

CBCS Scheme

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16MCA452

Fourth Semester MCA Degree Examination, June/July 2018 Big Data Analytics

Time: 3 hrs.

Max. Marks: 80

Note: Answer FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. Describe any four characteristics (4V_s) of big data. (04 Marks)
b. Discuss the applications of big data analytics. (04 Marks)
c. With a neat diagram, describe the working of analytical processing model. (08 Marks)

OR

- 2 a. Mention the different types of data sources for big data analytics. Explain. (04 Marks)
b. Calculate the Z-scores and detect the outlier for the following data. Where mean $\mu = 40$ and standard deviation $\sigma = 10$. Data = 30, 50, 10, 40, 60, 80. (04 Marks)
c. List the various factors required for analytical model and explain. (08 Marks)

Module-2

- 3 a. Discuss the critical components of Hadoop and their working along with a neat diagram. (08 Marks)
b. What is predictive analysis? Why are they required? Discuss the leading trends of predictive analysis. (08 Marks)

OR

- 4 a. List and explain the technical features of Hadoop. (08 Marks)
b. Write a brief note on:
i) Crowd sourcing
ii) Mobile business intelligence. (08 Marks)

Module-3

- 5 a. Explain the various open source technologies of Hadoop ecosystem. (08 Marks)
b. Discuss the difficulties of implementing storage and analysis support for big data. (08 Marks)

OR

- 6 a. List the differences between Map Reduce and RDBMS. (08 Marks)
b. Write a short note on:
i) Volunteer computing
ii) Grid computing. (08 Marks)

Module-4

- 7 a. What is a memory block in HDFS? Explain block report, replication factor and rack awareness with respect to data node. (08 Marks)
b. Discuss any four HDFS commands. (08 Marks)

1 of 2

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

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OR

- 8 a. Explain the architectural changes that are needed while replacing active name node with stand by name node. (08 Marks)
b. With a neat diagram, explain the anatomy of reading data from a file in HDFS. (08 Marks)

Module-5

- 9 a. What is Map Reduce? Sketch a neat diagram and explain the logical data flow in Map Reduce. (08 Marks)
b. Write a short note on:
i) Map Reduce UI
ii) Hadoop logs. (08 Marks)

OR

- 10 a. Write a Java Map Reduce code to find maximum temperature from the weather data set. (08 Marks)
b. How does a Map Reduce model works with a single reduce task? Explain with a neat diagram. (08 Marks)

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