

Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, May 2023			
Course: Real World Scalable Architecture Program: B.Tech CSE-SPZ-BD Course Code: CSBD4003		Semester: VIII Time: 03 hrs. Max. Marks: 100	
SECTION A (5Qx4M=20Marks)			
Instructions: Explain in short. (60-70 words)			
S. No.		Marks	CO
Q 1	Elaborate the role of data ingestion and extraction in case of BigData architecture.	4	CO1
Q 2	How and why Serving Layer in Lambda architecture?	4	CO2
Q 3	Sensors and Actuators are tiny devices and essential components of IoT architecture. Justify.	4	CO3
Q 4	How the implementation of distributed file systems in case of Zeta architecture be done?	4	CO3
Q 5	Discuss the concept of sensing and networking layer in case of an IOT devices with suitable examples.	4	CO4
SECTION B (4Qx10M= 40 Marks)			
Instruction: Write brief notes. (100-150 words)			
Q 6	Data scientists break the Big Data in 4 Vs. Briefly compare and relate all 4 Vs.	10	CO1
Q 7	Elaborate the design goals in case of Lambda architecture with suitable example.	10	CO1
Q 8	Give a detailed overview of Zeta architecture. Discuss the use case of CEP on streams. <p style="text-align: center;">OR</p> A scalable architecture is one that can be easily adapted to handle increased workloads. Appraise how the data management is taken care in Scalable Architecture.	10	CO2

Q 9	Differentiate Airbnb Architecture and Pinterest Architecture with the suitable diagram.	10	CO2
SECTION-C (2Qx20M=40 Marks) Instruction: Write long answer. (Up to 350 words while explaining)			
Q 10	<p>With the suitable examples explain the scalable architecture of the following top tech companies.</p> <p>i. Facebook ii. Netflix</p> <p style="text-align: center;"><i>OR</i></p> <p>Elaborate on the implementation of IoT architecture and its usage in case of real time analytics.</p>	20	CO4
Q 11	Provide a detailed overview of Kappa architecture of “LinkedIn” use case scenario.	20	CO3