Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

III SEMESTER MCA

END SEMESTER EXAMINATIONS, DEC 2020

SUBJECT: BIG DATA ANALYTICS [MCA 5026]

REVISED CREDIT SYSTEM
(04/01/2021)

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer **ALL** the questions.
- Missing data may be suitable assumed.

1A.	Explain the 4 V's of Big Data with suitable examples.	**5**
1B.	Compare and Contrast the functions of following: i. Name Node vs. Data Node. ii. Job tracker vs. Task Tracker iii. Name Node vs. Secondary Name Node	**3**
1C.	How does Real-Time Analytics Processing (RTAP) differ from OLAP? Give examples.	**2**
2A.	Explain with a neat diagram the features of the Distributed File Systems.	**5**
2B.	How do Big Data frameworks support fault tolerance?	**3**
2C.	What are the various sources of Internet data for Big Data applications?	**2**
3A.	Explain the Hadoop Eco System with a neat diagram.	**5**
3B.	List and Explain the various mathematical algorithms supported in Map Reduce.	**3**

3C.	How does Big data analytics differ from traditional data analytics? Give examples.	2
4A.	With a neat diagram explain the working of a write operation in HDFS.	5
4B.	With suitable examples, describe the limitations of Map Reduce?	3
4C.	What is data parallelism? How is it achieved in Map Reduce?	2
5A.	Explain the components of Apache Spark with a neat diagram	5
5B.	How are sparse data types represented in Spark represented in MLLib?	3
5C.	List and describe the two dæmons running on YARN?	2