

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

LECTURE SCHEDULE

SUBJECT: MFCS

ACADEMIC YEAR: 2017-18

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

YEAR/SEM /SECTION: II – I (CSE –A)

No. of Lectures per Week: 4+2*(Tutorial)

S.NO	Date	UNIT	TOPIC TO BE COVERED
1	12-06-17	I	Introduction to Mathematical Logic
2	13-06-17		Propositional Calculus: Statements and Notations
3	15-06-17		Connectives, Well Formed Formulas, Truth Tables, Tautologies
4	16-06-17		Equivalence of Formulas, Duality law
5	17-06-17		Tautological Implications ,
6	17-06-17		Normal Forms-CNF, DNF
7	19-06-17		Normal Forms-PCNF, PDNF
8	20-06-16		Theory of Inference for Statement Calculus
9	22-06-17		Consistency of Premises, Indirect Method of Proof
10	23-06-17		Predicate calculus: Predicative Logic, Statement Functions, Variables and Quantifiers
11	24-06-17		TUTORIAL
12	24-06-17		TUTORIAL
13	27-06-17		Free & Bound Variables, Inference theory for predicate calculus
14	29-06-17	II	Set Theory: Introduction, Operations on Binary Sets
15	30-06-17		SLIPTEST-1
16	01-07-17		TUTORIAL
17	01-07-17		TUTORIAL
18	03-07-17		Principle of Inclusion and Exclusion
19	04-07-17		Relations: Properties of Binary Relations, Relation Matrix and Digraph
20	06-07-17		Operations on Relations, Partition and Covering
21	07-07-17		Transitive Closure, Equivalence relation
22	10-07-17		Compatibility and Partial Ordering Relations
23	11-07-17		Hasse Diagrams
24	13-07-17		Functions: Bijective Functions, Composition of Functions
25	14-07-17		Inverse Functions, Permutation Functions
26	15-07-17		TUTORIAL
27	15-07-17		TUTORIAL
28	17-07-17		Recursive Functions
29	18-07-17		Lattice and its Properties.
30	20-07-17	III	Algebraic Structures and Number Theory: Algebraic Systems, Examples, General Properties
31	21-07-17		SLIPTEST-2
32	22-07-17		TUTORIAL
33	22-07-17		TUTORIAL
34	24-07-17		Semi Groups and Monoids ,Homomorphism of Semi Groups and Monoids
35	25-07-17		Group, Subgroup, Abelian Group, Homomorphism, Isomorphism,
36	27-07-17		Number Theory: Properties of integers, Division Theorem
37	28-07-17		The Greatest Common Divisor, Euclidean Algorithm,
38	29-07-17		TUTORIAL
39	29-07-17		TUTORIAL
40	31-07-17		Least Common Multiple
41	01-08-17		Testing for Prime Numbers, The Fundamental Theorem of Arithmetic
42	03-08-17		Modular Arithmetic-Fermat's theorem & Euler's's theorem
43	04-08-17		REVISION

44	05-08-17		TUTORIAL
45	05-08-17		TUTORIAL
46	07-08-17		REVISION
47	08-08-17		REVISION
48	10-08-17		REVISION
49	11-08-17		REVISION
50	12-08-17		TUTORIAL
51	12-08-17		TUTORIAL
52	17-08-17	IV	Combinatorics: Basic of Counting, Permutations,
53	18-08-17		Permutations with Repetitions,
54	19-08-17		TUTORIAL
55	19-08-17		TUTORIAL
56	21-08-17		Circular Permutations, Restricted Permutations,
57	22-08-17		Combinations, Restricted Combinations,
58	24-08-17		Generating Functions of Permutations and Combinations,
59	28-08-17		Binomial and Multinomial Coefficients, Binomial and Multinomial Theorems,
60	29-08-17		The Principles of Inclusion–Exclusion, Pigeonhole Principle & its Application.
61	31-08-17		V
62	01-09-17	Partial Fractions ,Calculating Coefficient of Generating Functions,	
63	02-09-17	TUTORIAL	
64	02-09-17	TUTORIAL	
65	05-09-17	SLIPTEST-3	
66	07-09-17	Recurrence Relations, Formulation as Recurrence Relations,	
67	08-09-17	Solving Recurrence Relations by Substitution and Generating Functions,	
68	11-09-17	Solving RR by method of characteristic roots	
69	12-09-17	Solving Inhomogeneous recurrence Relations	
70	14-09-17	VI	Graph Theory: Basic Concepts of Graphs,Sub graphs
71	15-09-17		Matrix Representation of Graphs:Adjacency Matrices,
72	16-09-17		TUTORIAL
73	16-09-17		TUTORIAL
74	18-09-17		SLIPTEST-4
75	19-09-17		Incidence Matrices
76	21-09-17		Isomorphic Graphs
77	22-09-17		Paths and Circuits
78	23-09-17		TUTORIAL
79	23-09-17		TUTORIAL
80	25-09-17		Eulerian Graphs
81	26-09-17		Hamiltonian Graphs
82	03-10-17		Multigraphs, Planar Graphs
83	05-10-17		Euler’s Formula, Graph Coloring and Covering, Chromatic Number
84	06-10-17	Spanning Trees: Properties, Algorithms for Spanning trees	
85	07-10-17	TUTORIAL	
86	07-10-17	TUTORIAL	
87	09-10-17	REVISION	
88	10-10-17	REVISION	
89	12-10-17	REVISION	
90	13-10-17	REVISION	
91	14-10-17	TUTORIAL	
92	14-10-17	TUTORIAL	

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, Bernard Kolman, 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