SCIENT INSTITUTE OF TECHNOLOGY

Ibrahimpatnam. R.R Dist - 501506

(Approved by AICTE & Affiliated to JNTUH, Hyderabad)

COURSE FILE

NAME OF THE FACULTY	: Ms.BANALA RAMYA SREE
DEPARTMENT	: COMPUTER SCIENCE & ENGINEERING
YEAR & SEM	: II YEAR II SEM
COURSE	: DISCRETE MATHEMATICS
COURSE CODE	: CS401PC
REGULATION	: R18
BRANCH & SECTION	: COMPUTER SCIENCE & ENGINEERING(A&B)
ACADEMIC YEAR	: 2023-2024
NO. OF CREDITS	: 3

SCIENT INSTITUTE OF TECHNOLOGY

Ibrahimpatnam, Ranga Reddy District-501 506

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
DEPARTMENT ACADEMIC CALENDAR :2021-2022
B.TECH II YEAR II SEMESTER

Date:21st March,2022

PART	EVENT	DATE OF COMMENCEMENT	DATE OF COVERAGE
1st	COMMENCEMENT OF CLASS WORK	21st Mar, 2022	
	Instructions for covering Unit 1st to 2.5th	21st Mar, 2022	14th May, 2022
	Instructions for covering unit 1st	21st Mar, 2022	6th April, 2022
	Department meeting & Review meeting of syllabus Coverage of Unit 1st	07th April, 2022 at 3:30 PM at HOD Office	
	Unit 1st Revision	8th April, 2022	
	Class Internal test-Unit 1st	11th April, 2022	
	Instructions for covering unit 2nd	12th April,2022	30th April, 2022
	Department meeting & Review meeting of syllabus Coverage of Unit 2nd	2nd May, 2022 at 3:30 PM at HOD Office	
	2nd Unit Revision	4th May, 2022	
	Class Internal test-Unit 2nd	5th May, 2022	
	Instructions for covering unit 2.5	6th May, 2022	14th May, 2022
	Unit 2.5th Revision	14th May, 2022	
	Class Internal test-Unit 2.5th	30th May, 2022	
	Department meeting & Review meeting of syllabus Coverage of Unit 2.5th	30th May, 2022 at 3:30 PM at HOD Office	
	1st Mid Examinations (Theory)	31st May, 2022	04th June, 2022
	Vacation	15th May,2022 to 29th May ,2022	
2nd	Instructions for covering Unit 2.5th to 5th	6th June, 2022	01st Aug, 2022
	Instruction for covering Unit 2.5th – 3rd	06th June, 2022	14th June, 2022
	Department meeting & Review meeting of syllabus Coverage of Unit 3rd	15th June, 2022 at 2:30 PM at HOD Office	
	Unit 3rd Revision	16th June, 2022	
	Class Internal test: Unit 3rd	17st June, 2022	
	Instructions for covering unit 4th	18th June, 2022	8th July, 2022
	Department meeting & Review meeting of syllabus Coverage of Unit 4th	8th July, 2022 at 2:30 PM at HOD Office	
	4th Unit Revision	9th July, 2022	
	Class Internal test: Unit 4th	11th July, 2022	
	Instructions for covering unit 5th	12th July , 2022	28th July, 2022
	Department meeting & Review meeting of syllabus Coverage of Unit 5th	28th July, 2022 at 1:30 PM at HOD Office	
	Unit 5th Revision	29th & 30th July , 2022	
	Class Internal test: Unit 5th	1st August, 2022	
	2nd Mid Examinations (Theory)	2nd August, 2022	04th August, 2022
	2nd Mid Examinations (Practical)	5th August, 2022	8th August, 2022
	Preparation Holidays & Practical Examination	8th August, 2022	16th August, 2022
	End Semester Regular & Supplementary Examination	17th August, 2022	30th August, 2022

HOD

(Dr.SRIKANTH)

VISION AND MISSION OF COLLEGE

VISION

To impart quality education in building Engineering and Management professionals striving for a symbiosis of innovative technological excellence, research and human values with global standards to meet skills, knowledge and behaviour of industry and societal needs.

MISSION

- To achieve excellence by imparting innovative Teaching & Learning and Research.
- To generate, empower, disseminate, and preserve knowledge and information.
- To render social relevant technical services and inculcating entrepreneurial talents in technological advancements.
- To nurture, inculcate and develop skills, knowledge and attitudes to render technical services for industry and societal needs.

