mechanisms for manipulating the information. In addition, the database system must provide for the safety of the stored information, despite system crashes or attempts at unauthorized access. If data are to be shared among several users, the system must avoid possible anomalous results due to multiple users concurrently accessing the same data.

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Scheme					Total	
				External		Internal				
Lect Hrs/	Tut Hrs/	Lab H.,.		T	P	T	CE	P		
0	0	4		2		30			20	50

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Course Outcome:

After Learning the course the students shall be able to:

1. For a given query write relational algebra expressions for that query and optimize the developed expressions

2. For a given specification of the requirement design the databases using EnR method and normalization.

3. For a given specification construct the SQL queries for Open source and Commercial DBMS -MYSQL, ORACLE, and DB2.

4. For a given query optimize its execution using Query optimization algorithms

5. For a given transaction-processing system, determine the transaction atomicity, consistency, isolation, and durability.

6. Implement the isolation property, including locking, time stamping based on concurrency control and Serializability of scheduling.

List of Practical:

1. To study DDL-create and DML-insert commands.
2. To study various options of LIKE predicate.
3. To Perform various data manipulation commands, aggregate functions and sorting concept on all created tables.
4. To study Single-row functions.
5. Displaying data from Multiple Tables (join)
6. To apply the concept of Aggregating Data using Group functions.
7. To solve queries using the concept of sub query.
8. Manipulating Data
9. To apply the concept of security and privileges.
10. To study Transaction control command.

Data Structure and Algorithms (203105205)

Type of Course: BTech

Prerequisite: Fundamentals of Knowledge of Programming & C Language

Rationale: This course is design to provide fundamentals of data structures. This subject provides basic knowledge of performance analysis and measurements and implementation of different data structure and algorithm using programming language.

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Scheme					Total
				External		Internal			
Lect Hrs/	Tut Hrs/	Lab Hrs/		T	P	T	CE	P	
3	0	0	3	60	-	20	20	-	100

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Contents:

Sr.	Topic	Weightage	Teaching Hrs.
1	**UNIT-1**: **Introduction:**Basic Terminologies: Elementary Data Organizations,Data Structure Operations: insertion, deletion, traversal etc.; Analysis of an Algorithm, Asymptotic Notations, Time-Space trade off. **Searching:**Linear Search and Binary Search Techniquesand their complexity analysis.	13%	6
2	**UNIT-2**: **Stacks and Queues:** ADT Stack and its operations: Algorithms andtheir complexity analysis, Applications of Stacks: Expression Conversion and evaluation –corresponding algorithms and complexity analysis. ADT queue, Types of Queue: Simple Queue, Circular Queue, Priority Queue; Operations on each types of Queues: Algorithms and their analysis.	23%	11
3	**UNIT-3**: **Linked Lists:**Singly linked lists: Representation in memory, Algorithms of several operations: Traversing, Searching, Insertion into, Deletion from linked list; Linked representation of Stack and Queue, Header nodes, Doubly linked list: operations on it and algorithmic analysis; Circular Linked Lists: all operations their algorithms and the complexity analysis.	22%	10

4	**UNIT-4**: **Trees:**Basic Tree Terminologies, Different types of Trees: Binary Tree, Threaded Binary Tree, Binary Search Tree, AVL Tree; Tree operations on each of the trees and their algorithms with complexity analysis. Applications of Binary Trees. B Tree, B+ Tree: definitions, algorithms and analysis.	22%	10
5	**UNIT-5**: **Sorting and Hashing:**Objective and properties of different sorting algorithms: Selection Sort, Bubble Sort, Insertion Sort, Quick Sort, Merge Sort, Heap Sort;Performance and Comparison among all the methods, Hashing.	12%	5
6	**UNIT-6**: **Graph:**Basic Terminologies and Representations, Graph search and traversal algorithms and complexity analysis.	8%	3

*Continuous Evaluation:

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.

Reference Books:

1.   An Introduction to Data Structures with Applications (TextBook)
Jean-Paul Tremblay, Paul G. Sorenson; Tata McGraw-Hill; 2nd Edition, (2007)

2.   Data Structures using C & C++ Tanenbaum;
Prenctice-Hall International.

3.   Fundamentals of Computer Algorithms
E. Horowitz, S. Sahni, and S. Rajsekaran; Galgotia Publication

4.   Fundamentals of Data Structures in C++-
Sartaj Sahani

5.   Data Structures: A Pseudo-code approach with C
Gilberg & Forouzan Publisher; Thomson Learning.

Course Outcome:

After Learning the course the students shall be able to:

1. For a given algorithm student will able to analyze the algorithms to determine the time and computation complexity and justify the correctness.
2. For a given Search problem (Linear Search and Binary Search) student will able to imement it.
3. For a given problem of Stacks, Queues and linked list student will able to implement itand analyze the same to determine the time and computation complexity.
4. Student will able to write an algorithm Selection Sort, Bubble Sort, Insertion Sort,Quick Sort, Merge Sort, Heap Sort and compare their performance in term of Spaceand Time complexity.
5. Student will able to implement Graph search and traversal algorithms and determinethe time and computation complexity.

Data Structure and Algorithms Laboratory (203105206)

Type of Course: BTech

Prerequisite: Fundamentals of Knowledge of Programming & C Language

Rationale: This course is design to provide fundamentals of data structures. This subject provides basic knowledge of performance analysis and measurements and implementation of different data structure and algorithm using programming language.

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Scheme					Total
				External		Internal			
Lect Hrs/	Tut Hrs/	Lab Hrs/		T	P	T	CE	P	
0	0	2	1	-	30	-	-	20	50

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Course Outcome:

After Learning the course the students shall be able to:

1. For a given algorithm student will able to analyze the algorithms to determine the time and computation complexity and justify the correctness.
2. For a given Search problem (Linear Search and Binary Search) student will able toimplement it.
3. For a given problem of Stacks, Queues and linked list student will able to implement itand analyze the same to determine the time and computation complexity.
4. Student will able to write an algorithm Selection Sort, Bubble Sort, Insertion Sort,Quick Sort, Merge Sort, Heap Sort and compare their performance in term of Spaceand Time complexity.
5. Student will able to implement Graph search and traversal algorithms and determinethe time and computation complexity.

List of Practical:

1.   **A- Introduction to pointers.**
     (a) Call by Value (write a function that return max of two passed value)

     (b) Call by reference.(write a function to swap value of two variable)

1.   ***1-B Introduction to Dynamic Memory Allocation***
DMA functions malloc(), calloc(), free() etc.

     (a) W.A.P. to create dynamic int array using malloc() and free()

     (b) W.A.P. to create dynamic char array using calloc() and free()

2.   ***A- Write a program to implement structure in c.***

2.   **2-B Write a program to implement (a) linear Search (b) Binary Search**

3.   **A-Write a program to implement (a) Bubble Sort (b) Insertion Sort (c) Selection Sort**

3. B- Implement a program for stack that performs following operations using array. (a)PUSH (b) POP (c) PEEP (d) CHANGE (e) DISPLAY

4. A- Implement a program to convert infix notation to postfix notation using stack.

4. B- Implement a program to evaluate postfix notation.

5. A- Write a program to implement QUEUE using arrays that performs following operations (a)INSERT (b) DELETE (c) DISPLAY

5. B- Write a menu driven program to implement following operations on the singly linked list. (a) Insert a node at the front of the linked list. (b) Insert a node at the end of the linked list.

6. A-Write a menu driven program to implement following operations on the singly linked list. (a)) Insert a node at the specified position (b) Delete a first node of the linked list.

6. B- Write a menu driven program to implement following operations on the singly linked list. (a) Delete a node before specified position. (b) Delete a node after specified position.

7. A- Write a program to implement following operations on the doubly linked list. (a) Insert anode at the front of the linked list. (b) Insert a node at the end of the linked list.

7. B- Write a program to implement following operations on the doubly linked list. (a) Delete alast node of the linked list. (b) Delete a node before specified position.

8. A- Write a program to implement following operations on the circular linked list. (a) Insert anode at the end of the linked list. (b) Insert a node before specified position.

8. B- Write a program to implement following operations on the circular linked list. (a) Delete afirst node of the linked list. (b) Delete a node after specified position.

9. A- Write a program to implement stack using linked list.

9. B- Write a program to implement queue using linked list.

10. A- Write a program to create binary Tree Traversal.

10. B- Write a program to implement Prim's and Kruskal'salgorithm

Object Oriented Concepts and UML (203105207)

Type of Course: BTech

Prerequisite: Concepts of Object-Orientation

Rationale: This course is designed to provide the deep concept of Object-Oriented system analysis and design. OO methodology employs international standard Unified Modeling Language (UML) fromthe Object Management Group (OMG). UML is a modeling standard for OO analysis and design which has been widely adopted in the IT industry.

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Scheme					Total
				External		Internal			
Lect Hrs/	Tut Hrs/	Lab Hrs/		T	P	T	CE	P	
3	0	0	3	60	-	20	20	-	100

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Contents:

Sr.	Topic	Weightage	Teaching Hrs.
1	**UNIT-1**: **Introduction**: About Object Orientated Technology, Development and OOModeling History, Introduction to UML, Features of Object-oriented concepts. **Modeling Concepts**: Introduction to Model, Modeling design Technique, Three models, Class Model, State model and Interaction model.	20%	8
2	**UNIT-2**: **Class Modeling**: Object and class concepts, link and association, Generalization and Inheritance, Advanced class modeling- Aggregation, Composition, Abstract class and concrete class, metadata, constraints. **State Modeling**: Event, state, Transition and conditions, state diagram, state diagram behavior, concurrency, Relation of Class and State models.	25%	12
3	**UNIT-3**: **Interaction Modeling**: Use case Models, sequence models, activity models	15%	4

4	**UNIT-4**: **Analysis and Design**: Development Life cycle, Development stages, Domain Analysis-Domain class model, domain state model, domain interaction model, Iterating and analysis. Application Interaction model, Application class model, Application state Model, Adding operation.	15%	6
5	**UNIT-5**: **SystemDesign**: Estimating Performance, making a reuse plan, breaking system into subsystems, identifying concurrency, allocation of subsystems, management of data storage, Handling Global resources, choosing a software control strategy, Handling boundary condition, common Architectural style.	15%	6
6	**UNIT-6**: **Class design**: Overview of class design, designing algorithms recursing downward, refactoring, design optimization, Adjustment of Inheritance, Reification of Behavior, Design pattern: introduction and classification, case study of model view controller(MVC).	10%	6

*Continuous Evaluation:

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.

