



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.														
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--

End - Term Examinations –May/June 2026

Date: 19-05-2026

Time: 09:30am – 12:30pm

School: SOIS-PG	Program: MCA	
Course Code: CSA4015	Course Name: DevOps and Micro Services	
Semester: IV	Max Marks: 100	Weightage: 50%

CO - Levels	C01	C02	C03	C04	C05
Marks					

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.	Define DevOps and list its Features.	2 Marks	L1	C01
2.	Write about Continuous Integration process.	2 Marks	L1	C01
3.	What is meant by pipeline as code?	2 Marks	L2	C02
4.	What is a Playbook in Ansible?	2 Marks	L2	C02
5.	State the purpose of the shell module in Ansible?	2 Marks	L2	C02
6.	What is meant by idempotency in Ansible?	2 Marks	L2	C02
7.	State the purpose of git init command?	2 Marks	L1	C03
8.	What is the purpose of git status?	2 Marks	L2	C03
9.	State the purpose of Docker tag?	2 Marks	L1	C04
10.	Explain the purpose of Docker Build command.	2 Marks	L2	C04

Part B

Answer the Questions.

Total Marks 80M

11.	a.	Explain Microservices Architecture and its main Components with a neat diagram.	10 Marks	L2	CO1
	b.	Develop a Jenkins CI/CD pipeline for build and deployment of a Java application using Jenkins and Git.	10 Marks	L3	CO1
Or					
12.	a.	Describe DevOps in detail. Explain its need, usage, and applications.	10 Marks	L2	CO1
	b.	Define a CI/CD pipeline. Demonstrate how to create a pipeline in Jenkins using YAML format with standard stages such as build, test, and deploy.	10 Marks	L3	CO1
13.	a.	Demonstrate Ansible Galaxy and role-based automation with suitable example.	10 Marks	L3	CO2
	b.	Demonstrate Ansible Modules such as apt, yum, copy, file, and command with suitable example.	10 Marks	L3	CO2
Or					
14.	a.	Demonstrate Ansible Roles, Variables, and Tags in detail.	10 Marks	L3	CO2
	b.	Illustrate Ansible ad-hoc commands with suitable examples.	10 Marks	L3	CO2
15.	a.	Explain all basic Git commands used for local repository operations.	10 Marks	L2	CO3
	b.	Illustrate the difference between git add, git commit, and git push.	10 Marks	L3	CO3
Or					
16.	a.	Demonstrate the process of creating a repository and making the first commit with required git commands.	10 Marks	L2	CO3
	b.	Demonstrate the process of cloning, pulling, and pushing changes in Git.	10 Marks	L3	CO3
17.	a.	Describe the architecture and working of Docker process.	10 Marks	L2	CO4
	b.	Demonstrate multi-stage Dockerfile with a practical example and also explain its advantages.	10 Marks	L3	CO4
Or					
18.	a.	Describe how to push and pull Docker images using Docker Hub. Illustrate the process with suitable examples.	10 Marks	L2	CO4
	b.	Compare Docker images, containers, and volumes with practical scenarios.	10 Marks	L3	CO4