

D 141107**(Pages : 2)****Name.....****Reg. No.....****FOURTH SEMESTER B.VOC. DEGREE EXAMINATION, APRIL 2026**

Data Science and Analytics

SDC 4DS 18—BIG DATA TECHNOLOGIES

(2021 Syllabus)

Time : Two Hours and a Half

Maximum : 80 Marks

Section A (Short Answer Type Questions)

*All questions can be answered, each correct answer carries a maximum of 2 marks.
Ceiling 25 marks.*

1. Define Big Data.
2. What is Data Management ?
3. List any *two* elements of Big Data.
4. What is a Cluster ?
5. Define NoSQL database.
6. What is Replication ?
7. What is Hadoop ?
8. Define Batch Processing.
9. Expand HDFS.
10. What is YARN ?
11. What is Hive used for ?
12. Define Map function.
13. What is Reduce function ?
14. What is an On-Disk storage device ?
15. What is an In-Memory database ?

Turn over

Section B (Paragraph Type Questions)

*All questions can be answered, each correct answer carries a maximum of 5 marks.
Ceiling 35 marks.*

16. Explain the history of data management briefly.
17. Describe Distributed Computing.
18. Explain Sharding with an example.
19. Write short notes on CAP Theorem.
20. Explain the architecture of HDFS.
21. Describe the features of MapReduce.
22. Explain the role of Flume in Hadoop ecosystem.
23. Differentiate RDBMS and NoSQL databases.

Section C (Essay Type Questions)

*Answer any **two** questions, correct answer carries 10 marks.*

24. Explain Big Data Stack and its components.
25. Describe the Hadoop ecosystem and its major tools.
26. Explain the working of MapReduce framework.
27. Discuss different Big Data Storage Technologies.

(2 × 10 = 20 marks)