Reference Books:

1. Object oriented Modeling and Design (TextBook)
   Michael Blaha and James Rambaugh.

2. Object Oriented Analysis Design and Implementation
   Brahma Dathan, SarnathRamnath

3. Object Oriented Design with Applications
   Grady Booch

4. Design Patterns - Elements of Reusable Object - Oriented Software
   E. Gamma et.al.

Course Outcome:

After Learning the course the students shall be able to:

After Learning the course, the students shall be able to:
1. Recognize object-oriented technology features to the practical system analysis and design.
2. Identify Reuse Mechanisms & Use appropriate design patterns.
3. Prepare the UML analysis and design diagrams.
4. Name and apply some common object-oriented design patterns and give example of their use.

Object Oriented Concepts and UML Laboratory (203105208)

Type of Course: BTech

Prerequisite: Basic Concepts of Object-Orientation

Rationale: This course is designed to provide the deep concept of Object-Oriented system analysis and design. OO methodology employs international standard Unified Modeling Language (UML) fromthe Object Management Group (OMG). UML is a modeling standard for OO analysis and design which has been widely adopted in the IT industry.

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Scheme					Total
				External		Internal			
Lect Hrs/	Tut Hrs/	Lab Hrs/		T	P	T	CE	P	
0	0	2	1	-	30	-	-	20	50

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Course Outcome:

After Learning the course the students shall be able to:

After Learning the course, the students shall be able to:
1. Recognize object-oriented technology features to the practical system analysis and design.
2. Identify Reuse Mechanisms & Use appropriate design patterns.
3. Prepare the UML analysis and design diagrams.
4. Name and apply some common object-oriented design patterns and give example of their use.

List of Practical:

1. **Implement and Design of class Diagram**

2. **Implement and Design of Object Diagram**

3. **Implement and Design of State Diagram**

4. **Implement and Design of Use case Diagram**

5. **Implement and Design of Sequence Diagram**

6. **Implement and Design of Activity Diagram**

7. **Implement and Design of Collaboration Diagram**

8. **Implement the Domain class and state model**

9. **Study on rational tool**

10. **Study of MVC Design Pattern**

PARUL INSTITUTE OF ENGINEERING & TECHNOLOGY - FIRST SHIFT
THIRD SEMESTER INFORMATION TECHNOLOGY
STUDENTS HAND-BOOK-2020-21

Department of Computer Science & Engineering

SYLLABUS FOR 3rd Sem BTech PROGRAMME

Python Programming Workshop-1 (203124208)

Type of Course: BTech

Prerequisite:

Rationale:

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Scheme					Total
				External		Internal			
Lect Hrs/ Week	Tut Hrs/ Week	Lab Hrs/ Week		T	P	T	CE	P	
0	0	2	1	-	60	-	-	40	100

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

List of Practical:

1. **What is Python?, Installation of the python environment (anaconda),.python keywords, comments, and indentation, Python data types, Math and numbers in python.**

2. **CONTROL STATEMENTS (Include nested and at least 3 examples for A, B, C) A. If-else and if-elif-else B. While-loops C. For loops D. Break, continue, pass, and return E. Pointers in python**

3. **Functions in python - Inbuilt functions in python, User-defined functions (with and without argument & with and without return type), Lambda faction in python.**

4. **List, Tuples, Dictionaries & Sets in python**

5. **Input and output in python - Inputs and outputs from the file, Operations on files, Modes and methods of files.**

6. **EXCEPTION HANDLING (compile time and run time) Try-except-finally Try-except-else**

7. **Decorators in python**

8. **Regular expression (REGEX) in python**

9. **DB-API in python - DML operations , DDL operations**

10. **Object oriented programming in python Inheritance, Polymorphism, Encapsulation and data abstraction**

PARUL INSTITUTE OF ENGINEERING & TECHNOLOGY - FIRST SHIFT
THIRD SEMESTER INFORMATION TECHNOLOGY
STUDENTS HAND-BOOK-2020-21

Professional Communication Skills-1 (203193201)

Type of Course: BTech

Prerequisite:

Rationale: Knowledge and application of English, Aptitude and Management Skills are crucial for better employability as well as professionalism

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Scheme					Total
				External		Internal			
Lect Hrs/ Week	Tut Hrs/ Week	Lab Hrs/		T	P	T	CE	P	
1	1	0	2	-	-	-	100	-	100

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Contents:

Sr.	Topic	Weightage	Teaching Hrs.
1	**Technical Writing: Email etiquette & Email writing Letter Writing (Types of letters & Layout)**: • Trains students on detailed email and letter writingetiquette. • Students will be able to write formal letters following certain spitulated formats. • They will learn different types of letters for different official purposes.	10%	6
2	**Interpersonal Communication at Workplace: Dynamics of communication**: • To develop the cofidence to handle a wide range of demanding situation more effectively at the workplace • To enable the students to analyse their own interpersonal communication style.	5%	2
3	**Debate: The three minute debate planner**: • To enable the students to generate effective critical thinking into primary issues in the given topic. • Students will be able to resolve controvercies and recognize strengths and weaknesses of arguments.	10%	3
4	**Goal setting & Tracking**: • To enable the students to define stategies or implementation steps to attain the identified goals and make progress everyday.	5%	2
5	**Time Management & Task Planning (Case –study)**: • To enable the students to identify their own time wasters and adopt strategies to reduce them. • To enable students to clarify and prioritise their objective and goals by creating more planning time	3%	2

6	**Reading Comprehension: Intermediate level**: • To enable the students develop the knowlege, skills, and strategies they must possess to become proficient and independent readers	5%	2
7	**Listening Skills: Small everyday conversation & comprehension**: • Provides practice on understanding accents and day to day conversations. • Listening to English conversations in different context.	10%	1
8	**Information design and writing for print and online media: Blog Writing**: • To enable students to design information that is targeted to specific audiences in specific situation to meet defiened objectives. • To create blogs ans share their own knowledge and experience to the world.	3%	2
9	**Advanced vocabulary Building:**: • The students will expand their vocabulary so as to enhance their proficiency in reading and listening to academic texts, writing, and speaking. • The students will attain vocabulary to comprehend academic and social reading and listening texts. • The students will develop adequate speaking skills to communicate effectively.	5%	5
10	**Picture Perception**: • To prepare the students for a test for basic intelligence and IQ, generally done on the first day of SSB (Sashastra Seema Bal is one of India's Central Armed Police Forces)	5%	1
11	**Game of Truth (Activity)**: • To make the students think of significance of certain things in their life. • To make them share their thoughts and perception of matters in life, with others.	0%	1
12	**Appreciation, Apology and Acknowledgement letters**: • To enable the students to maintain productive business relationship throght different types of letters. • To enable the studets to express their feelings without speaking out loud.	7%	2
13	**The Art of Negotiation**: • To enable the students to reach an agreement for mutual benifits through negotiation. • To enable the students to learn a process by which compromise or agreement is reached while avoiding argument and dispute.	2%	1
14	**Coding & decoding, series, analogy, odd man out and Visual reasoning**: • The topic consist of Coding and Decoding ,Series, Analogy ,Odd Man Out , Visual Reasoning which going to help students to sharpen their brain	5%	2
15	**Profit and loss, Partnership and averages**: • This topic is going to help student to understand Basic terminologies in profit and loss , Partnership, Averages , Weighted average ,Mixtures and alligations	5%	3

16	**Job Vs Career, Career Planning Basics**: • This topic is going to help student to understand Basic terminologies in profit and loss , Partnership, Averages , Weighted average ,Mixtures and alligations	4%	2
17	**Data arrangement and blood relations**: • Students are able to understand Linear Arrangement, Circular Arrangement ,Multi-dimensional Arrangement ,Blood Relations which is very helpful to solve logical reasoning section in aptitude	5%	2
18	**Set theory**: • This topic will help students to recall Set definition and formulas, Power set , Sub set, Set multiplication which they already studied at school level	3%	1
19	**Algebraic expression**: • This topic will help student to understand Remainder of an expression ,Factors, multiples, HCF and LCM of expressions, Finding maxima and minima	3%	2
20	**Surds indices and simplification**: • Students are able to understand Surds, Indices ,Simplification it will be slight exercise of the same	3%	1
21	**Attention to Detail**: • This topic comprises of String matching ,Text and image comprehension Qs , Decision based Qs which is the base of Data Interpretation questions	2%	2

*Continuous Evaluation:

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.

Reference Books:

1. communication skills Kumar S and Lata P; New Delhi Oxford University press2 practical English Usage Michael Swan

3 A remedial English Grammar for foreign Student F. T Wood4 on Writing well William Zinsser,
Harper Paperbacks

5 Oxford Practice Grammar John Eastwood; Oxford university Press

6 Quantitative Aptitude for Competitive Examinations; Dr R S Aggrawal

course Outcome:

After Learning the course the students shall be able to:

1. Write, read and understand workplace English.
2. Speak and participate in oral organizational communication

List of Tutorial:

1. **Game of Truth**

2. **Listening Skills: Small everyday conversation & comprehension (practice & test)**

3. **Appreciation, Apology and Acknowledgement letters (2 hours)**

4. **Debate (2 hours)**

5. **Advanced vocabulary Building (3 hours) • Phrasal verbs • Idiotic Expression(chart Activity) • Developing Technical vocabulary(Memory Game)**

6. **Letter Writing (4 hours)**

FACULTY OF ENGG. & TECH. – PIET							

Table:

FACULTY OF ENGG. & TECH. – PIET							
LESSON PLAN							
Academic Year: 2020-2021			**Sem: 3rd**				
Subject: Object Oriented Concepts with UML			**Department: IT**				
Name of Teacher: Prof. Tejal Patel , Prof. Shaleen Shukla			**Hrs./Week: 03 Hours/Week**				
Sr. No.	**Name of Topic**	**Hrs. Allotted**	**Planned Date**					
			IT3A	**IT3B**	**IT3C**			
	Chapter: 1	**8**						
1	About Object Orientated Technology	1	31-05	01-06	31-05			
2	Development and OO Modeling History	1	01-06	02-06	03-06			
3	Introduction to UML	1	02-06	05-06	04-06			
4	Features of Object-oriented concepts	1	07-06	08-06	07-06			
5	Features of Object-oriented concepts	1	08-06	09-06	10-06			
6	Introduction to Model	1	09-06	12-06	11-06			
7	Modeling designs Technique	1	14-06	15-06	14-06			
8	Three models: Class Model, State model, Interaction Model	1	15-06	16-06	17-06			
	Chapter:2	**12**						
9	Object and class concepts	1	16-06	19-06	18-06			
10	Link and association	1	21-06	22-06	21-06			
11	Generalization, Inheritance	1	22-06	23-06	24-06			
12	Advanced class modeling- Aggregation,	1	23-06	26-06	25-06			
13	Composition	1	28-06	29-06	28-06			
14	Abstract class and concrete class	1	29-06	30-06	01-07			
15	Metadata, Constraints, Event, State	1	30-06	03-07	02-07			
16	Transition and conditions	1	05-07	06-07	05-07			
17	State diagram	1	06-07	07-07	08-07			
18	State diagram behavior	1	07-07	10-07	09-07			
19	Concurrency	1	12-07	13-07	12-07			
20	Relation of Class and State models	1	13-07	14-07	15-07			