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SNO	TOPIC	PAGE NO's
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1	Academic Calendar	
2	Vision & Mission of College	
3	Vision & Mission of Department	
4	Program Educational Objectives(PEOs)	
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19	Mid Question papers with Blooms taxonomy levels	
20	Mid Marks	
21	Mid Answer Scripts	
22	Result Analysis	
23	Others if any	

VISION AND MISSION OF DEPARTMENT

VISION

The Vision of the department is to produce competent graduates suitable for industries and organizations at global level including research and development with Social responsibility.

MISSION

➢ To provide an open environment to foster professional and personal growth with a strong theoretical and practical background.

➢ Emphasis on hardware and software development making the graduates industry ready with social ethics.

➢ Further the Department is to provide training and to partner with Global entities in education and research

Program Educational Objectives (PEOs):

PEO1	Students will establish themselves as effective professionals by solving real problems through the use of computer science knowledge and with attention to team work, effective communication, critical thinking and problem solving skills.
PEO2	Students will develop professional skills that prepare them for immediate employment and for life-long learning in advanced areas of computer science and related fields.
PEO3	Students will demonstrate their ability to adapt to a rapidly changing environment by having learned and applied new skills and new technologies
PEO4	Students will be provided with an educational foundation that prepares them for excellence, leadership roles along diverse career paths with encouragement to professional ethics and active participation needed for a successful career.

Program Outcomes (POs):

PO1-Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO2-Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and Engineering sciences.

PO3-Design/Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4- Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5- Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6-The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7-Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8- Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9- Individual and Team Work: Function effectively as an individual and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10- Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11- Project Management and Finance: Demonstrate knowledge and understanding of the

engineering management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12-Life-long Learning: Recognize the need for and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

Program Specific Outcomes (PSOs):

PSO1	Understand, design and analyze computer programs in the areas related to Algorithms, System Software, Web design, Big data, Artificial Intelligence, Machine Learning and Networking.
PSO2	Focus on improving software reliability, network security or information retrieval systems.
PSO3	Make use of modern computer tools for creating innovative career paths, to be an entrepreneur and desire for higher studies

Course Objectives

- Able to understand mathematical logics and proofs.
- Ability to understand and practice sets, functions and relations and their representations.
- To attain knowledge on complexity of algorithms, structural induction and recursions.
- Ability to understand discrete probability and accounting techniques.
- To acquire knowledge on trees and graphs.

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SYLLABUS
CS401PC: DISCRETE MATHEMATICS

UNIT - I

The Foundations: Logic and Proofs: Propositional Logic, Applications of Propositional Logic, Propositional Equivalence, Predicates and Quantifiers, Nested Quantifiers, Rules of Inference, Introduction to Proofs, Proof Methods and Strategy.

UNIT - II

Basic Structures, Sets, Functions, Sequences, Sums, Matrices and Relations Sets, Functions, Sequences & Summations, Cardinality of Sets and Matrices Relations, Relations and Their Properties, n-ary Relations and Their Applications, Representing Relations, Closures of Relations, Equivalence Relations, Partial Orderings.

UNIT - III

Algorithms, Induction and Recursion: Algorithms, The Growth of Functions, Complexity of Algorithms

Induction and Recursion: Mathematical Induction, Strong Induction and Well-Ordering, Recursive Definitions and Structural Induction, Recursive Algorithms, Program Correctness

UNIT - IV

Discrete Probability and Advanced Counting Techniques: An Introduction to Discrete Probability, Probability Theory, Bayes' Theorem, Expected Value and Variance

Advanced Counting Techniques: Recurrence Relations, Solving Linear Recurrence Relations, Divide-and-Conquer Algorithms and Recurrence Relations, Generating Functions, Inclusion-Exclusion, Applications of Inclusion-Exclusion

UNIT - V

Graphs: Graphs and Graph Models, Graph Terminology and Special Types of Graphs, Representing Graphs and Graph Isomorphism, Connectivity, Euler and Hamilton Paths, Shortest-Path Problems, Planar Graphs, Graph Coloring.

