

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2025
(Sixth Semester)

Branch – INFORMATION TECHNOLOGY

NOSQL DATABASES

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 What in big data refers to the speed at which data is created and the speed at which it is required to be processed?
(i) volume (ii) variety
(iii) velocity (iv) veracity
- 2 What type of database is mongodb?
(i) relational (ii) document oriented
(iii) graph (iv) keyvalue
- 3 Which component in MapReduce is responsible for sorting and grouping data?
(i) mapper (ii) combiner
(iii) reducer (iv) reducer
- 4 Which type of database is Apache Cassandra, a massively scalable open-source database?
(i) relational (ii) graph
(iii) document (iv) nosql
- 5 Which language is used to query Cassandra?
(i) SQL (ii) CQL
(iii) NoSQL (iv) DQL

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Explain the various sources of big data.
OR
b Outline the advantages of NOSQL.
- 7 a Show the importance of JSON.
OR
b Describe data balancing process of sharding.
- 8 a Explain the delete query.
OR
b Prepare some advantages of MapReduce.
- 9 a State the importance of column database.
OR
b Explain about graph database.
- 10 a How to remove the keyspaces in Cassandra.
OR
b Discuss on tuple?

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Categorize the three V's of big data.
OR
b Compare ACID vs BASE.
- 12 a Discuss the tools of MongoDB and explain them.
OR
b Examine the process of Master/Slave replication.
- 13 a Discuss the create and insert query in MongoDB.
OR
b Justify the need of regular expression.
- 14 a Discover the importance of key value database.
OR
b Analyze the drawbacks of Cassandra's.
- 15 a Identify the key concepts of dropping and truncating tables in Cassandra.
OR
b Classify the need of various aggregate functions.

Z-Z-Z

END