	Chapter:3	**4**						
21	Use case Models	1	14-07	17-07	16-07			
22	Use case Models	1	19-07	20-07	19-07			
23	Sequence Models	1	20-07	21-07	22-07			
24	Activity Models	1	21-07	24-07	23-07			
	Chapter: 4	**6**						
25	Development Life cycle, Development stages	1	26-07	28-07	29-07			
26	Domain Analysis-Domain class model	1	27-07	31-07	30-07			
27	Domain state model, domain interaction model	1	28-07	03-08	02-08			
28	Iterating and analysis	1	09-08	04-08	05-08			
29	Application Interaction model	1	10-08	07-08	06-08			
30	Application class model, Application state Model, Adding operation	1	11-08	10-08	09-08			
	Chapter: 5	**6**						
31	Estimating Performance, making a reuse plan	1	16-08	11-08	12-08			
32	Breaking system into subsystems, identifying concurrency	1	17-08	14-08	13-08			
33	Allocation of subsystems	1	18-08	17-08	16-08			
34	Management of data storage	1	23-08	18-08	19-08			
35	Handling Global resources, choosing a software control strategy	1	24-08	21-08	20-08			
36	Handling boundary condition, common Architectural style.	1	25-08	24-08	23-08			
	Chapter: 6	**6**						
37	Overview of class design, Designing algorithms recursing downward	1	30-08	25-08	26-08			
38	Refactoring, design optimization	1	31-08	28-08	27-08			
39	Adjustment of Inheritance	1	01-09	31-08	30-08			
40	Reification of Behavior	1	04-09	01-09	02-09			
41	Design pattern: introduction and classification	1	06-09	04-09	03-09			
42	Case study of model view controller (MVC).	1	07-09	07-09	06-09			

			FACULTY OF ENGG. & TECH. – PIET							
			LESSON PLAN (Practical)							
Academic Year: 2021-2022			Sem: 3rd sem							
Subject: Object Oriented Concepts with UML (203105208)			Department: IT							
Name of Teacher: Prof. Tejal Patel , Prof. Shaleen Shukla, Prof. Disha			Hrs./Week: 02							
Sr. No.	Name of Topic		Planned Date							
			3ITA1	3ITA2	3ITB1	3ITB2	3ITC1	3ITC2		
1	Implement and Design of class Diagram		01/06/21	31/05/21	02.Jun	5-Jun	01/06/2021	02/06/2021		
2	Implement and Design of Object Diagram		15/06/21	14/06/21	05.Jun	12-Jun	08/06	09/06		
3	Implement and Design of State Diagram		29/06/21	28/06/21	09.Jun	19-Jun	15/06	16/06		
4	Implement and Design of Use case Diagram		06/07/21	05/07/21	12.Jun	26-Jun	22/06	23/06		
5	Implement and Design of Sequence Diagram		20/07/21	19/07/21	16.Jun	3-Jul	29/06	30/06		
6	Implement and Design of Activity Diagram		27/07/21	26/07/21	19.Jun	10-Jul	06/07	07/07		
7	Implement and Design of Collaboration Diagram		10/08/21	09/08/21	23.Jun	17-Jul	13/07	14/07		
8	Implement the Domain class and state model		24/08/21	23/08/21	26.Jun	24-Jul	20/07	28/07		
9	Study on rational tool		31/08/21	30/08/21	30.Jun	31-Jul	27/07	04/08		
10	Study of MVC Design Pattern		07/09/21	06/09/21	03.Jul	7-Aug	03/08	11/08		

FACULTY OF ENGG. & TECH. – PIET					
LESSON PLAN(Theory)					
Academic Year: 2021-2022			Sem: 3rd		
Subject: Data Base Management System			Department: IT		
Name of Teacher: Sumitra Menaria, Jayshree Parmar			Hrs./Week: 3		
Sr. No.	Name of Topic	Hrs. Allotted	Planned Date			
			3ITA	3ITB	3ITC	3ITD
1	**Database system architecture**	**7**				
	Data Abstraction, Data Independence	1	6/3/2021	6/2/2021	01-06-2021	NA
	Data Definition Language (DDL)	1	6/5/2021	6/4/2021	02-06-2021	
	Data Manipulation Language (DML)	1	6/9/2021	6/5/2021	05-06-2021	
	Data models				08-06-2021	
	Entity-relationship model, network model	1	6/10/2021	6/9/2021	09-06-2021	
	relational and object oriented datamodels	1	6/12/2021	6/11/2021	12-06-2021	
	integrity constraints	1	6/16/2021	6/12/2021	15-06-2021	
	data manipulation operations	1	6/17/2021	6/16/2021	16-06-2021	
2	**Relational query languages**	**14**				
	Relational algebra	1	6/19/2021	6/18/2021	19-06-2021	
	Tuple and domain relational calculus	1	6/23/2021	6/19/2021	22-06-2021	
	SQL3	1	6/24/2021	6/23/2021	23-06-2021	
	DDL and DML constructs	1	6/26/2021	6/25/2021	26-06-2021	
	Open source and Commercial DBMS -MYSQL, ORACLE, DB2, SQL server	1	6/30/2021	6/26/2021	29-06-2021	
	Relational database design					
	Domain and data dependency	1	7/1/2021	6/30/2021	30-06-2021	
	Armstrong's axioms	1	7/3/2021	7/2/2021	03-07-2021	
	Normal forms	1	7/7/2021	7/3/2021	06-07-2021	
	Dependency preservation	1	7/8/2021	7/7/2021	07-07-2021	
	Lossless design	1	7/10/2021	7/9/2021	10-07-2021	
	Query processing and optimization					
	Evaluation of relational algebra expressions	1	7/17/2021	7/10/2021	13-07-2021	
	Query equivalence	1	7/21/2021	7/14/2021	14-07-2021	
	Join strategies	1	7/22/2021	7/16/2021	17-07-2021	
	Query optimization algorithms	1	7/24/2021	7/17/2021	19-07-2021	

3	Storage strategies	5				
	Indices	1	7/28/2021	7/21/2021	20-07-2021	
	B-trees	2	31-07-2021	24-07-2021	24-07-2021	
	Hashing	2	05-08-2021	30-07-2021	28-07-2021	
4	Transaction processing	8				
	Concurrency control	2	11-08-2021	31-07-2021,04-08-2021	03-08-2021	
	ACID property	1	8/12/2021	8/6/2021	07-08-2021	
	Serializability of scheduling	1	8/14/2021	8/6/2021	10-08-2021	
	Locking and timestamp based schedulers	2	8-08-2021,19-08-2021	8/7/2021	11-08-2021	
	Multi-version and optimistic Concurrency Control schemes	1	8/21/2021	8/7/2021	17-08-2021	
	Database recovery	1	8/25/2021	8/11/2021	18-08-2021	
5	Database Security	6				
	Authentication	1	8/26/2021	8/13/2021	21-08-2021	
	Authorization and access control	1	8/28/2021	8/14/2021	24-08-2021	
	DAC, MAC and RBAC models	2	01-09-2021,	18-08-2021,20-08-2021	25-08-2021	
	Intrusion detection	1	9/2/2021	8/21/2021	31-08-2021	
	SQL injection	1	9/2/2021	8/25/2021	01-09-2021	
6	Advanced topics	8				
	Object oriented and object relational databases	2	9/4/2021	8/28/2021	04-09-2021	
	Logical databases	1	9/4/2021	9/1/2021	08-09-2021	
	Web databases	1	9/8/2021	9/3/2021	11-09-2021	
	Distributed databases	2	9/9/2021	04-09-2021,08-09-2021	14-09-2021	
	Data warehousing and data mining	2	9/11/2021	10-09-2021,11-09-2021	18-09-2021	

	FACULTY OF ENGG. & TECH. – PIET							
	LESSON PLAN (Practical)							
Academic Year: 2021-2022			Sem: 3rd					
Subject: Data Base Management System LAB			Department: IT					
Name of Teacher: Sumitra Menaria, Jayshree Parmar			Hrs./Week: 2					

Sr. No.	Name of Topic	Hrs. Allotted	Planned Date							
			3ITA1	3ITA2	3ITB1	3ITB2	3ITC1	3ITC2	3ITD1	3ITD2
1	To study DDL-create and DML-insert commands	1	31-05-2021,07-06-2021	04-06-2021,11-06-2021	03-06-2021,10-06-2021	31-05-2021,07-06-2021	02-06-2021	05-06-2021		
2	To study various options of LIKE predicate	1	14-06-2021	18-06-2021	17-06-2021	14-06-2021	16-06-2021	19-06-2021		
3	To Perform various data manipulation commands, aggregate functions and sorting concept on all created tables	1	21-06-2021,28-06-2021	25-06-2021	24-06-2021,01-07-2021	21-06-2021,28-06-2021	30-06-2021	03-07-2021		
4	To study Single-row functions	1	05-07-2021,12-07-2021	02-07-2021,09-07-2021	08-07-2021,15-07-2021	05-07-2021,12-07-2021	14-07-2021	17-07-2021		
5	Displaying data from Multiple Tables (join)	1	19-07-2021	16-07-2021	22-07-2021	19-07-2021	28-07-2021	31-07-2021		
6	To apply the concept of Aggregating Data using Group functions	1	26-07-2021	23-07-2021	29-07-2021	26-07-2021	11-08-2021	14-08-2021		
7	To solve queries using the concept of sub query	1	02-08-2021	30-07-2021	05-08-2021	02-08-2021	25-08-2021	28-08-2021		
8	Manipulating Data	1	09-08-2021	06-08-2021	12-08-2021	09-08-2021	01-09-2021	04-08-2021		
9	To apply the concept of security and privileges	1	30-08-2021	03-09-2021	26-08-2021	30-08-2021	15-09-2021	11-08-2021		
10	To study Transaction control command	1	06-09-2021	10-09-2021	02-09-2021	06-09-2021	22-09-2021	18-08-2021		