Trees: Introduction to Trees, Applications of Trees, Tree Traversal, Spanning Trees, Minimum Spanning Trees

TEXT BOOK:

1. Discrete Mathematics and its Applications with Combinatorics and Graph Theory- Kenneth H Rosen, 7th Edition, TMH.

REFERENCES BOOKS:

1. Discrete Mathematical Structures with Applications to Computer Science-J.P. Tremblay and R.Manohar, TMH,

2. Discrete Mathematics for Computer Scientists & Mathematicians: Joe L. Mott, Abraham Kandel, Teodore P. Baker, 2nd ed, Pearson Education.

3. Discrete Mathematics- Richard Johnsonbaugh, 7Th Edn., Pearson Education.

4. Discrete Mathematics with Graph Theory- Edgar G. Goodaire, Michael M. Parmenter.

5. Discrete and Combinatorial Mathematics - an applied introduction: Ralph.P. Grimald, 5th edition, Pearson Education.

Course Outcomes

SNO	COURSE OUTCOMES	BT Level
1	Able to understand mathematical logics and proofs.	L1,L2,L3
2	Ability to understand and practice sets, functions and relations and their representations.	L1,L2,L3
3	To attain knowledge on complexity of algorithms, structural induction and recursions.	L1,L2
4	Ability to understand discrete probability and accounting techniques.	L1,L2,L3
5	To acquire knowledge on trees and graphs.	L1,L2,L3

Course Mapping with POs & PSOs

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	2	3	2	2	0	0	0	0	1	0	0	1	2	1	2
2	3	3	3	2	0	0	0	0	1	0	0	1	1	3	3
3	3	2	2	2	0	0	0	0	0	0	0	0	2	1	2
4	3	3	2	2	0	0	0	0	1	0	0	1	2	2	1
5	2	3	2	1	0	0	0	0	0	0	0	1	3	2	2
Avg :	2.6	2.8	2.2	1.8	0	0	0	0	0.6	0	0	0.8	2	1.8	2

NOTE : 1 -> low, 2 -> medium and 3 -> high

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Class Time Table

CSE DEPARTMENT TIMETABLE
ACADEMIC YEAR 2021 – 2022

B-Tech. II Year /II Semester
Branch: CSE – A

W.E.F: 21-03-2022
L.H No: 202

TIME / DAY	9:20 AM - 10:10 AM	10:10 AM - 11:00 AM	11:00 AM - 11:10 AM	11:10 AM- 12:00PM	12:00 PM - 12:50 PM	12:50 PM – 1:30 PM	01:30 PM - 02:20 PM	02:20 PM - 03:10 PM	03:10 PM - 04:00 PM
MON	BEFA	DBMS	SHORT BREAK	JAVA	OS	LUNCH BREAK	DM	BEFA	LIBN
TUE	DBMS	JAVA		OS	BEFA		SPORTS	DBMS	DA(NT)
WED	JAVA	BEFA		OS	DA(NT)		OS LAB		
THU	JAVA	DM		DBMS	LIB		BEFA	DM	OS
FRI	DM	JAVA LAB		JAVA LAB			DBMS	DA	DA
SAT	OS	DBMS LAB		DBMS LAB			JAVA	DM	SPORTS

S.NO	SUBJECT CODE	SUBJECT NAME		FACULTY NAME
1	CS401PC	Discrete Mathematics	DM	Ms. B.Ramya Sree
2	SM402MS	Business Economics & Financial Analysis	BEFA	Dr. Y. Srinivasa Reddy
3	CS403PC	Operating Systems	OS	Mrs. K.Anoosha
4	CS404PC	Database Management Systems	DBMS	Mrs. S. Nagaiyothi
5	CS405PC	Java Programming	JAVA	Mr. SMD. Shafiulla
6	CS406PC	Operating Systems Lab	OS-LAB	Mrs. K.Anoosha & Mr. M.Naveen
7	CS407PC	Database Management Systems Lab	DBMS-LAB	Mrs. S. Nagaiyothi & Ms. M.Swetha
8	CS408PC	Java Programming Lab	JAVA-LAB	Mr. SMD. Shafiulla & Ms. Beulah Sharon Vanguri
9		DEPARTMENT ACTIVITY	DA	Mr. SMD. Shafiulla
10		DEPARTMENT ACTIVITY(NT)	DA(NT)	Mrs. S. Nagaiyothi & Mrs. K.Anoosha

