

GYANMANJARI INNOVATIVE UNIVERSITY

GYANMANJARI INSTITUTE OF TECHNOLOGY

B.Tech.-Mid Semester Examination (MSE)-W2026

Enrollment No.: _____

Subject Code: BETCE16403

Date: 24-09-2026

Subject Name: Big Data Management

Semester: 07

Time: 02:30 PM To 04:30 PM

Total Marks: 60

Instructions:

1. Question No. 1 is compulsory.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		Marks
Q.1	(a) Enlist the major sources of Big Data. Explain any three.	05
	(b) Explain the functions of NameNode and DataNode in HDFS.	05
	(c) Explain the MapReduce programming model with a suitable example.	10
Q.2	(a) Write a short note on social-media and sensor data as sources of Big Data.	05
	(b) Differentiate between HDFS and a traditional file system.	05
	OR	
	(b) Explain the key-value data model with a suitable example.	05
	(c) What is data replication in HDFS? Explain the significance of the replication factor.	10
	OR	
	(c) Explain the Map, Shuffle and Sort, and Reduce phases of MapReduce with a neat diagram.	10
Q.3	(a) Explain the document data model with a suitable example.	05
	(b) Justify the need for Big Data Management in healthcare or smart-city applications.	05
	(c) Explain the different types of NoSQL databases with suitable examples.	10
	OR	
Q.3	(a) Select suitable storage systems for transaction data, sensor data and multimedia data. Justify your answer.	05
	(b) A company performs iterative analysis on a large dataset. Select MapReduce or Spark and justify your answer.	05
	(c) What is NoSQL? Explain the need and important features of NoSQL databases in Big Data.	10