FACULTY OF ENGG. & TECH. – PIET					
LESSON PLAN(Theory)					
Academic Year: 2021-2022			Sem: 3rd		
Subject: Data Structures& Algorithms (203105205)			Department: IT		
Name of Teacher: Dhenuka Patel, Mahendra Kumar Meena, Trilok Suthar			Hrs./Week: 3		
Sr. No.	Name of Topic	Hrs. Allotted	Planned Date			
			3ITA	3ITB	3ITC	3ITD
1	**Introduction**	**7**				
	Basic Terminologies: Elementary Data Organizations	1	2/5/21	31/5/21	31/5/21	1/6
	Data Structure Operations: insertion, deletion, traversal	1	4/6/21	2/6/21	1/6/21	2/6
	Analysis of an Algorithm	1	5/6/21	3/6/21	3/6/21	5/6
	Asymptotic Notations, Time-Space trade off	1	9/6/21	7/6/21	7/6/21	5/6
	Searching: Linear Search and Binary Search Techniques	1	11/6/21	9/6/21	8/6/21	8/6
	Binary Search, complexity analysis	1	12/6/21	10/6/21	10/6/21	9/6
	complexity analysis	1	16/6/21	14/6/21	14/6/21	12/6
2	**Stacks and Queues**	**13**				
	ADT Stack and its operations	1	18/6/21	16/6/21	15/6/21	15/6
	ADT Stack and its operations	1	19/6/21	17/6/21	17/6/21	16/6
	Algorithms and their complexity analysis, Applications of Stacks	1	23/6/21	21/6/21	21/6/21	19/6
	Expression Conversion and evaluation	1	25/6/21	23/6/21	22/6/21	22/6
	corresponding algorithms and complexity analysis	1	26/6/21	24/6/21	24/6/21	23/6
	ADT queue, Types of Queue	1	30/6/21	28/6/21	28/6/21	29/6
	ADT queue, Types of Queue	1	2/7/21	30/6/21	29/6/21	29/6
	Simple Queue; Operations on each types of Queues, Operations on each	1	3/7/21	1/7/21	1/7/21	30/6

	types of Queues					
	Simple Queue; Operations on each types of Queues, Operations on each types of Queues	1	**7/7/21**	**5/7/21**	**5/7/21**	**3/7**
	Circular Queue; Operations on each types of Queues, Algorithms and their analysis	1	**9/7/21**	**7/7/21**	**6/7/21**	**6/7**
	Circular Queue; Operations on each types of Queues, Algorithms and their analysis	1	**10/7/21**	**8/7/21**	**8/7/21**	**6/7**
	Priority Queue; Operations on each types of Queues, Algorithms and their analysis	1	**14/7/21**	**12/7/21**	**12/7/21**	**10/7**
	Priority Queue; Operations on each types of Queues, Algorithms and their analysis	1	**16/7/21**	**14/7/21**	**13/7/21**	**13/7**
3	**Linked Lists**	**12**				**14/7**
	Singly linked lists, Representation in memory	1	**17/7/21**	**15/7/21**	**15/7/21**	**17/7**
	Algorithms of several operations: Traversing	1	**21/7/21**	**19/7/21**	**19/7/21**	**20/7**
	Searching	1	**23/7/21**	**21/7/21**	**20/7/21**	**20/7**
	Insertion into, Deletion from linked list	1	**24/7/21**	**22/7/21**	**22/7/21**	**21/7**
	Insertion into, Deletion from linked list	1	**28/7/21**	**26/7/21**	**26/7/21**	**24/7**
	Linked representation of Stack	1	**30/7/21**	**28/7/21**	**27/7/21**	**28/7**
	Linked representation of Queue	1	**31/7/21**	**29/7/21**	**29/7/21**	**31/7**
	Header nodes, Doubly linked list: operations	1	**4/8/21**	**2/8/21**	**2/8/21**	**31/7**
	algorithmic analysis	1	**6/8/21**	**4/8/21**	**3/8/21**	**3/8**
	Circular Linked Lists: all operations their algorithms,	1	**7/8/21**	**5/8/21**	**5/8/21**	**4/8**
	Circular Linked Lists: all operations their algorithms,	1	**11/8/21**	**9/8/21**	**9/8/21**	**4/8**
	complexity analysis	1	**13/8/21**	**11/8/21**	**10/8/21**	**7/8**

4	**Trees**	11				
	Basic Tree Terminologies	1	**14/8/21**	**12/8/21**	**12/8/21**	**10/8**
	Different types of Trees: Binary Tree	1	**14/8/21**	**12/8/21**	**16/8/21**	**11/8**
	Threaded Binary Tree	1	**18/8/21**	**16/8/21**	**16/8/21**	**14/8**
	Binary Search Tree	1	**18/8/21**	**16/8/21**	**17/8/21**	**17/8**
	AVL Tree	1	**20/8/21**	**18/8/21**	**17/8/21**	**18/8**
	Tree operations on each of the trees and their algorithms with complexity analysis	1	**20/8/21**	**18/8/21**	**19/8/21**	**21/8**
	Tree operations on each of the trees and their algorithms with complexity analysis	1	**21/8/21**	**19/8/21**	**19/8/21**	**21/8**
	Tree operations on each of the trees and their algorithms with complexity analysis	1	**21/8/21**	**19/8/21**	**23/8/21**	**24/8**
	Applications of Binary Trees	1	**25/8/21**	**23/8/21**	**23/8/21**	**25/8**
	B Tree	1	**25/8/21**	**23/8/21**	**24/8/21**	**28/8**
	B+ Tree	1	**27/8/21**	**25/8/21**	**24/8/21**	**31/8**
	algorithms and analysis	1	**27/8/21**	**25/8/21**	**26/8/21**	**1/9**
5	**Sorting and Hashing**	6				
	Objective and properties of different sorting algorithms	1	**28/8/21**	**26/8/21**	**31/8/21**	**24/8**
	Selection Sort, Bubble Sort	1	**28/8/21**	**26/8/21**	**31/8/21**	**25/8**
	Insertion Sort, Quick Sort	1	**1/9/21**	**30/8/21**	**1/9/21**	**28/8**
	Merge Sort, Heap Sort	1	**1/9/21**	**30/8/21**	**1/9/21**	**31/8**
	Performance and Comparison among all the methods	1	**3/9/21**	**1/9/21**	**3/9/21**	**1/9**
	Hashing	1	**3/9/21**	**1/9/21**	**3/9/21**	**1/9**
6	**Graph**	5				
	Basic Terminologies and Representations	1	**4/9/21**	**2/9/21**	**6/9/21**	**4/9**

	Graph search	1	**4/9/21**	**2/9/21**	**6/9/21**	**7/9**
	traversal algorithms	1	**8/9/21**	**6/9/21**	**7/9/21**	**8/9**
	traversal algorithms	1	**10/9/21**	**8/9/21**	**7/9/21**	**11/9**
	complexity analysis	1	**11/9/21**	**9/9/21**	**9/9/21**	**11/9**

			FACULTY OF ENGG. & TECH. – PIET							
			LAB PLAN (Practical)							
Academic Year: 2021-2022				Sem: 3rd						
Subject: Data Structures& Algorithms Laboratory (203105206)				Department: IT						
Name of Teacher: Dhenuka Patel, Mahendra Kumar Meena, Trilok Suthar				Hrs./Week: 2						
Sr. No.	Name of Topic	Hrs. Allotted	Planned Date							
			3ITA1	3ITA2	3ITB1	3ITB2	3ITC1	3ITC2	3ITD1	3ITD2
1	Introduction to pointers. (a) Call by Value (write a function that return max of two passed value) (b) Call by reference.(write a function to swap value of two variable)	1	1/6/21	3/6/21	5/6/21	4/6/21	2/6/21	1/6/21	2/6	4/6
2	Introduction to Dynamic Memory Allocation. DMA functions malloc(), calloc(), free() etc. (a) W.A.P. to create dynamic int array using malloc() and free() (b) W.A.P. to create dynamic char array using calloc() and free()	2	8/6/21	10/6/21	12/6/21	11/6/21	9/6/21	8/6/21	9/6	11/6
3	Write a program to implement structure in c.	1	1/6/21	3/6/21	5/6/21	4/6/21	2/6/21	1/6/21	16/6	18/6
4	Write a program to implement 1) linear Search 2) Binary Search	2	15/6/21	17/6/21	19/6/21	18/6/21	16/6/21	15/6/21	16/6	18/6
5	Write a program to implement 1) Bubble Sort 2) Insertion Sort 3) Selection Sort	2	22/6/21	24/6/21	26/6/21	25/6/21	23/6/21	22/6/21	23/6	25/6
6	Implement a program for stack that performs following operations using array. (a) PUSH (b) POP (c) PEEP (d) CHANGE (e) DISPLAY	2	29/6/21	1/7/21	3/7/21	2/7/21	30/6/21	29/6/21	30/6	2/7
7	Implement a program to convert infix notation to postfix notation using	2	6/7/21	8/7/21	10/7/21	9/7/21	7/7/21	6/7/21	7/7	9/7

	stack.									
8	Implement a program evaluate postfix notation.	2	**13/7/21**	**15/7/21**	**17/7/21**	**16/7/21**	**14/7/21**	**13/7/21**	**7/7**	**9/7**
9	Write a program to implement QUEUE using arrays that performs following operations (a) INSERT (b) DELETE (c) DISPLAY	**2**	**20/7/21**	**22/7/21**	**24/7/21**	**23/7/21**	**21/7/21**	**20/7/21**	**14/7**	**16/7**
10	Write a menu driven program to implement following operations on the singly linked list. (a) Insert a node at the front of the linked list. (b) Insert a node at the end of the linked list.	**2**	**27/7/21**	**29/7/21**	**31/7/21**	**30/7/21**	**28/7/21**	**27/7/21**	**21/7**	**23/7**
11	Write a menu driven program to implement following operations on the singly linked list.(a) Insert a node such that linked list is in ascending order.(according to info. Field) (b) Delete a first node of the linked list.	1	**3/8/21**	**5/8/21**	**7/8/21**	**6/8/21**	**4/8/21**	**3/8/21**	**28/7**	**30/7**
12	Write a menu driven program to implement following operations on the singly linked list. (a) Delete a node before specified position. (b) Delete a node after specified position.	1	**3/8/21**	**5/8/21**	**7/8/21**	**6/8/21**	**4/8/21**	**3/8/21**	**28/7**	**30/7**
13	Write a program to implement following operations on the doubly linked list. (a) Insert a node at the front of the linked list. (b) Insert a node at the end of the linked list.	1	**10/8/21**	**12/8/21**	**14/8/21**	**13/8/21**	**11/8/21**	**10/8/21**	**4/8**	**6/8**
14	Write a program to implement following operations on the circular linked list.(a) Delete a first node of the linked list. (b) Delete a node after specified position.	1	**10/8/21**	**12/8/21**	**14/8/21**	**13/8/21**	**11/8/21**	**10/8/21**	**4/8**	**6/8**
15	Write a program to implement following operations on the circular linked list. (a) Insert a node at the end of the linked list.(b) Insert a node	**1**	**17/8/21**	**19/8/21**	**21/8/21**	**20/8/21**	**18/8/21**	**17/8/21**	**11/8**	**13/8**

	before specified position.									
16	Write a program to implement following operations on the circular linked list. (a) Delete a first node of the linked list. (b) Delete a node after specified position.	1	17/8/21	19/8/21	21/8/21	20/8/21	18/8/21	17/8/21	18/8	20/8
17	Write a program to implement stack using linked list.	1	24/8/21	26/8/21	28/8/21	27/8/21	25/8/21	24/8/21	25/8	27/8
18	Write a program to implement queue using linked list.	1	24/8/21	26/8/21	28/8/21	27/8/21	25/8/21	24/8/21	25/8	27/8
19	Write a program to create binary Tree Traversal.	2	31/8/21	2/9/21	4/9/21	3/9/21	1/9/21	31/8/21	1/9	3/9
20	Write a program to implement Prim's and Kruskal's algorithm	2	7/9/21	9/9/21	11/9/21	10/9/21	8/9/21	7/9/21	1/9	3/9

