

ST.ANN'S COLLEGE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
LECTURE SCHEDULE

SUBJECT: MFCS

ACADEMIC YEAR: 2018-19

FACULTY: Mr.A.V.S.SUDHAKARRA RAO

YEAR/SEM /SECTION: II – I (CSE –C)

No. of Lectures per Week: 5+1*(Tutorial)

S.NO	Date	UNIT	TOPIC TO BE COVERED
1	10-6-2019	I	Introduction to Mathematical Logic
2	11-6-2019		Propositional Calculus: Statements and Notations
3	12-6-2019		Connectives, Well Formed Formulas, Truth Tables, Tautologies
4	13-6-2019		Equivalence of Formulas, Duality law
5	14-6-2019		Tautological Implications ,
6	15-6-2019		Normal Forms-CNF,DNF
7	17-6-2019		Normal Forms-PCNF,PDFN
8	18-6-2019		Theory of Inference for Statement Calculus
9	19-6-2019		TUTORIAL
10	20-6-2019		Consistency of Premises, Indirect Method of Proof
11	21-6-2019		Predicate calculus: Predicative Logic, Statement Functions,
12	22-6-2019		Variables and Quantifiers, ,
13	24-6-2019		Free & Bound Variables
14	25-6-2019		Inference theory for predicate calculus
15	26-6-2019		TUTORIAL
16	27-6-2019		Inference theory for predicate calculus
17	28-6-2019		Revision with PPT
18	29-6-2019		
19	1-7-2019	II	Set Theory: Introduction, Operations on Binary Sets
20	2-7-2019		Principle of Inclusion and Exclusion
21	3-7-2019		TUTORIAL
22	4-7-2019		Relations: Properties of Binary Relations, Relation Matrix and Digraph
23	5-7-2019		Operations on Relations, Partition and Covering
24	6-7-2019		Transitive Closure, Equivalence relation
25	8-7-2019		Compatibility and Partial Ordering Relations
26	9-7-2019		, Hasse Diagrams
27	10-7-2019		TUTORIAL
28	11-7-2019		Functions: Bijective Functions,
29	12-7-2019		Composition of Functions
30	15-7-2019		Inverse Functions, Permutation Functions
31	16-7-2019		Recursive Functions, Lattice and its Properties.
32	17-7-2019		TUTORIAL
33	18-7-2019		Revision with PPT
34	19-7-2019		
35	20-7-2019	III	Algebraic Structures and Number Theory: Algebraic Systems, Examples, General Properties
36	22-7-2019		Semi Groups and Monoids , Homomorphism of Semi Groups and Monoids
37			Group, Subgroup, Abelian Group
38	24-7-2019		TUTORIAL
39	25-7-2019		Homomorphism, Isomorphism,
40	26-7-2019		Number Theory: Properties of integers, Division Theorem
41	27-7-2019		The Greatest Common Divisor, Euclidean Algorithm,
42	29-7-2019		Least Common Multiple, Testing for Prime Numbers,
43	30-7-2019		The Fundamental Theorem of Arithmetic
44	31-7-2019		TUTORIAL
45	1-8-2019		Modular Arithmetic-Fermat's theorem

46	2-8-2019		Euler's theorem
47	3-8-2019		Revision with PPT
48	5-8-2019	MID-1	REVISION –MID-1
49	6-8-2019		REVISION –MID-1
50	7-8-2019		REVISION –MID-1/TUTORIAL
51	8-8-2019		REVISION –MID-1
52	9-8-2019		REVISION –MID-1
53	10-8-2019		REVISION –MID-1
54	13-8-2019		IV
55	14-8-2019	TUTORIAL	
56	16-8-2019	Permutations, Permutations with Repetitions,	
57	17-8-2019	Circular Permutations, Restricted Permutations,	
58	19-8-2019	Combinations, Restricted Combinations,	
59	20-8-2019	Generating Functions of Permutations and Combinations,	
60	21-8-2019	TUTORIAL	
61	22-8-2019	Binomial and Multinomial Coefficients, Binomial and Multinomial Theorems	
62	26-8-2019	The Principles of Inclusion–Exclusion,	
63		Pigeonhole Principle & its Application.	
64	28-8-2019	TUTORIAL	
65	29-8-2019	Revision with PPT	
66	30-8-2019		
67	31-8-2019	V	Recurrence Relation: Function of Sequences
68	3-9-2019		Partial Fractions
69	4-9-2019		TUTORIAL
70	5-9-2019		Calculating Coefficient of Generating Functions
71	6-9-2019		Recurrence Relations, Formulation as Recurrence Relations
72	7-9-2019		Solving Recurrence Relations by Substitution Method
73	9-9-2019		Generating Functions- First Order
74	10-9-2019		Generating Functions- Second Order
75	11-9-2019		TUTORIAL
76	12-9-2019		Solving RR by method of characteristic roots
77	13-9-2019		Solving Inhomogeneous recurrence Relations –First Order
78	16-9-2019		Solving Inhomogeneous recurrence Relations-Second Order
79	17-9-2019		Revision with PPT
80	18-9-2019		TUTORIAL
81	19-9-2019		
82	20-9-2019	VI	Graph Theory: Basic Concepts of Graphs, Sub graphs
83	21-9-2019		Matrix Representation of Graphs: Adjacency Matrices, Incidence Matrices
84	23-9-2019		Isomorphic Graphs, Paths and Circuits
85	24-9-2019		Eulerian Graphs,
86	25-9-2019		TUTORIAL
87	26-9-2019		Hamiltonian Graphs
88	27-9-2019		Multigraphs, Planar Graphs,
89	28-9-2019		Euler's Formula,
90	30-9-2019		Graph Coloring and Covering, Chromatic Number
91	1-10-2019		Spanning Trees: Properties, Algorithms for Spanning trees
92	3-10-2019		Minimal Spanning Tress(Prim's & Kruskal's algorithms)
93	4-10-2019		Revision with PPT
94	5-10-2019		Revision with PPT
95	7-10-2019		MID-2
96	9-10-2019	REVISION –MID-2/TUTORIAL	
97	10-10-2019	REVISION –MID-2	
98	11-10-2019	REVISION –MID-2	
99	12-10-2019	REVISION –MID-2	

TEXT BOOKS:

1. Discrete Mathematical Structures with Applications to Computer Science, J. P. Tremblay and P. Manohar, Tata McGraw Hill.
2. Elements of Discrete Mathematics-A Computer Oriented Approach, C. L. Liu and D. P. Mohapatra, 3rd Edition, Tata McGraw Hill.
3. Discrete Mathematics and its Applications with Combinatorics and Graph Theory, K. H. Rosen, 7th Edition, Tata McGraw Hill.

REFERENCE BOOKS:

1. Discrete Mathematics for Computer Scientists and Mathematicians, J. L. Mott, A. Kandel, T.P. Baker, 2nd Edition, Prentice Hall of India.
2. Discrete Mathematical Structures, BernandKolman, Robert C. Busby, Sharon Cutler Ross, PHI.
3. Discrete Mathematics, S. K. Chakraborty and B.K. Sarkar, Oxford, 2011.

SIGNATURE OF STAFF**HEAD OF THE DEPARTMENT**

SACET-CSE