Code No.: AD601PC | R20 | H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–II–Semester End Examinations (Regular) - June- 2024
BIG DATA ANALYTICS
(AI&DS)

[Time: 3 Hours] **[Max. Marks: 70]**

Note: This question paper contains two parts A and B.
Part A is compulsory and carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, and c as sub-questions.

PART-A **(20 Marks)**

1. a)	Enlist the features of Big Data.	[2M]
b)	List the Components of Hadoop.	[2M]
c)	Illustrate the main phases of MapReduce.	[2M]
d)	What is name node in HDFS?	[2M]
e)	How does Map Reduce work?	[2M]
f)	What decides the number of mappers in a MapReduce job?	[2M]
g)	Is Hive a database? Justify your answer.	[2M]
h)	What is HIVE?	[2M]
i)	What is MapReduce?	[2M]
j)	What is HBase in big data?	[2M]

PART-B **(50 Marks)**

2.a)	Explain the characteristics of Big Data.	[5M]
b)	What are the benefits of Big Data? Discuss challenges under Big Data. How Big Data Analytics can be useful in the development of smart transport.	[5M]
	OR	
3.a)	Describe the Hadoop Ecosystem in detail.	[5M]
b)	How to Configure the Hadoop cluster? Explain.	[5M]
4.	Define HDFS. Discuss the HDFS architecture in detail.	[10M]
	OR	
5.a)	Explain the architecture of the Hadoop Distributed File System in detail.	[5M]
b)	Explain Processing Data with Hadoop in detail.	[5M]
6.	How does MapReduce work? Explain in detail.	[10M]
	OR	
7.	List and explain MapReduce types and formats in detail.	[10M]
8.a)	Explain the Architecture of HIVE and Features of HIVE.	[5M]
b)	Explain HIVE Data types and file Formats.	[5M]
	OR	
9.	What is a PIG? Explain its features and Architecture.	[10M]
10.a)	Differentiate SQL and NoSQL.	[5M]
b)	Discuss the importance of MongoDB. Explain the Data types supported by Mongo DB.	[5M]
	OR	
11.a)	Why NOSQL and where it is used?	[5M]
b)	Discuss i) document-orient ii) graph-based databases	[5M]

****