MANIPAL UNIVERSITY JAIPUR

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Tentative Blueprint for End Term Exam, November 2022
III SEM. B.Tech.
MA2101 Engineering Mathematics III

As per the circulated guidelines, the End Term Examination will be of 2 hrs. and students will have to attempt five full questions out of six.

, a tentative overview of the topic-wise distribution of marks is mentioned below:

Unit	Topics	No. of Questions	Weightage of Marks
i	Partial ordering relations, Poset, Hasse Diagrams, Lattices, Basic Properties of Lattices. Distributive and complemented lattices. Boolean Algebra: Boolean lattices and Boolean Algebra., Principle of inclusion and exclusion, Partitions.	1.5	12
ii	Graph theory I: Basic definitions of Graphs and graph models, graph terminology, Degree, types of graphs, Handshaking theorem, regular graph, complete graph, bipartite graph, graph isomorphism, subgraphs, walk, path, cycle, Eulerian and Hamiltonian graphs. Graph theory II: Trees and Properties, Centre, radius and diameter of a graph, Rooted and binary trees, Matrices associated with graphs, Algorithm for finding shortest path-Dijkstra Algorithm.	1.5	12
iii	Elementary Configuration: Permutations and Combinations, Generating function.	1	8
iv	Propositional and Predicate Calculus: Well-formed formula, connectives, Quantifiers.	1	8
v	Algebraic Structures: Group theory: Semi groups, Monoids, Groups, subgroups, Order of an element in a group, Cyclic groups.	1	8