CSE DEPARTMENT TIMETABLE
ACADEMIC YEAR 2021 – 2022

B-Tech. II Year /II Semester
Branch: CSE – B

W.E.F: 21-03-2022
L.H No: 203

TIME / DAY	9:20 AM - 10:10 AM	10:10 AM - 11:00 AM	11:00 AM - 11:10 AM	11:10 AM- 12:00PM	12:00 PM - 12:50 PM	12:50 PM – 1:30 PM	01:30 PM - 02:20 PM	02:20 PM - 03:10 PM	03:10 PM - 04:00 PM
MON	OS	BEFA	SHORT BREAK	JAVA	DBMS	LUNCH BREAK	OS LAB		
TUE	BEFA	JAVA		DM	OS		LIB	BEFA	SPORTS
WED	JAVA	DBMS LAB		DBMS LAB			DM	BEFA	DBMS
THU	JAVA	JAVA LAB		JAVA LAB			DM	DBMS	SPORTS
FRI	DBMS	DA(NT)		DM	LIB		OS	DA	DA
SAT	BEFA	OS		DA(NT)	OS		JAVA	DBMS	DM

S.NO	SUBJECT CODE	SUBJECT NAME		FACULTY NAME
1	CS401PC	Discrete Mathematics	DM	Ms. B.Ramya Sree
2	SM402MS	Business Economics & Financial Analysis	BEFA	Dr. Y. Srinivasa Reddy
3	CS403PC	Operating Systems	OS	Mrs. K.Anoosha
4	CS404PC	Database Management Systems	DBMS	Mrs. S. Nagaiyothi
5	CS405PC	Java Programming	JAVA	Mr. SMD. Shafiulla
6	CS406PC	Operating Systems Lab	OS-LAB	Mrs. K.Anoosha & Mr. M.Naveen
7	CS407PC	Database Management Systems Lab	DBMS-LAB	Mrs. S. Nagaiyothi & Ms. M.Swetha
8	CS408PC	Java Programming Lab	JAVA-LAB	Mr. SMD. Shafiulla & Ms. Beulah Sharon Vanguri
9		DEPARTMENT ACTIVITY	DA	Mr. SMD. Shafiulla
10		DEPARTMENT ACTIVITY(NT)	DA(NT)	Mrs. S. Nagaiyothi & Mrs. K.Anoosha

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Individual Time Table

Ms. B.RAMYA SREE									
TIME	9:20 AM 10:10 AM	10:10 AM 11:00 AM	11:00 AM 11:10 AM	11:10 AM 12:00PM	12:00 PM 12:50 PM	12:50 PM 1:30 PM	1:30 PM 2:20 PM	2:20 PM 3:10 PM	3:10 PM 4:00 PM
DAY/PERIOD NO.	1st	2nd	BREAK	3rd	4th	LUNCH BREAK	5th	6th	7th
MON							DM-A		
TUE				DM-B					
WED							DM-B		
THU		DM-A					DM-B	DM-A	
FRI	DM-A			DM-B					
SAT								DM-A	DM-B

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Academic Year   :   2021-2022
Class & Semester   :   B.Tech II Year II Sem
Name of the Faculty member   :   B.RAMYA SREE
Name of the subject   :   DISCRETE MATHEMATICS

		LESSON PLAN				
		LECTURE SCHEDULE (DISCRETE MATHEMATICS 2021-22)-CSE A				
SNO	Date	Topic(s)	No of Periods	Cumulative no of periods	Teaching Methodology (Chalk and Talk, PPTs, Video Lectures etc.)	Resources (T1, R1, OR1,OR2..)
UNIT I						
1	21-03-2022	Propositional Logic, Applications of Propositional Logic	2	2	Chalk and Talk	
2	24-03-2022	Propositional Equivalence	1	3	Chalk and Talk	
3	24-03-2022	Predicates	1	4	Chalk and Talk	
4	25-03-2022	Quantifiers	1	5	Chalk and Talk	
5	26-03-2022	Examples	1	6	Chalk and Talk	T1
6	28-03-2022, 29-03-2022	Nested Quantifiers	2	8	Chalk and Talk	
7	30-03-2022, 31-03-2022	Rules of Inference	2	10	Chalk and Talk	
8	01-04-2022, 04-04-2022	Introduction to Proofs	2	12	Chalk and Talk	
9	05-04-2022, 06-04-2022	Proof Methods and Strategy.	2	14	Chalk and Talk	
UNIT II						
10	12-04-2022, 13-04-2022	Sets	2	16	Chalk and Talk	
11	16-04-2022, 18-04-2022	Functions	2	18	Chalk and Talk	
12	19-04-2022	Sequences & Summations	1	19	Chalk and Talk	T1
13	20-04-2022	Cardinality of Sets and Matrices Relations	1	20	Chalk and Talk	
14	21-04-2022	Relations and Their Properties	2	22	Chalk and Talk	

