

7E1824

Roll No. _____

Total No. of Pages: **2****7E1824****B. Tech. VII - Sem. (Main / Back) Exam., - 2024****Information Technology****7IT4-01 Big Data Analytics****AID, IT****Time: 3 Hours****Maximum Marks: 70***Instructions to Candidates:*

Attempt all ten questions from Part A, five questions out of seven questions from Part B and three questions out of five questions from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL2. NIL**PART – A****[10×2=20]****(Answer should be given up to 25 words only)****All questions are compulsory**

- Q.1 What is Big Data?
- Q.2 Summarize the data types for big data.
- Q.3 Define HDFS.
- Q.4 What is advantage of MapReduce?
- Q.5 Define Clustering.
- Q.6 What is Scaling out?
- Q.7 What is PIG?
- Q.8 Define Hive.
- Q.9 Define Data Node in HDFS.
- Q.10 What are Custom comparators?

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PART – B

[5×4=20]

(Analytical/Problem solving questions)

Attempt any five questions

- Q.1 Classify the components of Hadoop framework.
- Q.2 Explain MapReduce with the help of example.
- Q.3 Describe briefly about Hadoop Input and output and write a note on Data Integrity.
- Q.4 Explain the PIG Latin data types and examples.
- Q.5 Illustrate main features and architecture of Hive with neat diagram.
- Q.6 Explain the concept of 3V's of big data.
- Q.7 Explain in detail about the PIG architecture.

PART – C

[3×10=30]

(Descriptive/Analytical/Problem Solving/Design Questions)

Attempt any three questions

- Q.1 Explain core architecture of Hadoop with suitable block diagram. Discuss role of each component in detail.
- Q.2 Write and explain in detail the concept of developing the MapReduce Application.
- Q.3 Explain HDFS operation in detail also describe Namenode, Datanode and block.
- Q.4 Explain the operators supported by PIG with respect to Data Access, Transformations and Debugging operations. Also describe local and distributed modes of running PIG Scripts.
- Q.5 Analyze the use of Hive in details. How does Hive Interact with Hadoop explain in detail? Also explain the Hive data Manipulation, Queries and data definition.