Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – December 2025

Date: 11 – 12- 2025 **Time:** 01:00pm – 04:00pm

School: SOCSE	**Program:** B.Tech CST-CDV	
Course Code: CDV3402	**Course Name:** Serverless Computing	
Semester: VII	**Max Marks**: 100	**Weightage**: 50%

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

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 the Questions. Each question carries 2marks. 10Q x 2M=20M

1.	Define the terms statelessness, automated scaling and Orchestration.	**2 Marks**	**L2**	**CO1**
2.	Define Serverless architecture.	**2 Marks**	**L1**	**CO1**
3.	Illustrate the Event-Driven Architecture. How it is related with FaaS?	**2 Marks**	**L2**	**CO1**
4.	What is a container? Explain cold start & warm start w.r.t a container.	**2 Marks**	**L1**	**CO2**
5.	Name any three cloud platforms and their use in serverless computing.	**2 Marks**	**L1**	**CO2**
6.	Define cross platform tools in serverless computing with an example.	**2 Marks**	**L2**	**CO3**
7.	What is a handler function/code? Write the signatures of handler code on different runtimes.	**2 Marks**	**L2**	**CO3**
8.	Explain the use of Docker in serverless functions.	**2 Marks**	**L1**	**CO3**
9.	Rephrase the use cases of serverless functions in Real-Time Data Analytics.	**2 Marks**	**L1**	**CO4**
10.	Define ChatOps. List the use of serverless functions in building ChatOps.	**2 Marks**	**L2**	**CO4**

Part B

Answer the Questions. **Total Marks 80M**

11.	**a.**	Outline the key considerations and tradeoffs in serverless computing.	**5 Marks**	**L2**	**CO1**
	b.	Identify the benefits and challenges of serverless computing.	**5 Marks**	**L2**	**CO1**
	c.	Compare FaaS and BaaS. List the key differences between them.	**10 Marks**	**L4**	**CO1**
OR					
12.	**a.**	Compare and contrast the traditional (VM-based) and serverless models.	**5 Marks**	**L4**	**CO1**
	b.	Identify key characteristics of serverless architecture.	**5 Marks**	**L3**	**CO1**
	c.	Explain key components of serverless architecture.	**10 Marks**	**L2**	**CO1**

13.	**a.**	Identify how stateless functions, timeouts & cold starts related to each other.	**5 Marks**	**L3**	**CO2**
	b.	Identify the common patterns & internal consideration of FaaS platform.	**5 Marks**	**L3**	**CO2**
	c.	With a neat diagram explain serverless life-cycle with API gateway.	**10 Marks**	**L2**	**CO2**
OR					
14.	**a.**	With a neat sketch explain FaaS integration with event driven architecture.	**5 Marks**	**L2**	**CO2**
	b.	Create a http function trigger using serverless function on GCP.	**5 Marks**	**L3**	**CO2**
	c.	Organize the step by step working of a serverless web application using AWS.	**10 Marks**	**L4**	**CO2**

15.	**a.**	Summarize the different cross-platform tools and their uses.	**5 Marks**	**L2**	**CO3**
	b.	Categorize at least 5 deployment technologies used in Aure functions.	**5 Marks**	**L4**	**CO3**
	c.	Construct the basic structure of serverless.yml file.	**10 Marks**	**L3**	**CO3**
OR					

16.	**a.**	Develop a function in JavaScript to implement any one scenarios of Azure functions are used.	**5 Marks**	**L3**	**CO3**
	b.	Analyze Docker container deployment method in Azure functions.	**5 Marks**	**L4**	**CO3**
	c.	Outline the architecture of terraform with a neat diagram.	**10 Marks**	**L3**	**CO3**

17.	**a.**	Develop a function in python for providing security using Serverless functions.	**5 Marks**	**L3**	**CO4**
	b.	Categorize the uses of serverless functions for data analytics.	**5 Marks**	**L4**	**CO4**
	c.	With a diagram explain the CloudWatch.	**10 Marks**	**L2**	**CO4**
OR					
18.	**a.**	Categorize Serverless Use Cases of Monitoring using OpenTelemetry.	**5 Marks**	**L4**	**CO4**
	b.	Summarize Serverless Use Cases of Monitoring with AWS X-Ray	**5 Marks**	**L2**	**CO4**
	c.	Identify the components of Stackdriver (Google Cloud Operations Suite) with diagram.	**10 Marks**	**L3**	**CO4**