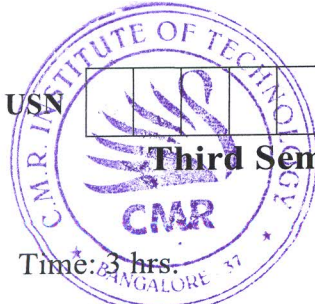


# CBGS SCHEME

20MCA352



## Third Semester MCA Degree Examination, June/July 2023 Big Data Analytics

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. What is Big data? Describe the characteristics (4vs) of Big data. (10 Marks)
- b. Describe the working of analytical processing model with a neat diagram. (10 Marks)

OR

- 2 a. Explain the very important steps in dealing with outliers. (10 Marks)
- b. Write the different types of data sources and data elements of the Big data. (10 Marks)

### Module-2

- 3 a. Illustrate on how Cloud and Big Data related with each other. (10 Marks)
- b. What is Crowd sourcing Analytics? Why is it needed? (10 Marks)

OR

- 4 a. Explain how Mobile Business intelligence is going Mainstream. (10 Marks)
- b. Describe Inter and trans Firewall analytics with a neat diagram. (10 Marks)

### Module-3

- 5 a. List the differences between Map Reduce and RDBMS. (10 Marks)
- b. List and explain briefly the Hadoop different projects. (10 Marks)

OR

- 6 a. Explain the various Open source technology of Hadoop eco system. (10 Marks)
- b. Briefly explain the following : (10 Marks)
  - i) Grid computing
  - ii) Volunteer computing.

### Module-4

- 7 a. Explain the architectural changes that are needed while replacing active name nodes with standby name node. (10 Marks)
- b. Explain the sequence of events that take place when writing a file to HDFS with a neat diagram. (10 Marks)

OR

- 8 a. Write the anatomy of reading data from a file in HDFS with a neat diagram. (10 Marks)
- b. Explain HDFS concepts : i) Blocks ii) Namenode and Datanode (10 Marks)
  - iii) HDFS federation
  - iv) HDFS high availability.

### Module-5

- 9 a. What is Map Reduce? Explain Logical data flow in Map Reduce with a neat diagram. (10 Marks)
- b. Explain how components in Hadoop are configured. (10 Marks)

OR

- 10 a. Describe the combiner functions in Hadoop. (10 Marks)
- b. Define Hadoop pipes. Write the source code for the map and reduce function in C++ to find maximum temperature. (10 Marks)

CMRIT LIBRARY  
BANGALORE - 560 037

\*\*\*\*\*

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.