



Roll No

**PRESIDENCY UNIVERSITY  
BENGALURU**

**School Of Computer Science and Engineering & Information Science**

**End-Term Examinations, Aug 2024**

**Odd Semester:** 2023 - 24

**Course Code:** CSA1007

**Course Name:** Introduction to DevOps

**Department:** SOIS

**Date:** 05-08-2024

**Time:** 9:30 AM – 12:30 AM

**Max Marks:** 100

**Weightage:** 50%

**Instructions:**

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

Q. No	Questions	Marks	CO	RBT
1	a. Define DevOps. Summarize the Objectives of DevOps.	4	CO1	L1
	b. Name the tools used in configuration management and write short notes on those tools.	6	CO1	L2
	c. Explain the architecture of the DevOps with a neat diagram.	10	CO1	L3

OR

2	a. Define DevOps. Summarize the Objectives of DevOps.	4	CO1	L1
	b. List the fundamental differences between Waterfall Model & Agile model and explain briefly.	6	CO1	L2
	c. Geetha is CEO of a company which has got a new project for developing a software for managing complete process of insurance using DevOps. Help her by suggesting the tools available for every phase of the DevOps to complete the project efficiently and successfully.	10	CO1	L3

3	a. Which git command is used to move the code from staging area to local repository? Write the syntax of the same command.	4	CO2	L1
	b. Sophy has done a code commit wrongly and made it public. Help her to revert the commit by outlining the command used for this.	6	CO2	L2
	c. The project team has completed the project development and delivered the source code to the customer and the copy of the source code is available in the team leader's GitHub account. The customer has come up with enhancements to that project and asked to implement the same. The team leader asked you to work on the enhancements, and also he asked to include another member from your team to work on this enhancement. Demonstrate the procedure in detail like how you and your team member will share the code and work together on this enhancement.	10	CO2	L3

OR

4	a. Write the syntax of git fetch and git pull. List the key differences between these 2 commands.	4	CO2	L1
	b. Demonstrate the architecture of GIT with a neat diagram and necessary git commands.	6	CO2	L2
	c. Thara wants to create a new repository in Git by adding 2 new source files 'add.java' and 'subtract.java'. This directory must be uploaded onto the GitHub link 'https://github.com/thara/calculator.git' for further sharing with all team members. Explain all the necessary steps and commands used for this task.	10	CO2	L3
5	a. What is Jenkins? List the primary purpose of Jenkins.	4	CO3	L1
	b. Illustrate the Parent and Child Builds & Sequential Builds (Jenkins Build Pipe Line) with examples.	6	CO3	L2
	c. Define workspace. Explain how the workspace is managed in Jenkins.	10	CO3	L3

OR

6	a. What is the purpose of static code analysis tools in the CI/CD pipeline?	4	CO3	L1
	b. Describe a real-world scenario where Jenkins was successfully implemented for continuous integration.	6	CO3	L2
	c. Demonstrate the two different ways of scheduling build jobs in Jenkins.	10	CO3	L3
7	a. What is meant by the term 'Dependencies and Repositories' in Maven?	4	CO4	L1
	b. Discuss the benefits of using Maven as a build automation tool in software development projects.	6	CO4	L2
	c. Demonstrate the role of Apache Maven in modern software development practices. Identify its key features and advantages.	10	CO4	L3

OR

8	a. Differentiate virtualization and containerization.	4	CO4	L1
	b. Identify the difference between Docker Container and Docker Image.	6	CO4	L2
	c. Ramesh wants to use Docker in his upcoming project and he is not well-versed in Docker. Demonstrate to him the architecture of Docker with a complete explanation on Docker Engine, containers, images, and registries.	10	CO4	L3

9	a. What is the role of the Jenkins master?	4	CO3	L1
	b. List the different ways of creating Jenkins job and explain in detail.	6	CO3	L2
	c. What are plugins? Explain the process of installing and managing plugins in Jenkins.	10	CO3	L3

OR

10	a. What is POM? List the role of POM	4	CO4	L1
	b. What is a Maven Repository? Explain the different repositories in Maven.	6	CO4	L2
	c. Explain briefly on components of Docker.	10	CO4	L3