AISSMS
INSTITUTE OF INFORMATION TECHNOLOGY
ADDING VALUE TO ENGINEERING
An Autonomous Institute Affiliated to Savitribai Phule Pune University
Approved by AICTE, New Delhi and Recognised by Govt. of Maharashtra
Accredited by NAAC with "A+" Grade | NBA - 5UG Programmes

Department of Computer Engineering

Academic Year : 2025-26	
SUBJECT: **Discrete Mathematics**	
CLASS: SY	SEMESTER: III
ASSIGNMENT NO.: 4	DATE OF SUBMISSION:

Q. No.	Question	Marks	Learning Level	CO	PO	PSO
1	Let A = {1, 2, 3, 4, 6, 8, 12} and let R be the relation on A defined by aRb if and only if "a divides b". • Prove that (A, R) is a partially ordered set. • Draw the Hasse diagram for this relation. • Is this a lattice? Justify your answer by finding the least upper bound (LUB) and greatest lower bound (GLB) for a few pairs (e.g., {4, 6} and {8, 12}).	6	Apply	4	1,5	1,3
2.	Let S = {a, b, c}. Consider the relation R = {(a, a), (a, b), (b, c), (c, a)}. • Represent this relation as a matrix and a directed graph. • Find the reflexive, symmetric, and transitive closures of R.	4	Apply	4	1,5	1,3

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