

# KAMARAJ COLLEGE (Autonomous)

Accredited with A+ Grade by NAAC

(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

(4 Pages)

Reg. No:.....

Question Code: 26E01404

Course Code: 24PMCA32

PG Degree - End Semester Examinations, April 2026

Third Semester

M.C.A

Big Data Analytics

(For those who joined in July 2024 onwards)

Time : 3 Hours

Maximum : 75 Marks

**PART - A (10 × 1 = 10 Marks)**

**Answer ALL Questions**

**Choose the correct answer :**

- CO:1  
K:1
1. Which of the following characteristics of Big data that deals with a wide range of data types and sources of data?
- (a) vast (b) value  
(c) variety (d) versatile
- CO:1  
K:1
2. Choose an analytics type that focuses on forecasting the future using predictive and prescriptive modeling.
- (a) Basic analytics (b) Advanced analytics  
(c) Monetized analytics (d) Operationalized analytics
- CO:2  
K:1
3. Label the feature of NoSQL that automatically spreads data across an arbitrary number of servers.
- (a) replication (b) dynamic schema  
(c) relationship (d) auto-sharding
- CO:2  
K:1
4. How many blocks will be created for a file that is 300 MB? The default block size is 64 MB and the replication factor is 3.
- (a) 15 (b) 30  
(c) 5 (d) 100

- C0:3 5. Find the data type in MongoDB that used to store a true/false  
K:1 value.  
(a) integer (b) boolean  
(c) double (d) string
- C0:3 6. Outline the benefit of compression in MapReduce programming.  
K:2  
(a) data arrangement (b) data shuffle  
(c) reduce the space to (d) data analytics  
store files
- C0:4 7. Show the file format in Hive that stores the data in column  
K:2 oriented manner.  
(a) RCFile (b) Sequential File  
(c) Text File (d) Image File
- C0:4 8. Select the aggregate function supported by Hive.  
K:1  
(a) load() (b) group()  
(c) drop() (d) avg()
- C0:5 9. Relate a Pig philosophy to its ability to process different kinds of  
K:2 data such as structured and unstructured data.  
(a) Pigs Eat Anything (b) Pigs Live Anywhere  
(c) Pigs Fly (d) Pigs are Domestic Animals
- C0:5 10. Show the eval function in Pig that used to compute the maximum  
K:2 of numeric values in a single column bag.  
(a) SUM (b) MIN  
(c) MAX (d) COUNT

**PART - B (5 X 5 = 25 Marks)**

**Answer ALL Questions choosing either (a) or (b).**

**Answer should not exceed 250 words.**

- C0:1 11. (a) Classify the various types of digital data.  
K:4

**(OR)**

(b) Survey the few top analytics tools used in the Big data environment.

- C0:2 12. (a) Identify the comparative features of SQL versus NoSQL.  
K:3

**(OR)**

(b) Organize the various components of the Hadoop ecosystem.

CO:3 13. (a) Examine the methods used for creating and dropping  
K:4 databases in MongoDB.

**(OR)**

(b) Inspect the various phases of Reducer in MapReduce programming.

CO:4 14. (a) Organize the primitive and collection data types in Hive.

K:3

**(OR)**

(b) Make use of user defined functions in Hive with suitable examples.

CO:5 15. (a) Analyze the dual running ways and execution modes of  
K:4 Pig.

**(OR)**

(b) Compare the various features of Pig versus Hive.

**PART - C (5 X 8 = 40 Marks)**

**Answer ALL Questions choosing either (a) or (b).**

**Answer should not exceed 600 words.**

CO:1 16. (a) Utilize the characteristics and challenges of Big data.

K:3

**(OR)**

(b) Organize the various terminologies used in Big data environments.

CO:2 17. (a) Analyze the numerous types of NoSQL databases and pros  
K:4 of NoSQL.

**(OR)**

(b) Examine the overview of Hadoop in detail.

CO:3 18. (a) Inspect the purpose of following methods in MongoDB  
K:4 Query Language:

i.) insert() ii.) save() iii.) update() iv.) remove() v.) find()

**(OR)**

(b) Survey the working principles of Combiner and Partitioner in MapReduce programming.

CO:4 19. (a) Explain in detail about the various parts in Hive  
architecture with a neat diagram.

K:4

**(OR)**

(b) Assess the significance of partitions and bucketing in Hive query language.

CO:5 20. (a) Elaborate the concepts available in overview of Pig Latin.

K:4

**(OR)**

(b) Discuss any five relational operators of Pig with suitable examples.