

**B.Tech. VIII Sem. (Main/Back) Examination, June - 2022**  
**Computer Sc. & Engg.**  
**8CS4-01 Big Data Analytics**

**Time : 3 Hours**

**Maximum Marks : 120**  
**Min. Passing Marks : 42**

**Instructions to Candidates:**

*Attempt all ten questions from Part A, five questions out of Seven from Part B and Four questions out of Five 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)*

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**PART - A**

(Answer should be given up to 25 words only)

**All questions are compulsory.**

- ①. What are the three V's of Big data?
- ②. What is Hadoop API.
- ③. Why Hadoop is used in Big data analytics?
- ④. Differentiate between combiner and partitioner. ✓
- ⑤. Differentiate between object writable and generic writable? ✓
- ⑥. What is google file system. ✓
7. What is Driver code. X -
- ⑧. Explain Pig Script Interfaces. ✓ script  
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9. List some issues and challenges in data stream query processing. X
- ⑩. What is Hive data manipulation language? ✓

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Most (10×2=20)  
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## PART - B

(Analytical/Problem solving questions)

Attempt any Five questions.

(5×8=40)

- ①. What is HDFS? List all the components of HDFS and explain any four components. ✓
- ②. What is the role of a "combiner" in the map reduce framework? Explain with the help of one example. ✓
- ③. How can implementing a Row comparator for speed? ✓
- ④. How can creating and managing databases and tables? Explain it. ✓
- ⑤. Explain the principles to be considered while writing pig scripts. ✓
- ⑥. Explain the application flow of pig latin. ✓ *Load Map Join*
- ⑦. Explain the creating, dropping and altering databases using APACHE Hive. ✓

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## PART - C

(Descriptive/Analytical/Problem Solving/Design questions)

Attempt any Four questions.

(4×15=60)

- ①. Explain HDFS architecture with diagram.
- ②. Explain the building blocks of Hadoop. Draw the block diagram and explain all the blocks separately. Also draw the flow diagram of building blocks of Hadoop.
- ③. Write the Java code for MAP and REDUCE of word count problem. Describe the steps of compiling and removing the map reduce program. ✓
- ④. Explain the working through the ABC's of Pig data. How can check out the pig script interfaces.
- ⑤. What are Wrapper classes? List and explain wrapper classes available for primitive types?