FACULTY OF ENGG. & TECH. - PIET					
LESSON PLAN(Theory)					
Academic Year: 2021-2022			**Sem: 3rd**		
Subject: Discrete Mathematics			**Department: IT**		
Name of Teacher: Dr. Sweta Shah, Dr. Pratibha Tyagi Rupa Purohit, Vibhuti Rathod, Krupa Shah.			**Hrs./Week: 3 hrs/ Week**		
Sr. No.	**Name of Topic**	**Hrs. Allotted**	**Planned Date**			
			3ITA	**3ITB**	**3ITC**	**3ITD**
Unit:1	**Sets, Relation and Function:**	**5**				
1.1	Operations and Laws of Sets, Cartesian Products, Binary Relation,,	1	01-06-21	31-5-21	01-06-21	01-06-21
1.2	Partial Ordering Relation, Equivalence Relation, Image of a Set,	1	02-06-21	03-06-21	04-06-21	04-06-21
1.3	Bijective functions, Inverse and Composite Function, Size of a Set, Finite and infinite Sets	1	05-06-21	04-06-21	05-06-21	05-06-21
1.4	Sum and Product of Functions, Countable and uncountable Sets,	1	08-06-21	07-06-21	08-06-21	08-06-21
1.5	Cantor's diagonal argument and The Power Set theorem, Schroeder-Bernstein theorem.	1	09-06-21	10-06-21	11-06-21	11-06-21
Unit:2	**Principles of Mathematical Induction**:	**4**				
2.1	The Well-Ordering Principle, Recursive definition, The Division algorithm: Prime Numbers	1	12-06-21	11-06-21	12-06-21	12-06-21
2.2	The Greatest Common Divisor: Euclidean Algorithm, The Fundamental Theorem of Arithmetic	2	15-06-21 16-06-21	14-06-21 17-06-21	15-06-21 18-06-21	15-06-21 18-06-21
2.3	Basic counting techniques-inclusion and exclusion, pigeon-hole principle, permutation and combination	1	19-06-21	18-06-21	19-06-21	19-06-21
Unit:3	**Propositional Logic and Proof Techniques**	**8**				
3.1	Syntax, Semantics, Validity and Satisfiability, Basic Connectives and Truth Tables,	2	22-06-21 23-06-21	21-06-21 24-06-21	22-06-21 25-06-21	22-06-21 25-06-21
3.2	Logical Equivalence: The Laws of Logic, Logical Implication, Rules of Inference, The use of Quantifiers.	2	26-06-21 29-06-21	25-06-21 28-06-21	26-06-21 29-06-21	26-06-21 29-06-21
3.3	Proof by Contradiction, Proof by Contraposition, Proof of Necessity and Sufficiency.	2	30-06-21 03-07-21	01-07-21 02-07-21	02-07-21 03-07-21	02-07-21 03-07-21

3.4	Some Terminology, Proof Methods and Strategies, Forward Proof,	2	06-07-21 07-07-21	05-07-21 08-07-21	06-07-21 09-07-21	06-07-21 09-07-21
Unit:4	**Algebraic Structures and Morphism:**	**18**				
4.1	Algebraic Structures with one Binary Operation, Semi Groups, Monoids, Groups	2	10-07-21 13-07-21	09-07-21 12-07-21	10-07-21 13-07-21	10-07-21 13-07-21
4.2	Congruence Relation and Quotient Structures, Free and Cyclic Monoids and Groups,	4	14-07-21 17-07-21 20-07-21 21-07-21	15-07-21 16-07-21 19-07-21 22-07-21	16-07-21 17-07-21 20-07-21 23-07-21	16-07-21 17-07-21 20-07-21 23-07-21
4.3	Permutation Groups, Substructures, Normal Subgroups, Algebraic Structures with two Binary Operation, Rings,	3	24-07-21 27-07-21 28-07-21	23-07-21 26-07-21 29-07-21	24-07-21 27-07-21 30-07-21	24-07-21 27-07-21 30-07-21
4.4	Integral Domain and Fields	2	31-07-21 03-08-21	30-07-21 02-08-21	31-07-21 03-08-21	31-07-21 03-08-21
4.5	Boolean Algebra and Boolean Ring, Identities of Boolean Algebra	3	04-08-21 07-08-21 10-08-21	05-08-21 06-08-21 09-08-21	06-08-21 07-08-21 10-08-21	06-08-21 07-08-21 10-08-21
4.6	Duality, Representation of Boolean Function,	2	11-08-21 14-08-21	12-08-21 13-08-21	13-08-21 14-08-21	13-08-21 14-08-21
4.7	Disjunctive and Conjunctive Normal Form	2	17-08-21 18-08-21	16-08-21 19-08-21	17-08-21 20-08-21	17-08-21 20-08-21
Unit:5	**Graphs and Trees:**	**8**				
5.1	Graphs and their properties, Degree, Connectivity, Path, Cycle, Sub Graph	1	21-08-21	20-08-21	21-08-21	21-08-21
5.2	Isomorphism, Eulerian and Hamiltonian Walks,	1	24-08-21	23-08-21	24-08-21	24-08-21
5.3	Graph Colouring, Colouring maps and Planar Graphs, Colouring Vertices, Colouring Edges, List Colouring,	2	25-08-21 28-08-21	26-08-21 27-08-21	27-08-21 28-08-21	27-08-21 28-08-21
5.4	Perfect Graph, definition properties and Example,.	1	31-08-21	02-09-21	31-08-21	31-08-21
5.5	rooted trees, trees and sorting, weighted trees and prefix codes	1	01-09-21	03-09-21	03-09-21	03-09-21
5.6	Bi-connected component and Articulation Points, Shortest distances.	2	04-09-21 08-09-21	06-09-21 09-09-21	04-09-21 07-09-21	04-09-21 07-09-21

FACULTY OF ENGG. & TECH. – PIET									
Tutorial PLAN (Practical)									
Academic Year: 2021-2022				Sem: 3rd					
Subject: Discrete Mathematics				Department: IT					
Name of Teacher: Dr. Sweta Shah, Dr. Pratibha Tyagi Rupa Purohit, Vibhuti Rathod, Krupa Shah.				Hrs./Week: 2 hrs/ week					
Sr. No.	Name of Topic	Hrs. Allotted	Planned Date							
			3ITA1	3ITA2	3ITB1	3ITB2	3ITC1	3ITC2	3ITD1	3ITD2
1.	Tutorial 1	4	31-05 07-06	31-05 07-06	01-06 08-06	01-06 08-06	31-05 07-06	31-05 07-06	04-06 11-06	04-06 11-06
2.	Tutorial 2	2	14-06	14-06	15-06	15-06	14-06	14-06	18-06	18-06
3.	Tutorial 3a	4	21-06 28-06	21-06 28-06	22-06 29-06	22-06 29-06	21-06 28-06	21-06 28-06	25-06 02-07	25-06 02-07
4.	Tutorial 3b	2	05-07	05-07	06-07	06-07	05-07	05-07	09-07	09-07
5.	Tutorial 4a	4	12-07 19-07	12-07 19-07	13-07 20-07	13-07 20-07	12-07 19-07	12-07 19-07	16-07 23-07	16-07 23-07
6.	Tutorial 4b	2	26-07	26-07	27-07	27-07	26-07	26-07	30-07	30-07
7.	Tutorial 4c	2	02-08	02-08	03-08	03-08	02-08	02-08	06-08	06-08
8.	Tutorial 5a	4	09-08 16-08	09-08 16-08	10-08 17-08	10-08 17-08	09-08 16-08	09-08 16-08	13-08 20-08	13-08 20-08
9.	Tutorial 5b	2	23-08	23-08	24-08	24-08	23-08	23-08	27-08	27-08

Name of Teachers : Archna Dubey(AVD), Dhwani Brahmbhatt(DAB)		Hrs./Week : 3		
Subject: Digital Electronics (203105201)				
Sr. No.	Name of Topic	3B16 AVD(T,W,Th)	3B17 DAB (M,T,S)	3B18 DAB (M,W,F)
1	**Fundamentals of digital systems and logic families :**	7	7	**7**
2	Digital signals, digital circuits, Number Systems: binary, signed binary, octal, hexadecimal number	01-06-2021 02-06-2021	31-05-2021 01-06-2021	31-05-2021 02-06-2021
2	binary arithmetic, one's and two's complements arithmetic, codes, BCD arithmetic ,error detecting and correcting codes,	03-06-2021 08-06-2021	05-06-2021 07-06-2021	04-06-2021 07-06-2021
1	AND, OR, NOT, NAND, NOR and Exclusive-OR operations	09-06-2021	08-06-2021	09-06-2021
2	Examples of IC gates, characteristics of digital lCs, Digital Logic families**:** TTL and CMOS logic, interfacing CMOS and TTL.	10-06-2021	12-06-2021	11-06-2021
2	**Minimization techniques:**	8	8	8
2	Boolean Algebra, Boolean postulates and laws, De-Morgan's Theorem, Principle of Duality, Boolean expression.	16-06-2021 17-06-2021	14-06-2021 15-06-2021	14-06-2021 16-06-2021
3	Minterm, Maxterm, Sum of Products (SOP), Product of Sums (POS), K-map representation, simplification and minimization of logic functions using K-map. Don't care conditions	22-06-2021 23-06-2021 24-06-2021	19-06-2021 21-06-2021 22-06-2021	18-06-2021 21-06-2021 23-06-2021
3	Quine-McCluskey Method of minimization. Variable Entered Maps, Realizing Logic Function with Gates	29-06-2021 30-06-2021 01-07-2021	26-06-2021 28-06-2021 29-06-2021	25-06-2021 28-06-2021 29-06-2021
3	**Combinational design using msi devices**	9	9	9
1	Design procedure – Half adder, Full Adder,	6-07-2021	03-07-2021	02-07-2021

