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23CAU634N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCA DEGREE EXAMINATION MAY 2026
(Sixth Semester)

Branch – **COMPUTER APPLICATIONS**

BIG DATA ANALYTICS

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	M2M communication stands for (i) Man to Machine (ii) Map to Map (iii) Machine to Machine (iv) Memory to Memory	K1	CO1
	2	Standard Big Data Architecture includes (i) Data Layer (ii) Storage Layer (iii) Processing Layer (iv) All of the above	K2	CO1
2	3	Hadoop framework is written in (i) JAVA (ii) C (iii) Python (iv) HTML	K1	CO2
	4	Big Data hype refers to (i) Over expectation (ii) Virus (iii) Hardware issue (iv) Storage failure	K2	CO2
3	5	RDBMS vs Hadoop differs in (i) Scalability (ii) Structure (iii) Data Type (iv) All of the above	K1	CO3
	6	Hadoop YARN is used for (i) Storage (ii) Resource Management (iii) Formatting (iv) Querying	K2	CO3
4	7	TTL in Cassandra means (i) Time To Live (ii) Transfer Table Link (iii) Total Time Limit (iv) Table Type Logic	K1	CO4
	8	Combiner function is used for (i) Sorting (ii) Reducing network traffic (iii) Printing (iv) Storing	K2	CO4
5	9	Hive is mainly used for (i) Transaction processing (ii) Gaming (iii) Data warehousing (iv) Editing	K1	CO5
	10	Pig execution modes include (i) Local (ii) MapReduce (iii) Both (iv) None	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Analyze the importance of Big Data in business decision making.	K4	CO1
		(OR)		
	11.b.	Analyze Big Data applications in smart cities.		
2	12.a.	Explain the classification of analytics.	K2	CO2
		(OR)		
	12.b.	Summarize the terminologies used in Big Data environment.		
3	13.a.	Demonstrate the MongoDB data types with example.	K2	CO3
		(OR)		
	13.b.	Illustrate the Hadoop YARN architecture with a neat sketch.		
4	14.a.	Examine the TTL and counters in Cassandra.	K4	CO4
		(OR)		
	14.b.	Critically compare Cassandra with RDBMS.		
5	15.a.	Solve performance issues by selecting the suitable Pig execution mode.	K3	CO5
		(OR)		
	15.b.	Choose suitable relational operators in Pig for ETL processing		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Examine the technology challenges in Big Data environment	K4	CO1
2	17	Explain NOSQL database types with advantages.	K2	CO2
3	18	Compare MongoDB vs RDBMS performance and Hadoop vs RDBMS.	K5	CO3
4	19	Explain querying system tables in Cassandra.	K2	CO4
5	20	Analyze HQL and relational operators.	K4	CO5

Z-Z-Z END