Roll No: | | | | | | | | | | | |

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

PRESIDENCY UNIVERSITY

Presidency University Act, 2013 of the Karnataka Act No. 41 of 2013 | Established under Section 2(f) of UGC Act, 1956
Approved by AICTE, New Delhi | Approved By BCI
Bengaluru

Mid Term Examinations - October 2026

Date: 05/10/2026 **Time:** 09:30 AM - 11:00 AM

Course Code: CBD3404 **Course Name:** Cloud-Based Big Data Architecture and Optimization

Semester: Fifth Semester **Max. Marks:** 50 **Weightage:** 50%

CO - Levels	CO1	CO2
Marks	46	44

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	Define Apache Spark.	2	CO1	BT1
2	Differentiate between Hadoop and Spark.	2	CO1	BT2
3	What is a Data Lake?	2	CO1	BT1
4	Define serverless computing.	2	CO2	BT1
5	What is AWS Lambda?	2	CO2	BT1

PART B : Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
6	Describe about the Publisher–Subscriber model, its components, working, and applications.	10	CO1	BT2
7	Explain Kappa Architecture with a neat diagram. Compare it with Lambda Architecture.	10	CO1	BT2

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	Explain Lambda Architecture with a neat diagram. Discuss its batch, speed, and serving layers.	10	CO1	BT2
9	Explain the architecture of a cloud-based Big Data processing system with a neat diagram.	10	CO1	BT2

PART D: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
10	Explain serverless computing and discuss the architecture and working of AWS Lambda.	10	CO2	BT2
11	Discuss about the Google Cloud Dataflow architecture and working with a neat diagram.	10	CO2	BT2

PART E: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT

12	Explain Apache NiFi architecture, components, and working with a neat diagram.	10	CO2	BT2
13	Compare Apache NiFi and Apache Airflow based on architecture, functionality, and applications.	10	CO2	BT2