

WEEK	DATE	TOPICS
1	(1-3) Feb.	Graphs, Konosberg seven bridges Problem finite & Infinite graphs.
2	(5-10) Feb.	Incidence Vertex, Degree of Vertex, Isolated and Pendant vertex, Null graphs
3.	(12-17) Feb.	Isomorphism of graphs, Subgraphs, walks Path, circuit, Connected - disconnected graphs, Euler graph, Hamiltonian Path & circuit
4.	(19-24) Feb.	Traveling salesman Problem, Tree & their properties, Pendant vertices, Rooted & binary Tree, spanning tree in weighted graph.
5.	26-29 (Feb) 1-2 (March)	Cutset & their properties, Connectivity separability, Network flows, Planar graph, Kuratowski's two graphs. Vector space associated with graph
6.	4-9 (March)	Circuit & cutset subspaces, Incidence matrix of graph. Test.
7.	11-16 (March)	Fundamental Circuit Matrix, its rank. cutset matrix, Path matrix and adjacency of matrix.

WEEKS	DATE	TOPICS
8	18-22 (March)	Partially order set & lattices. Lattice as an algebraic system. Sublattices & Isomorphism of lattices. Distributive & modular lattice
9.	1-6 (April)	Chain in lattices, Zassenhaus's lemma, Schöier's Theorem, Composition chain and Jordan-Hölder theorem. Chain condition
10	8-13 April	Fundamental dimensionality relation for modular lattices, Decomposition theory ascending chains reducible & irreducible elements, Independent element in lattices.
11.	15-20 (April)	Points (atoms of lattice) Complemented lattices, chain conditions, Boolean algebra, Conversion of Boolean algebra into Boolean ring with unity. Direct product of Boolean Algebra
12.	(22-27) April	Boolean function, Boolean expressions Application of Boolean Algebra to switching circuit Theory
13	29-30 April	Revision

Paper - Sequence & Series

(Extension Lect. (Math))

WEEK	DATE	TOPICS
1	1-3 (Feb)	Sets, Bounded, unbdd sets.
2	5-10 (Feb)	LUB/GLB (Definitions, Examples) Theorems - bdd/unbdd sets.
3	12-17 (Feb)	Examples, Problems, discussion, Nbd. of point & Theorems.
4	19-24 (Feb)	Interior set, open set, closed set Examples & Theorems
5	(26-29) (Feb.) (1-2) March	Limit point, closure, Theorems, Problems B.W.T. compact set, cover, open cover.
6	(4-9) March	Sequence, cgt, dgt & oscillating sequence Examples, Problem discussion, Test Basic Theorem on squeeze principle.
7	11-16 (March)	Cauchy first theorem, second theorem Examples, Problems, Monotonic sequence.
8	18-22 (March)	Nested sequence, Examples, limit point of sequence, Cauchy sequence, subsequence & Examples.
9	1-6 April	CGPC, geometric series, Comparison Test, p Test, Ratio, Raabe's test, Cauchy root test, logarithmic test, DeMoivre's & Gauss Test
10	8-13 (April)	Alternating series, Leibnitz Test, Absolute & conditional convergence Arbitrary series, Abel's Test, Dirichlet test

Sequence & Series

Teacher's Name
Gurpreet Kaur
(Mathematics)

Week	DATE	TOPIC
<u>11.</u>	15-20 (April)	Insertion & removal of Parenthesis, Examples Riemann Arrangement Theorem, Multiplication of series Mertens's theorem & Examples.
12.	22-27 (April)	Infinite product, Sequence of partial sum G.P.C., More theorems on Infinite product. Examples, Problems
13.	29-30 (April)	Revision.

Session 2023-24

B.Com - I Paper - Numerical Ability
Sem - II Enhancement skills

Teacher's Name -
Gurprakash
(Extension letter) (Date)

Feb 2024	Feb 16-17	Real Number System, operations on numbers Test for divisibility of Natural Number
1.		
2.	Feb 23	Square roots, Cube roots, Surd and Indices, Use of Bodmas
3.	March 1-2	HCF, LCM of integers, Ratio and Proportion, Progressions: Arithmetic Progression
4.	March 9	Geometric Progression; Harmonic Progression with their simple and basic practical applications
5.	March 15-16	Number Series completion, Percentage, Profit & Loss
6.	March 22	Alligation or mixture, Average, Average speed problems, Calendar, Test
7.	April 5-6	Logarithms, Area of Quadrilateral (Parallelogram, Square, Rectangle)
8.	April 12-13	Area of Rhombus, Trapezium, Revision
9.	April 19-20	Volume and Surface Area of Cube, Cuboid, Cylinder, Cone, Sphere, Hemisphere
10.	April 26-27	Examples of Area and Volume
11.	May	Problem discussion and Revision