Department of Artificial Intelligence and Machine Leaning

Date: 28.04.2025	Test - 1	Max. Marks: 50+10
Semester: VI	UG	Duration: $1\frac{1}{2}$ Hrs + ½ Hr
Course Title: Big Data Technologies		Course Code: AI362IA

Sl No	Questions	M	BT	CO
1.	What is the role of Name node in HDFS	2	2	1
2.	How does Hadoop handle read consistency in a distributed environment?	2	2	1
3.	What is the role of the Namenode in a read operation in Hadoop?	2	2	1
4.	Define fencing in High Availability?	2	2	1
5.	Define data locality Optimization	2	2	1
PART- B				
1(a)	Summarize the different characteristics of Big Data	5	2	1
1(b)	Why are distributed systems essential for modern data storage and analysis?	5	2	1
2(a)	Define HDFS? Examine the applications for which HDFS does not work?	2+4	2	1
2(b)	Explain the roles of the two types of nodes functioning in the master–worker architecture of HDFS.	4	2	2
3	HDFS is built write-once, read-many-times pattern. Justify this statement through write operation?	10	2	2
4(a)	How does the Combiner function contribute to optimization in data processing?	5	2	2
4(b)	Why is it necessary to have multiple partitions during the reducer phase in data	5	2	2
5	Write a Map Reduce program using Java to find word count for a given text file?	10	3	2