15	22-04-2022	n-ary Relations and Their Applications	1	23	Chalk and Talk	
16	23-04-2022	Representing Relations	1	24	Chalk and Talk	
17	25-04-2022, 28-04-2022	Closures of Relations	2	26	Chalk and Talk	
18	28-04-2022	Equivalence Relations	1	27	Chalk and Talk	
19	29-04-2022, 30-04-2022	Partial Orderings	2	29	Chalk and Talk	
UNIT III						
20	06-05-2022	Algorithms	1	30	Chalk and Talk	
21	07-05-2022	The Growth of Functions	1	31	Chalk and Talk	
22	09-05-2022	Complexity of Algorithms	1	32	Chalk and Talk	
23	12-05-2022	Mathematical Induction	2	34	Chalk and Talk	
24	13-05-2022, 14-05-2022	Strong Induction and Well-Ordering	2	36	Chalk and Talk	**T1**
25	06-06-2022	Recursive Definitions and Structural Induction	1	37	Chalk and Talk	
26	09-06-2022	Recursive Algorithms	2	39	Chalk and Talk	
27	13-06-2022	Program Correctness	1	40	Chalk and Talk	
UNIT IV						
28	18-06-2022	An Introduction to Discrete Probability	1	41	Chalk and Talk	
29	20-06-2022, 23-06-2022	Probability Theory	2	43	Chalk and Talk	
30	23-06-2022, 24-06-2022	Bayes' Theorem	2	45	Chalk and Talk	
31	25-06-2022, 27-06-2022	Expected Value and Variance	2	47	Chalk and Talk	
32	30-06-2022	Advanced Counting Techniques: Recurrence Relations	1	48	Chalk and Talk	**T1**
33	01-07-2022	Solving Linear Recurrence Relations	1	49	Chalk and Talk	
34	2-07-2022, 4-07-2022	Divide-and-Conquer Algorithms and Recurrence Relations	2	51	Chalk and Talk	
35	07-07-2022	Generating Functions	1	52	Chalk and Talk	
36	07-07-2022	Inclusion-Exclusion	1	53	Chalk and Talk	
37	08-07-2022	Applications of Inclusion-Exclusion	1	54	Chalk and	

					Talk	
		UNIT V				
38	14-07-2022	Graphs and Graph Models	1	55	Chalk and Talk	
39	15-07-2022	Graph Terminology and Special Types of Graphs	1	56	Chalk and Talk	
40	16-07-2022	Representing Graphs and Graph Isomorphism	1	57	Chalk and Talk	
41	18-07-2022, 19-07-2022	Connectivity	2	59	Chalk and Talk	
42	21-07-2022	Euler and Hamilton Paths	1	60	Chalk and Talk	
43	21-07-2022	Shortest-Path Problems	1	61	Chalk and Talk	T1
44	22-07-2022, 23-07-2022	Shortest-Path Problems	2	63	Chalk and Talk	
45	25-07-2022	Graph Coloring	1	64	Chalk and Talk	
46	26-07-2022	Introduction to Trees	1	65	Chalk and Talk	
47	27-07-2022	Applications of Trees	1	66	Chalk and Talk	
48	28-07-2022	Tree Traversal	1	67	Chalk and Talk	
49	29-07-2022	Spanning Trees, Minimum Spanning Trees	2	69	Chalk and Talk	

TEXT BOOK:

1. Discrete Mathematics and its Applications with Combinatorics and Graph Theory- Kenneth H Rosen, 7th Edition, TMH.

REFERENCES BOOKS:

1. Discrete Mathematical Structures with Applications to Computer Science-J.P. Tremblay and R. Manohar, TMH,

2. Discrete Mathematics for Computer Scientists & Mathematicians: Joe L. Mott, Abraham Kandel, Teodore P. Baker, 2nd ed, Pearson Education.

