Name:	
Enrolment No:	![UPES logo] UPES UNIVERSITY OF TOMORROW

UPES
End Semester Examination, December 2023

Course: Continuous Integration and Continuous Delivery   Semester: V
Program: B.Tech (CSE-H+NH)-DevOps   Time: 03 hrs.
Course Code: CSDV3009   Max. Marks: 100

Instructions: 1. Attempt all questions. 2. Internal choice is given in Section B and Section C.

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	How to handle code branching and merging in CI?	4	CO1
Q 2	Define the steps involved in setting up a CI environment.	4	CO2
Q 3	List out the difference between SonarLint and SonarQube.	4	CO4
Q 4	Explain the concept of "shift left" in CI/CD.	4	CO3
Q 5	How does chef-apply differ from chef-client?	4	CO2

SECTION B
(4Qx10M= 40 Marks)

Q 6	Explain if SonarQube is a replacement for Checkstyle, PMD and FindBugs.	5 + 5	CO4
Q 7	Explain how rollback mechanisms are implemented in CD.	10	CO2
Q 8	Explain the role of the git annotate command. (Use suitable example).	10	CO4
Q 9	Discuss deployment pipeline and how does it help software development teams? (Justify with example)	5 + 5	CO3
	OR		
	List out difference between Git stash apply and Git stash pop.	10	CO4

SECTION-C
(2Qx20M=40 Marks)

Q 10	Write short notes on following with example; Data Flow Analysis, Control Flow Graph (CFG), Taint Analysis, Lexical Analysis	5+5+5+5	CO4
Q 11	Explain the role of the git config and Git bisect. How does Git bisect help to determine the source of a (regression) bug?	10 + 10	CO4

	OR		
	Explain the two types of pipelines in Jenkins, along with their syntax. How do you create a backup and copy files in Jenkins?	**10 + 10**	**CO2**