

# Model Question Paper

## BIG DATA ANALYTICS

TIME: 03 Hours

Max. Marks: 100

Note: 01. Answer any **FIVE** full questions choosing at least **ONE** question from each **MODULE**

| Module -1       |   |  | *Bloom's<br>Taxonomy<br>Level | COs | Marks |
|-----------------|---|--|-------------------------------|-----|-------|
| Q.01            | a | What is Big Data? Explain the challenges With Big Data.  | L2                            | CO1 | 10    |
|                 | b | What is big data analytics? Explain classification of analytics  | L2                            | CO1 | 10    |
| OR              |   |  |                               |     |       |
| Q.02            | a | Explain CAP Theorem.   | L2                            | CO1 | 05    |
|                 | b | What is NewSQL? Explain the Characteristics of NewSQL  | L2                            | CO1 | 07    |
|                 | c | Explain the Hadoop Ecosystem Components for Data Processing and Data Analysis  | L2                            | CO1 | 08    |
| <b>Module-2</b> |   |  |                               |     |       |
| Q. 03           | a | With a neat diagram explain HDFS architecture.   | L2                            | CO1 | 08    |
|                 | b | Explain HDFS Daemons   | L2                            | CO1 | 08    |
|                 | c | Give HDFS Commands to perform the following operations<br>i) To get the list of directories and files at the root of HDFS<br>ii) To create a directory (say, sample) in HDFS<br>iii) To copy a file from local file system to HDFS<br>iv) To display the contents of an HDFS file on console   | L3                            | CO2 | 04    |
| OR              |   |  |                               |     |       |
| Q.04            | a | Explain anatomy of HDFS file read and write.   | L2                            | CO1 | 10    |
|                 | b | Implement a word count program in Hadoop.  | L3                            | CO2 | 10    |
| <b>Module-3</b> |   |  |                               |     |       |
| Q. 05           | a | What is MongoDB? Why MongoDB? Illustrate the process of Creating or Generating a Unique Key.   | L2                            | CO1 | 10    |
|                 | b | Implement Functions: Count – Sort – Limit – Skip – Aggregate using MongoDB.  | L3                            | CO1 | 10    |
| OR              |   |  |                               |     |       |
| Q. 06           | a | Explain the following methods with an example for each<br>i) Save() ii) Find() iii) Pretty() iv) Count() v)Skip()  | L2                            | CO1 | 10    |
|                 | b | Given a collection named Students with the following fields:<br>StudRollNo, StudName, Grade, Hobbies, DOJ<br>Write MongoDB commands to perform the following operations<br>i) Insert the details of one student<br>ii) Display the details of the student having rollno 101<br>iii) Change the hobby of the student named "Rahul" from Cricket to Football<br>iv) Delete the record of the students belonging to V grade.<br>v) Retrieve the details of students whose names start with the letter 'B' | L3                            | CO1 | 10    |

| <b>Module-4</b> |   |   |    |     |    |
|-----------------|---|---|----|-----|----|
| Q. 07           | a | What is Hive? List the features of Hive.  | L2 | CO3 | 4  |
|                 | b | Explain Hive File Formats   | L2 | CO3 | 8  |
|                 | c | Explain bucketing with an example.  | L2 | CO3 | 8  |
| OR              |   |   |    |     |    |
| Q. 08           | a | What is Pig? explain the key features of Pig.   | L2 | CO3 | 4  |
|                 | b | With a neat diagram explain the anatomy of pig  | L2 | CO3 | 8  |
|                 | c | Explain any five relational operators of pig with an example for each.                            | L2 | CO3 | 8  |
| <b>Module-5</b> |   |   |    |     |    |
| Q. 09           | a | With a neat diagram explain the main feature of spark.  | L2 | CO3 | 10 |
|                 | b | Explain the five layer architecture for running applications using spark stack.                   | L2 | CO3 | 10 |
| OR              |   |   |    |     |    |
| Q. 10           | a | With a neat diagram explain text mining process.  | L2 | CO3 | 10 |
|                 | b | Explain the page rank algorithm using the relative authority of the parents over linked children. | L2 | CO3 | 10 |

