

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination, Dec 2020

Course: Stream Processing	Semester: VII
Program: B.Tech CSE-SPZ-BD	Time: 03 hrs.
Course Code: CSBD4001	Max. Marks: 100

Instructions:

SECTION A

1. Each Question will carry 5 Marks
2. Instruction: Complete the statement / Select the correct answer(s)

S. No.		Marks	CO
Q1	Batch processing helps to _____? Select one: a. Reduce the number of discrete I/O events b. Save network bandwidth c. Execute jobs in non-stop and sequential order d. All of the above	5	CO1
Q2	In Direct Approach of Spark & Kafka Integration, Kafka is periodically queried for the latest offsets in each topic+partition and accordingly define the offset ranges to process in each batch? Select one: a. True b. False	5	CO2
Q3	In stateful stream processing, _____ a. State is shared between events b. Past events cannot influence the way current events are processed c. Both a and b d. None of the above	5	CO3
Q4	In push based approach of Flume & Spark integration, Spark Streaming sets up a receiver that acts an Avro agent for Flume to which Flume can push the data? Select one: a. True b. False	5	CO4

Q5	Kafka platform is _____? Select one: a. Scalable, low performance & low latency platform b. Scalable, high performance, low latency platform c. Scalable, high performance, high latency platform d. All of the above	5	CO4
Q6	Real time processing allows _____? a. To feed data into analytics tools as soon as they get generated b. To get instant analytics results c. Both a & b d. None of the above	5	CO1
SECTION B			
1. Each question will carry 10 marks 2. Instruction: Write short / brief notes			
Q7	Differentiate between Batch and Real Time data processing with suitable example.	10	CO1
Q8	What are DStreams? Explain in detail with the help of an example.	10	CO2
Q9	What is real time streaming ETL? Explain.	10	CO3
Q10	Discuss Apache Flume architecture along with its benefits.	10	CO4
Q11	What are the scaling challenges in Stateful Stream Processing? Discuss	10	CO2
SECTION-C			
1. Each Question carries 20 Marks. 2. Instruction: Write long answer.			
Q12.	Explain the integration of Apache Flume with MongoDB with a suitable example	20	CO4