

Roll No.



PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations –May/June 2026

Date: 19-05-2026

Time: 09:30am – 12:30pm

School: SOCSE	Program: B.TECH	
Course Code : CDV2501	Course Name: DEVOPS TOOLS INTERNALS	
Semester: IV	Max Marks: 100	Weightage: 50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	24	24	26	26	

Instructions:

- (i) Read all questions carefully and answer accordingly.
(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1.	What is Git repository?	2 Marks	L1	CO1
2.	What is Git branch?	2 Marks	L1	CO1
3.	What is Docker container?	2 Marks	L1	CO2
4.	What is Docker image layer?	2 Marks	L1	CO2
5.	What is Ansible module?	2 Marks	L1	CO3
6.	What is Ansible role?	2 Marks	L1	CO3
7.	Differentiate between Git pull and fetch.	2 Marks	L1	CO3
8.	What is Jenkins node?	2 Marks	L1	CO4
9.	What is Jenkins pipeline?	2 Marks	L1	CO4
10.	Explain purpose of Docker networking.	2 Marks	L1	CO4

Part B

Answer the Questions.

Total Marks 80M

11.	a.	Explain the complete Git workflow in detail. Illustrate how data moves between working directory, staging area, and repository with diagram and commands.	10 Marks	L3	C01
	b.	Compare Git and Git Hub in detail. Discuss their features, differences, and real-world use cases.	10 Marks	L2	C01
Or					
12.	a.	Describe the process of installing Git on Windows and Linux. Include environment configuration and command verification.	10 Marks	L3	C01
	b.	Explain the Git repository structure and file status life cycle. Also demonstrate staging, unstaging, and commit operations with commands.	10 Marks	L2	C01

13.	a.	Explain various Docker operations used to manage containers and images. Illustrate commands like run, start, stop, and remove.	10 Marks	L2	C02
	b.	Explain various Docker operations used to manage containers and images. Illustrate commands like run, start, stop, and remove.	10 Marks	L3	C02
Or					
14.	a.	Explain various Docker operations used to manage containers and images. Illustrate commands like run, start, stop, and remove.	10 Marks	L2	C02
	b.	Discuss best practices for writing efficient Docker files and managing Docker containers in real-world applications.	10 Marks	L3	C02

15.	a.	Explain different types of Ansible modules. Discuss modules such as apt, yum, copy, file, command, lineinfile, and unarchive with examples.	10 Marks	L3	C03
	b.	Describe the use of templates, tags, and debug module in Ansible. Explain how they help in automation and troubleshooting.	10 Marks	L2	C03
Or					
16.	a.	Explain Ansible Vault and its importance in securing sensitive data. Demonstrate basic commands used in Vault.	10 Marks	L3	C03
	b.	Discuss Ansible Tower, AWX, and Ansible Galaxy. Explain their roles in enterprise automation and module sharing.	10 Marks	L2	C03

17.	a.	Explain the steps to create a CI/CD pipeline in Jenkins. Include configuration and execution stages.	10 Marks	L2	C04
	b.	Describe Jenkins pipeline as code. Explain the structure of a Jenkins file with examples.	10 Marks	L3	C04
Or					
18.	a.	Discuss different types of Jenkins pipelines (Declarative and Scripted) with examples and differences.	10 Marks	L2	C04
	b.	Explain best practices for designing efficient CI/CD pipelines in Jenkins for real-world applications.	10 Marks	L3	C04