1	Half subtractor, Full subtractor,	07-07-2021	05-07-2021	05-07-2021
1	Parallel binary adder & Subtractor, Fast Adder	08-07-2021	06-07-2021	07-07-2021
1	Carry Look Ahead adder, Serial Adder/Subtractor,	13-07-2021	10-07-2021	09-07-2021
2	BCD adder; Binary Multiplier, Binary Divider, Multiplexer/ Demultiplexer,.	14-07-2021 15-07-2021	12-07-2021 13-07-2021	12-07-2021 14-07-2021
1	decoder, encoder, parity checker,	20-07-2021	17-07-2021	16-07-2021
1	parity generators - code converters -	21-07-2021	19-07-2021	19-07-2021
1	Magnitude Comparator	22-07-2021	20-07-2021	21-07-2021
4	**Sequential circuits:**	9	9	9
2	A 1-bit memory, the circuit properties of Bi-stable latch, the clocked SR flip flop,	27-07-2021 28-07-2021	24-07-2021 26-07-2021	23-07-2021 26-07-2021
1	J- K-T and D types flip flops, applications of flip flops	29-07-2021	27-07-2021	28-07-2021
2	shift registers, Applications of shift registers,	03-08-2021 04-08-2021	31-07-2021 2-08-2021	30-07-2021 02-08-2021
2	ring counter, sequence generator, ripple(Asynchronous) counters, synchronous counters	05-08-2021 10-08-2021	03-08-2021 07-08-2021	04-08-2021 06-08-2021
2	Special counter IC's, asynchronous sequential counters, applications of counters.	11-08-2021 12-08-2021	09-08-2021 10-08-2021	09-08-2021 11-08-2021
5	**A/D and D/A converters:**	5	5	5
1	Digital to Analog converters:	17-08-2021	14-08-2021	13-08-2021
2	weighted resistor/converter, R-2R Ladder, examples of D to A converters IC's	18-08-2021 19-08-2021	16-08-2021 17-08-2021	16-08-2021 18-08-2021
1	Analog to Digital converters: successive approximation, A/D converter,	24-08-2021	21-08-2021	20-08-2021

1	Dual slope A/D Converter, Example of A/D Converter ICs.	25-08-2021	23-08-2021	23-08-2021
6	**Semiconductor memories and programmable logic devices:**	7	7	7
1	Classification and characteristics of memories	26-08-2021	24-08-2021	25-08-2021
1	Content addressable memory (CAM), commonly used memory chips	31-08-2021	28-08-2021	27-08-2021
2	Introduction of PLD, ROM as a PLD, Programmable logic array	01-09-2021 02-09-2021	31-08-2021 04-09-2021	01-09-2021 03-09-2021
3	Programmable array logic, Complex Programmable logic devices (CPLDS), Field Programmable Gate Array (FPGA).	07-09-2021 08-09-2021 09-09-2021	06-09-2021 07-09-2021 11-09-2021	06-09-2021 08-09-2021 10-09-2021

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
Academic Year 2021
Career Development Cell

SUB: Professional Communication Skills-1 (203193201)		Semester III					
Sr.no	**Topics**	**Hours LEC.**	**Mon**	**Tue**	**Wed**	**Thurs**	**Fri**	**Sat**
1--2	Interpersonal Communication at Workplace Dynamics of communication	1	31st May	1st June	2nd June	3rd June	4th June	5th June
	Non-verbal Communication	1	7th June	8th June	9th June	10th June	11th June	12th June
3--4	Goal setting & Tracking (Introduction)	1	14th June	15th June	16th June	17th June	18th June	19th June
	Goal setting & Tracking (Five finger Activity)	1	21st June	22nd June	23rd June	24th June	25th June	26th June
5--6	Time Management & Task Planning (Introduction)	1	28th June	29th June	30th June	1st July	2nd July	3rd July
	Time Management & Task Planning(Case –study/Activity)	1	5th July	6th July	7th July	8th July	9th July	10th July
7	Debate: • Purpose • Features of a good debate • Preparing for a debate • A few dos and don'ts • The three minute debate planner	1	12th July	13th July	14th July	15th July	16th July	17th July
8--9	Reading Comprehension (Intermediate level)	1	19th July	20th July	21st July	22nd July	23rd July	24th July

	Reading Comprehension (Intermediate level)	1	26th July	27th July	28th July	29th July	30th July	31st July
10--11	Advanced vocabulary Building (Introduction) Homophones,	1	9th Aug	10th Aug	11th Aug	12th Aug	13th Aug	14th Aug
	Advanced vocabulary Building : Homonyms &confusables	1	16th Aug	17th Aug	18th Aug	19th Aug	20th Aug	21st Aug
12--13	Letter Writing (Types of letters & Layout)	1	23rd Aug	24th Aug	25th Aug	26th Aug	27th Aug	28th Aug
	Email etiquette & Email writing	1	28th Aug	31st Aug	1st Sept	2nd Sept	3rd Sept	4th Sept
14--15	Information design and writing for Print Media	1	6th Sept	7th Sept	8th Sept	9th Sept	10th Sept	11th Sept
	Information design and writing for online media : Blog Writing	1	13th Sept	14th Sept	15th Sept	16th Sept	17th Sept	18th Sept
	Total	**15**						

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
Academic Year 2021
Career Development Cell

SUB: Professional Communication Skills-1 (203193201)			Semester III					
Sr.no	**Topics**	**Hours Tut.**	**Mon**	**Tue**	**Wed**	**Thurs**	**Fri**	**Sat**
1	Game of Truth (Speaking activity)	1	31st May	1st June	2nd June	3rd June	4th June	5th June
2	The Art of Negotiation (Speaking Activity)	1	7th June	8th June	9th June	10th June	11th June	12th June
3	**Listening Skills: (Small everyday conversation & comprehension- practice & test) - (Test - 10 Marks)**	1	14th June	15th June	16th June	17th June	18th June	19th June
4,5	Appreciation, Apology and Acknowledgement letters (Letter Wrtiting)	1	21st June	22nd June	23rd June	24th June	25th June	26th June
	Acknowledgement letters(Letter Wrtiting)	1	28th June	29th June	30th June	1st July	2nd July	3rd July
6	Picture Perception(Speaking and writing Activity)	1	5th July	6th July	7th July	8th July	9th July	10th July
7,8	Debate : practical (Speaking Activity)	1	12th July	13th July	14th July	15th July	16th July	17th July
	Debate: practical (Test - 10 Marks)	1	19th July	20th July	21st July	22nd July	23rd July	24th July
9,10,11	Advanced vocabulary Building • Phrasal verbs	1	26th July	27th July	28th July	29th July	30th July	31st July

	Advanced vocabulary Building • Idiotic Expression(chart Activity)	1	9th Aug	10th Aug	11th Aug	12th Aug	13th Aug	14th Aug
	Advanced vocabulary Building • Developing Technical vocabulary(Memory Game)	1	16th Aug	17th Aug	18th Aug	19th Aug	20th Aug	21st Aug
12,13,14,15,	• Letter Writing (Types of letters & Layout)	1	23rd Aug	24th Aug	25th Aug	26th Aug	27th Aug	28th Aug
	• Letter Writing Inquiry Letter	1	28th Aug	31st Aug	1st Sept	2nd Sept	3rd Sept	4th Sept
	• Letter Writing Order Letter	1	6th Sept	7th Sept	8th Sept	9th Sept	10th Sept	11th Sept
	• Letter Writing Claim and Adjustment Letter	1	13th Sept	14th Sept	15th Sept	16th Sept	17th Sept	18th Sept
	Total	**15**						

FACULTY OF ENGG. & TECH. – PIET

LESSON PLAN (Practical)

Academic Year: 2021-2022		Sem: 3rd						
Subject: PPW-1		Department: IT						
Name of Teacher: Ayush Kumar, R Shivamallikarjun		Hrs./Week: 2						

Sr. No.	Name of Topic	Hrs. Allotted	Planned Date							
			3ITA1	3ITA2	3ITB1	3ITB2	3ITC1	3ITC2	3ITD1	3ITD2
1.	What is Python?, Installation of the python environment (anaconda),.python keywords, comments, and indentation, Python data types, Math and numbers in python.	4	04/06 11/06	05/06 12/06	03/06 10/06	05/06 12/06	5/6/2021 12/6/2021	3/6/2021 10/6/2021		
2.	CONTROL STATEMENTS (Include nested and at least 3 examples for A, B, C) A. If-else and if-elif-else B. While-loops C. For loops D. Break, continue, pass, and return E. Pointers in python.	4	18/06 25/06	19/06 26/06	17/06 24/06	19/06 26/06	19/6/2021 26/6/2021	17/6/2021 24/6/2021		
3.	Functions in python - Inbuilt functions in python, User-defined functions (with and without argument & with and without return type), Lambda faction in python.	4	02/07 09/07	03/07 10/07	01/07 08/07	03/07 10/07	3/7/2021 10/7/2021	1/7/2021 8/7/2021		
4.	List, Tuples, Dictionaries & Sets in python	2	16/07	17/07	15/07	17/07	17/7/2021	15/7/2021		
5.	Input and output in python - Inputs and outputs from the file, Operations on files, Modes and methods of files.	2	23/07	24/07	22/07	24/07	24/7/2021	22/7/2021		
6.	EXCEPTION HANDLING (compile time and run time) Try-except-finally Try-except-else.	2	30/07	31/07	29/07	31/07	31/7/2021	29/7/2021		