3. Discrete Mathematics- Richard Johnsonbaugh, 7Th Edn., Pearson Education.

4. Discrete Mathematics with Graph Theory- Edgar G. Goodaire, Michael M. Parmenter.

5. Discrete and Combinatorial Mathematics - an applied introduction: Ralph.P. Grimald, 5th edition, Pearson Education.

FACULTY SIGN　　　　　　**HOD**　　　　　　**PRINCIPAL**

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Academic Year	:	2021-2022
Class & Semester	:	B.Tech II Year II Sem
Name of the Faculty member	:	B.RAMYA SREE
Name of the subject	:	DISCRETE MATHEMATICS

LESSON PLAN						
LECTURE SCHEDULE (DISCRETE MATHEMATICS 2021-22)-CSE B						
SNO	Date	Topic(s)	No of Periods	Cumulative no of periods	Teaching Methodology (Chalk and Talk, PPTs, Video Lectures etc.)	Resources (T1, R1, OR1,OR2..)
UNIT I						
1	22-03-2022,23-03-2022	Propositional Logic, Applications of Propositional Logic	2	2	Chalk and Talk	
2	24-03-2022	Propositional Equivalence	1	3	Chalk and Talk	
3	25-03-2022	Predicates	1	4	Chalk and Talk	
4	26-03-2022	Quantifiers	1	5	Chalk and Talk	
5	29-03-2022	Examples	1	6	Chalk and Talk	T1
6	30-03-2022,31-03-2022	Nested Quantifiers	2	8	Chalk and Talk	
7	30-03-2022,31-03-2022	Rules of Inference	2	10	Chalk and Talk	
8	1-04-2022,4-04-2022	Introduction to Proofs	2	12	Chalk and Talk	
9	5-04-2022,6-04-2022	Proof Methods and Strategy.	2	14	Chalk and Talk	
UNIT II						
10	12-04-2022,13-04-2022	Sets	2	16	Chalk and Talk	
11	16-04-2022,18-04-2022	Functions	2	18	Chalk and Talk	
12	19-04-2022	Sequences & Summations	1	19	Chalk and Talk	T1
13	20-04-2022	Cardinality of Sets and Matrices Relations	1	20	Chalk and Talk	

14	21-04-2022	Relations and Their Properties	2	22	Chalk and Talk	
15	22-04-2022	n-ary Relations and Their Applications	1	23	Chalk and Talk	
16	23-04-2022	Representing Relations	1	24	Chalk and Talk	
17	25-04-2022,28-04-2022	Closures of Relations	2	26	Chalk and Talk	
18	28-04-2022	Equivalence Relations	1	27	Chalk and Talk	
19	29-04-2022,30-04-2022	Partial Orderings	2	29	Chalk and Talk	
UNIT III						
20	06-05-2022	Algorithms	1	30	Chalk and Talk	
21	07-05-2022	The Growth of Functions	1	31	Chalk and Talk	
22	09-05-2022	Complexity of Algorithms	1	32	Chalk and Talk	
23	12-05-2022	Mathematical Induction	2	34	Chalk and Talk	
24	13-05-2022,14-05-2022	Strong Induction and Well-Ordering	2	36	Chalk and Talk	T1
25	06-06-2022	Recursive Definitions and Structural Induction	1	37	Chalk and Talk	
26	09-06-2022	Recursive Algorithms	2	39	Chalk and Talk	
27	13-06-2022	Program Correctness	1	40	Chalk and Talk	
UNIT IV						
28	18-06-2022	An Introduction to Discrete Probability	1	41	Chalk and Talk	
29	20-06-2022,23-06-2022	Probability Theory	2	43	Chalk and Talk	
30	23-06-2022,24-06-2022	Bayes' Theorem	2	45	Chalk and Talk	
31	25-06-2022,27-06-2022	Expected Value and Variance	2	47	Chalk and Talk	
32	30-06-2022	Advanced Counting Techniques: Recurrence Relations	1	48	Chalk and Talk	T1
33	01-07-2022	Solving Linear Recurrence Relations	1	49	Chalk and Talk	
34	2-07-2022,4-07-2022	Divide-and-Conquer Algorithms and Recurrence Relations	2	51	Chalk and Talk	
35	07-07-2022	Generating Functions	1	52	Chalk and Talk	