

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FOURTH SEMESTER REGULAR AND SECOND SEMESTER SECOND YEAR DIRECT
MCA DEGREE EXAMINATION(R&S), MAY 2019

Course Code: RLMCA204

Course Name: BIG DATA TECHNOLOGIES

Max. Marks: 60

Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks.

Marks

- | | | |
|---|---|-----|
| 1 | Illustrate any three layers of Big Data stack. | (3) |
| 2 | Discuss the role of NoSQL database in big data storage. | (3) |
| 3 | Write short notes on Brewer's theorem. | (3) |
| 4 | Explain the architecture of Hive in Hadoop ecosystem. | (3) |
| 5 | How map and reduce function is acting inside map reduce framework. | (3) |
| 6 | Distinguish NewSQL database from NoSQL. | (3) |
| 7 | List out the appropriate conditions for using IMDG storage devices. | (3) |
| 8 | Differentiate Quantitative and Qualitative analysis. | (3) |

PART B

Each question carries 6 marks.

Module I

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|---|---|-----|
| 9 | Illustrate the computing technologies used for handling big data. | (6) |
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OR

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| 10 | List out and explain the features of cloud computing. | (6) |
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Module II

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| 11 | Explain big data processing method in real time mode. | (6) |
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OR

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| 12 | Write short notes on the following. | (6) |
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i) Sharding

ii) Replication

Module III

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| 13 | Illustrate and explain HBase architecture. | (6) |
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OR

- 14 Explain how Hadoop Yarn improves high availability and scalability of Hadoop computing cluster. (6)

Module IV

- 15 Explain working of MapReduce framework with an example. (6)

OR

- 16 Explain the techniques for optimizing MapReduce job. (6)

Module V

- 17 Discuss the various approaches used by IMDG to improve read/write performance. (6)

OR

- 18 Write short notes on (6)
- i)RDBMS
 - ii)NoSQL
 - iii)NewSQL

Module VI

- 19 Explain statistical analysis and its types. (6)

OR

- 20 Describe various visual analysis techniques used for data analysis. (6)