7.	Decorators in python.	2	**06/08**	**07/08**	**05/08**	**07/08**	**7/8/2021**	**5/8/2021**		
8.	Regular expression (REGEX) in python.	4	**13/08** **20/08**	**14/08** **21/08**	**12/08** **19/08**	**14/08** **21/08**	**14/8/2021** **21/8/2021**	**12/8/2021** **19/8/2021**		
9.	DB-API in python - DML operations , DDL operations.	2	**27/08**	**28/08**	**26/08**	**28/08**	**28/8/2021**	**26/8/2021**		
10.	Object oriented programming in python Inheritance, Polymorphism, Encapsulation and data abstraction.	4	**03/09** **10/09**	**04/09** **11/09**	**02/09** **09/09**	**04/09** **11/09**	**4/9/2021** **11/9/2021**	**2/9/2021** **9/9/2021**		

PARUL INSTITUTE OF ENGINEERING & TECHNOLOGY						
AT & PO: LIMDA, Ta: Vaghodia						
Dist: Vadodara						
BE IT(3RD SEM)(3ITA) ENGINEERING TIME TABLE CLASS A – UG COURSE						
TIME	**MONDAY**	**TUESDAY**	**WEDNESDAY**	**THURSDAY**	**FRIDAY**	**SATURDAY**
09:30 to 10:30	3ITA1:DSA :{DMP}: B1 3ITA2:DE:{AVD} : B2	OOCUML:{TP} [C4]	DE:{AVD} :C1	3ITA1: OOCUML:{TP}: B1 3ITA2: DSA :{DMP}: B2	LIBRARY	DSA:{DMP} [C1]
10:30 to 11:30		WEEKLY	DBMS:{JKP} [C1]		DSA:{DMP} [C1]	DBMS: {JKP} [C1]
11:30 to 12:15						
12:15 to 1:15	3ITA1: DBMS:{JKP}:B2 3ITA2: OOCUML:{TP}: B1	OOCUML:{TP} [A-C1]	DSA:{DMP} [C1]	DBMS: {JKP} [C1]	3ITA1: PPW:{RS}:B1 3ITA2: LIBRARY	PCLS:{}:C1
1:15 to 2:15		DM:{SS}:[C1]	DM:{SS} :[C1]	DE:{AVD} :C1		DM:{SS}:[C1]
2:15 to 2:30						
02:30 to 03:30	DM:Tuto – B-1:{DP}:[C1] DM:Tuto – B-2:{PT}:[C2]	DE:{AVD} :C1	PCLS-2: Tuto – T1:{}:[C1] PCLS-2: Tuto – T2:{}:[C2]	LIBRARY	3ITA1: LIBRARY 3ITA2: DBMS:{JKP}: B7	3ITA1: DE:{ DAB}:B1 3ITA2: PPW:{RS}: B2
03:30 to 04:30		FACE:{}:C1	OOCUML:{TP} [A-C1]			

SUBJECT_CODE	SUBJECT_NAME(SHORT_NAME)	FACULTY FULL_NAME	FACULTY SHORT NAME	EMAIL ID	MIS	LECTURE LINK
203105207/08	OOCUML	Tejla Patel	TKP	tejal.patel@paruluniversity.ac.in	167	https://meet.google.com/bqd-mphb-efv
203124208	PPW	R Shivamallikarjun	RS	rayabarapu.shivamallikarjun270239@paruluniversity.ac.in	16753	meet.google.com/ypw-nfzg-yoe

203105205	DSA	Dhenuka Patel	DMP	dhenuka.patel2962@paruluniversity.ac.in	11734	https://meet.google.com/faa-sucb-mco
203105206	DSA Laboratory (A1 & A2)	Dhenuka Patel	DMP	dhenuka.patel2962@paruluniversity.ac.in	11734	https://meet.google.com/faa-sucb-mco
203105251/52	DBMS	JAYSHREE PARMAR	JKP	jayshree.parmar2946@paruluniversity.ac.in	11582	https://meet.google.com/cmk-cxac-xaq
203193201	PCLS	**PARVIN SODAGAR**	PS	**parvin.sodagar12565@paruluniversity.ac.in**	**9256**	**http://meet.google.com/pvo-qxnh-hvh**
203193201	PCLS TUTO-1	**PRIYANKA DESAI**	PD	**priyanka.desai14463@paruluniversity.ac.in**	**10924**	**https://meet.google.com/zus-cmmn-fwo**
203193201	PCLS TUTO-2	**PARVIN SODAGAR**	PS	**parvin.sodagar12565@paruluniversity.ac.in**	**9256**	**http://meet.google.com/pvo-qxnh-hvh**
203105201/02	Digital Electronics	Archna V. Dubey	AVD	archana.dubey17511@paruluniversity.ac.in	17511	http://meet.google.com/nhn-rzwm-emf
203105201/02	Digital Electronics	Dhwani Brahmbhatt	DAB	dhwani.bbrahmbhatt270246@paruluniversity.ac.in	16949	https://meet.google.com/vip-awud-uou
203191202	Discrete Mathematics	Dr Sweta Shah	SS	sweta.shah270035@paruluniversity.ac.in	13733	https://meet.google.com/kmv-ivzd-nsz
203191202	Discrete Mathematics	Dhara Patel	DP	dhara.patel270102@paruluniversity.ac.in	14206	https://meet.google.com/hnf-ipni-kfn
203191202	Discrete Mathematics	Dr. Pratibha Tyagi	PT	pratibha.tyagi17542@paruluniversity.ac.in	17542	https://meet.google.com/qoz-qsgz-qyb

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BE IT(3RD SEM) (3ITB) ENGINEERING TIME TABLE CLASS B ONLINE – UG COURSE

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
09:30 to 10:30	LIBRARY	OOCUML:SS : [C2]	FACE:{}:[C2]	3ITB1: DBMS:{JKP}: B3 3ITB2: PPW:{RS}: B4	DBMS:JKP:[C2]	3ITB1: PPW:{RS}: B1 3ITB2: DE:{AVD}: B2
10:30 to 11:30	DM:{SS}:[C2]	WEEKLY	OOCUML:SS : [C2]		DE:{DAB}:[C2]	
11:30 to 12:15						
12:15 to 1:15	OOCUML:SS : [C2]	PCLS:{F2}:[C2]	DBMS:JKP:[C2]	DM:{SS}:[C2]	DM:{SS}:[C2]	DSA:DMP:[C2]
1:15 to 2:15	DE:{DAB}:[C2]	DE:{DAB}:[C2]	DSA:DMP:[C2]	DSA:DMP:[C2]	PCLS-2: Tutorial – T1:{CM}:[C2] PCLS-2: Tutorial – T2:{PP}:[C5]	DBMS:JKP:[C2]
2:15 to 2:30						
02:30 to 03:30	3ITB1: lIBRARY 3ITB2: DBMS:{JKP}:B2	DM:Tuto – B-1:{VR}:C2 DM:Tuto – B-2:{RB}:[C3	3ITB1: OOCUML:{SS}:B1 3ITB2: LIBRARY	LIBRARY	3ITB1: DE:{AVD}: : B1 3ITB2:DSA:TA:B2	3ITB1: DSA:TA:B6 3ITB2: OOCUML:{SS}:B3
03:30 to 04:30						

SUBJECT_CODE	SUBJECT_NAME(SHORT_NAME)	FACULTY FULL_NAME	FACULTY SHORT NAME	EMAIL ID	MIS	LECTURE LINK
203105207/08	OOCUML	Prof. Shaleen Shukla	SS	shaleen.shukla270186@paruluniversity.ac.in	15331	https://meet.google.com/hhb-nfec-wtz
203124208	PPW	R Shivamallika	RS	rayabarapu.shivamallikarjun270239@paruluniversity.ac.in	16753	meet.google.com/ypw-nfzg-yoe

		rjun				
203105205 /06	DSA	Dhenuka Patel	DMP	dhenuka.patel2962@paruluniversity.ac.in	11734	https://meet.google.com/faa-sucb-mco
203105251 /52	DBMS	JAYSHREE PARMAR	JKP	jayshree.parmar2946@paruluniversity.ac.in	11582	https://meet.google.com/cmk-cxac-xaq
203193201	PCLS	F2	F2			
203193201	PCLS TUTO-1	**CATHERINE MASTER**	**(CM)**	**catherine.master2851@paruluniversity.ac.in**	**8683**	**https://meet.google.com/lookup/de7c4dbk46**
203193201	PCLS TUTO-2	**PARTHIV PATEL**	**(PP)**	**parthivkumar.patel@paruluniversity.ac.in**	**4254**	**https://meet.google.com/gyt-jqai-qmr**
203105201 /02	Digital Electronics	Archna V. Dubey	AVD	archana.dubey17511@paruluniversity.ac.in	17511	http://meet.google.com/nhn-rzwm-emf
203105201 /02	Digital Electronics	Dhwani Brahmbhatt	DAB	dhwani.bbrahmbhatt270246@paruluniversity.ac.in	16949	https://meet.google.com/vip-awud-uou
203191202	Discrete Mathematics	Dr Sweta Shah	SS	sweta.shah270035@paruluniversity.ac.in	13733	https://meet.google.com/kmv-ivzd-nsz
203191202	Discrete Mathematics	Vibhuti Rathod	VR	vibhuti.rathod4867@paruluniversity.ac.in	4867	https://meet.google.com/sbb-sgvo-vzg
203191202	Discrete Mathematics	Rupa Bhatt	RB	rupa.purohit@paruluniversity.ac.in	5547	https://meet.google.com/ymc-ytbw-jym

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BE IT(3RD SEM) ENGINEERING TIME TABLE CLASS C ONLINE – UG COURSE					

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
09:30 to 10:30	LIBRARY	DSA:{MM}:[A-C1]	DBMS:{SM}:[C3]	OOCUML:{SS}:[C1]	DM:{SS}:[C3]	DBMS:{SM}:[C1]
10:30 to 11:30	OOCUML:{SS}:[C3]	WEEKLY	DE:{DAB}:[C3]	DSA:{MM}:[A-C1]	FACE:{}:[C3]	DM:{SS}:[C3]
11:30 to 12:15						
12:15 to 1:15	DM:Tuto – B-1:{KS}:[C1] DM:Tuto – B-2:{SS}:[C3]	3ITC1: OOCUML:{DG} : B1 3ITC2: DSA:{MM}: B2	3ITC1: DSA:{MM}: B1 3ITC2: DE:{AVD}: B2	3ITC1:DE:{DAB} :B1 :3ITC2:ITWS :{AK-2}:B2	OOCUML:{SS}:[C1]	3ITC1: ITWS:{AK-2}:B1 3ITC2: DBMS:{SM}: B2
1:15 to 2:15					DE:{DAB}:[C1]	
2:15 to 2:30						
02:30 to 03:30	DSA:{MM}:[C3]	DM:{SS}:[C3]	3ITC1: DBMS:{SM}:B3 3ITC2: OOCUML:{DG}: B4	LIBRARY	DBMS:{SM}:[C5]	PCLS-2: Tutorial –T1:{PP}:[C1] PCLS-2: Tutorial –T2:{SP}:[C2]
03:30 to 04:30	DE:{DAB}:[C3]	PCLS:{PP}:[C3]			LIBRARY	LIBRARY

