BIRLA INSTITUTE OF TECHNOLOGY OFF-CAMPUS DEOGHAR, DEPARTMENT OF MATHEMATICS

CLASS: BTech **(1st QUIZ EXAMINATION)** **SESSION : MO/24**

SEMESTER : 3rd BRANCH: CSE

TIME: Scheduled Class Time **SUBJECT: MA 205 DISCRETE MATHEMATICS** **FULL MARKS: 10**

		Marks
Q1.	Verify the law of syllogism by truth table, i.e., show that the proposition $(p \vee q) \wedge (\sim p \vee r) \rightarrow (q \vee r)$ is a tautology	3
Q2.	Obtain the principle disjunctive normal form (DNF) of $p \rightarrow ((p \rightarrow q) \wedge \sim (\sim q \vee \sim p))$	3
Q3.	Show by mathematical induction $6^n - 5n + 4$ is divisible by 5 $\forall n \geq 1$	4

::::: 02/09/2023 :::::