Reg. No.															

Question Paper Code	12866

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Fifth Semester

Information Technology

20ITPC502 - BIG DATA ESSENTIALS

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	What is Unstructured data?	2	K1	CO1
2.	What are the main features of a Big Data Analytics?	2	K1	CO1
3.	Define Hadoop.	2	K1	CO2
4.	What is an Avro? Write the uses of Avro.	2	K1	CO2
5.	List the Phases of Map-Reduce.	2	K1	CO3
6.	What are the components of Map-Reduce Architecture?	2	K1	CO3
7.	State the need for HIVE in Facebook.	2	K1	CO4
8.	Who developed Apache PIG and the reason for which it is developed?	2	K1	CO4
9.	Define Spark and API used.	2	K1	CO5
10.	Differentiate Spark with Hadoop.	2	K2	CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

			Marks	K – Level	CO
11.	a) i)	Relate how can Big Data add value in Marketing?	7	K2	CO1
	ii)	Summarize the risks of Big Data.	6	K2	CO1
		OR			
	b)	Discuss various V's of Big Data with suitable examples.	13	K2	CO1
12.	a)	Explain the different design approaches in Hadoop.	13	K2	CO2
		OR			
	b)	Explain about Hadoop I/O- Compression- Serialization- Avro and File-Based Data structures.	13	K2	CO2
13.	a)	How Map Reduce works? Describes the anatomy of Map Reduce Job working with suitable example.	13	K2	CO3
		OR			

	b)	Describe in detail about YARN and Discuss about YARN job scheduling types in detail.	*13*	*K2*	*CO3*
14.	a)	Compare and Contrast HIVE, PIG, SQL also list their benefits in detail.	*13*	*K2*	*CO4*
		OR			
	b)	Brief the following:- 1. Column Oriented Database 2. Row Oriented Database Compare and contrast the same.	*13*	*K2*	*CO4*
15.	a)	Explain in detail about SPARK API its applications, features and characteristics.	*13*	*K2*	*CO5*
		OR			
	b)	Explain Spark architecture; Write a simple API application with steps of compilation.	*13*	*K2*	*CO5*

PART - C (1 × 15 = 15 Marks)

16.	a)	Explain in detail about GPU Architecture. List out the features GPU better than CPU.	*15*	*K2*	*CO6*
		OR			
	b)	Develop a C program to swap two numbers and use this host variable in device variable in CUDA program for swapping of two numbers. Write the steps of conversion.	*15*	*K3*	*CO6*