SUBJECT_CODE	SUBJECT_NAME(SHORT_NAME)	FACULTY FULL_NAME	FACULTY SHORT NAME	EMAIL ID	MIS	LECTURE LINK
203105207/08	OOCUML	Prof. Shaleen Shukla	SS	shaleen.shukla270186@paruluniversity.ac.in	15331	https://meet.google.com/hhb-nfec-wtz
203105209	ITWS	Ayush Kumar	AK-2	ayush.kumar17703@paruluniversity.ac.in	17703	https://meet.google.com/imb-kbac-wwa?pli=1&authuser=4
203105251/52	DBMS	Sumitra Menaria	SM	sumitra.menaria@paruluniversity.ac.in	96	https://meet.google.com/mpp-bbus-ery
203105205/06	DSA	Mahendra Kumar Meena	MK	mahendra.meena270243@paruluniversity.ac.in		https://meet.google.com/gsb-kgyi-cdu

	FACE	Samruddhi Joshi	SJ	samruddhi.joshi@paruluniversity.ac.in		http://meet.google.com/ftv-trtn-ujt
203193201	PCLS	**PARTHIV PATEL**	**(PP)**	parthivkumar.patel@paruluniversity.ac.in	4254	https://meet.google.com/gyt-jqai-qmr
203193201	PCLS TUTO-1	**PARTHIV PATEL**	**(PP)**	parthivkumar.patel@paruluniversity.ac.in	4254	https://meet.google.com/gyt-jqai-qmr
203193201	PCLS TUTO-2	**SNEHALKUMAR PATANWADIA**	**(SP)**	snehalkumar.patanwadiya270005@paruluniversity.ac.in	12539	https://meet.google.com/fdh-qizj-fjw
203105201/02	Digital Electronics	Archna V. Dubey	AVD	archana.dubey17511@paruluniversity.ac.in	17511	http://meet.google.com/nhn-rzwm-emf
203105201/02	Digital Electronics	Dhwani Brahmbhatt	DAB	dhwani.bbrahmbhatt270246@paruluniversity.ac.in	16949	https://meet.google.com/vip-awud-uou
203191202	Discrete Mathematics	Dr Sweta Shah	SS	sweta.shah270035@paruluniversity.ac.in	13733	https://meet.google.com/kmv-ivzd-nsz
203191202	Discrete Mathematics	Krupa Samani	KS	Krupa.samani270101@paruluniversity.ac.in	14205	https://meet.google.com/nzn-xctp-fay

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BE IT(3RD SEM) ENGINEERING TIME TABLE CLASS D ONLINE – UG COURSE

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
09:30 to 10:30	DSA:{TS}:[C4]	OOCUML:{DG}:[C3]	3ITD1:DSA:{TS}:B2	DBMS:{SM}:[C3]	FACE:{}:[C4]	LIBRARY
10:30 to 11:30	DE:{}:[C4]	WEEKLY	3ITD2:OOCUML:{DG}: B1	PCLS-2: Tutorial –T1:{AG}:[C2] PCLS-2: Tutorial – T2:{PD}:[C3]	DM:{}:[C4]	DSA:{TS}:[C4]
11:30 to 12:15						
12:15 to 1:15	3ITD1: OOCUML:{DG}: B3 3ITD2:DBMS:{SM}: B4	DBMS:{SM}:[C3]	DBMS:{SM}:[C3]	LIBRARY	DM:Tuto – B-1:{}:[C1]	DE:{}:[C4]
1:15 to 2:15		DM:{}:[C3]	DE:{}:[C3]	OOCUML:{DG}:[C3]	DM:Tuto – B-2:{}:[C3]	OOCUML:{DG}:[C4]
2:15 to 2:30						
02:30 to 03:30	3ITD1:DBMS:{SM}: B3 3ITD2:ITWS:{RS}: B4	3ITD1:ITWS:{RS}:B3 3ITD2: DE:{}:B4	DSA:{TS}:[C3]	LIBRARY	3ITD1:DE:{}:[B4] 3ITD2: DSA:{TS}: B3	DM:{}:[C4]
03:30 to 04:30			LIBRARY			PCLS:{F2}:[C4]

SUBJECT_CODE	SUBJECT_NAME(SHORT_NAME)	FACULTY FULL_NAME	FACULTY SHORT NAME	EMAIL ID	MIS	LECTURE LINK
203105205/06	DSA	Trilok Suthar	TJS	trilok.suthar270046@paruluniversity.ac.in	13799	meet.google.com/bdz-mnez-zwk
203105251/52	DBMS	Sumitra Menaria	SM	sumitra.menaria@paruluniversity.ac.in	96	https://meet.google.com/mpp-bbus-ery
203105209	ITWS	R Shivamallikarjun	RS	rayabarapu.shivamallikarjun270239@paruluniversity.ac.in	16753	meet.google.com/ypw-nfzg-yoe
203193201	PCLS	F2	F2			
203193201	PCLS TUTO-1	ANINDITA GHOSH	(AG)	anindita.ghosh270109@paruluniversity.ac.in	14244	http://meet.google.com/rdq-uqkh-ner
203193201	PCLS TUTO-2	PRIYANKA DESAI	(PD)	priyanka.desai14463@paruluniversity.ac.in	10924	https://meet.google.com/zus-cmmn-fwo

PARUL INSTITUTE OF ENGINEERING & TECHNOLOGY - FIRST SHIFT THIRD SEMESTER INFORMATION TECHNOLOGYSTUDENTS HAND-BOOK-2020-21

Faculty Representative Detail

Sr. No	Name of Faculty	DIV	Mobile No	E-mail ID
1	Dheeraj Kumar Singh	Admission/ Enrollment/ Discipline	8000503090	dheeraj.singh@paruluniversity.ac.in
2	Tejal Patel	Exam & Attendence	8347066800	tejal.patel@paruluniversity.ac.in
3	Uma Bhatt	Exam & Attendence	9429950684	uma.bhatt2987@paruluniversity.ac.in
4	Shaleen Shukla	Fee	9428282968	shaleen.shukla270186@paruluniversity.ac.in
5	Mahendra Meena	Fee	7016484828	mahendra.meena270243@paruluniversity.ac.in
6	R Shivamallikarjun	Academic / Timetable	9108288132	rayabarapu.shivamallikarjun270239@paruluniversity.ac.in

Faculty List of BE IT SEM-3

Sr No	Name of Faculty	Alias of Faculty	Mobile No	E-mail ID	SubjectCode
1	Sumitra Menaria	SM	9426765592	sumitra.menaria@paruluniversity.ac.in	203105251/52
2	Tejal Patel	TP	8347066800	tejal.patel@paruluniversity.ac.in	203105207/08
3	Dhenuka Patel	DP	9737717393	dhenuka.patel2962@paruluniversity.ac.in	203105205
4	JAYSHREE PARMAR	JKP	9898675116	jayshree.parmar2946@paruluniversity.ac.in	203105251/52
5	PARVIN SODAGAR	PS		parvin.sodagar12565@paruluniversity.ac.in	203193201
6	PRIYANKA DESAI	PD		priyanka.desai14463@paruluniversity.ac.in	203193201
7	Archna V. Dubey	AVD	9737957376	archana.dubey17511@paruluniversity.ac.in	203105201/02
8	Dhwani Brahmbhatt	DAB		dhwani.bbrahmbhatt270246@paruluniversity.ac.in38	203105201/02
9	Dr Sweta Shah	SS	7567227419	sweta.shah270035@paruluniversity.ac.in	203191202
10	Shaleen Shukla	SS	9428282968	shaleen.shukla270186@paruluniversity.ac.in	203105207/08
11	Dhara Patel	DP		dhara.patel270102@paruluniversity.ac.in	203191202
12	Dr. Pratibha Tyagi	PT	9690587154	pratibha.tyagi17542@paruluniversity.ac.in	203191202
13	R Shivamallikarjun	RS	9108288132	rayabarapu.shivamallikarjun270239@paruluniversity.ac.in	203124208
14	CATHERINE MASTER	CM		catherine.master2851@paruluniversity.ac.in	203193201
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Academic Regulations

EXAMINATION SYSTEM & EVALUATION:

Each course in the programme shall be evaluated as follows.

(a) Continuous Evaluation (CE) – 20 Marks. This consists of a maximum of 5 marks for attendance

A student shall have a minimum of 75% attendance in a course to be eligible to appear in the End Semester Examination

(b) Mid Term Examination: 20 marks. This examination shall be conducted by the course teacher. The maximum duration for the examination shall be two hours

(c) End Semester Examination: The End Semester Examination shall be conducted for 60

A student who fails to secure a minimum of 40% in End Semester Examination may appear for Supplementary Examination in the subject which will be conducted in the immediately succeeding semester.

(d) Continuous Evaluation (CE) in laboratory:

Laboratory work in the subject shall be evaluated in the form of CE &

ESE. CE in Laboratory Work shall carry 40% weightage as follows:

Assessment Parameters	Continuous Evaluation (40%)
Day-to-day Laboratory Work & Attendance	20%
Submission of Laboratory Work/Journal	5%
Exam	15%

(e) End Semester Examination (ESE) in laboratory:

ESE in Laboratory Work shall carry 60% weightage as follows:

Assessment Parameters	Continuous Evaluation (60%)
Lab Experiments/ Exercise	30%
Viva- Voce	20%
Certified Record	10%

A minimum of 50% of marks shall be obtained in CE (Internal component) and ESE (External/Final component) separately in a practical head/laboratory work in order to be declared as passed in the practical head/laboratory work and for the award of the grade in that laboratory work.

DETENTION:

A student is said to have been detained and not allowed to appear for End Semester Examination (ESE) at the end of the semester when – The student does not have a minimum 75% attendance or 65% attendance with condonation in all subjects

OR

The student has not scored a minimum of 40% of marks in Internal Examination (Mid-Term Examination plus CE) in each of the courses of Theory and/or for field work of that semester. Such a student shall have to repeat the same semester/course in next academic year subsequently and satisfy the above requirements afresh to become eligible to appear for the End Semester Examination (ESE), conducted at the end of the semester.

List of Activities During Semester

Sr. No	Activities	Count
1	Webinar	5
2	Workshop	2
3	Seminar/Expert talk	2
4	Technical Event	3
5	Tinkering Hub Event	3