

| Name:   |   |                 |               |  |  |
|---|---|-----------------|---------------|--|--|
| Enrolment No:   |   |                 |               |  |  |
|   |   |                 |               |  |  |
| UNIVERSITY OF PETROLEUM AND ENERGY STUDIES  |   |                 |               |  |  |
| End Semester Examination, May 2022 Course: Big Data Storage Semester: IV                                      |   |                 |               |  |  |
| Program: B.Tech-CSE-BD  |   |                 | Time: 03 hrs. |  |  |
| Course Code: CSBD 2004  |   | Max. Marks: 100 |               |  |  |
| Instructions: Explain in short. (60-70 words)   |   |                 |               |  |  |
| SECTION A<br>(5Qx4M=20Marks)  |   |                 |               |  |  |
| S. No.  | (c <b>L</b> . 1012  | Marks           | СО            |  |  |
| Q 1   | Explain the term Big Data Storage in detail.  | 4               | CO1           |  |  |
| Q 2   | Difference between NoSql and RDBMS.   | 4               | CO3           |  |  |
| Q 3   | Discuss the Traditional file systems in terms of Bigdata storage.   | 4               | CO1           |  |  |
| Q 4   | Explain the term Sharding in Bigdata storage.   | 4               | CO2           |  |  |
| Q 5   | Discuss the File system hierarchy with the help of an example.  | 4               | CO4           |  |  |
| SECTION B   |   |                 |               |  |  |
| (4Qx10M= 40 Marks) Instruction: Write brief notes. (100-150 words)  |   |                 |               |  |  |
| Q 6   | Elaborate the term Scaling using sharding with the help of a diagram.   | 10              | CO1           |  |  |
| Q 7   | Explain the concept of Client-server architecture in Distributed File   |                 |               |  |  |
|   | System.   | 10              | CO2           |  |  |
| Q 8   | Discourse the usage of Heartbeats signals in HDFS. Also, define the term Checkpointing in HDFS                      |                 |               |  |  |
|   | OR  | 10              | CO2           |  |  |
|   | Explain the operation of Google File System used in Distributed File  |                 |               |  |  |
| Q 9   | System with the help of an example.  Discuss the concept of Distributed File System in detail.                      | 10              | CO1           |  |  |
|   | SECTION-C   | 10              | COI           |  |  |
| (2Qx20M=40 Marks)   |   |                 |               |  |  |
| Instruction: Write long answer. (Up to 350 words while explaining)  |   |                 |               |  |  |
| Attempt any part of question no. 10 as there is an option "a" OR "b".  There is no choice for question no.11. |   |                 |               |  |  |
| Q 10  | Explain the need of NoSQL Database Approach. Also, elaborate different types of Nosql with the appropriate diagram. | 20              | CO3           |  |  |

|      | OR  Discuss the term Bigdata used in today's era. Elaborate the V's of Bigdata along with the appropriate diagram and example. |    |     |
|------|--|----|-----|
| Q 11 | Elaborate the term Hadoop and explain its architecture. Also, discuss the concept of HDFS in Bigdata Storage.                  | 20 | CO4 |