

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022

Branch – COMPUTER SCIENCE WITH DATA ANALYTICS

MODERN DATABASE SYSTEMS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

1. What is the main purpose of organized database?
(i) Rapid search (ii) Quick retrieval
(iii) structured pattern (iv) All the above
2. Which process divides the database into a smaller multiple parts?
(i) Fragmentation (ii) Decode (iii) Segmentation (iv) Compaction
3. Which one is most well-known and widely-used query language?
(i) SQL (ii) Java (iii) Open source (iv) Python
4. What method is used in Graph compute engines?
(i) OLAP (ii) OLTP (iii) OLDB (iv) OLPA
5. Storing very large amounts of single-keyed data with very low latency.
(i) Fact table (ii) Big table (iii) Route table (iv) IP table
6. Name the visual representations of data elements and the connections between them.
(i) Data model (ii) Method (iii) Model (iv) Graph
7. Which database that stores data in a structured format using rows and columns?
(i) Pivot table (ii) Relational database (iii) Patterns (iv) Nodes
8. Which databases offer the agility to transform your business on the platform trusted for innovation?
(i) Batch (ii) Incremental (iii) Cloud (iv) Files
9. Which is the module name of Hadoop?
(i) HDFS (ii) HCFS (iii) HOFS (iv) HHFS
10. Which address the fundamental concerns around the design of a database schema?
(i) Design (ii) Pattern (iii) Model (iv) Rules

SECTION - B (25 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 5 = 25)

11. a) Summarize the promises and complications of distributed database systems.
(OR)
b) Define fragmentation.
12. a) State about query processing.
(OR)
b) Define Load balancing.
13. a) Narrate the emergence of NoSQL.
(OR)
b) Summarize about graph databases.

Cont...

14. a) Describe about Google databases.
b) Define about Google workspace.

(OR)

15. a) Describe about column database and document database.
b) State about Hbase. Why it is used?

(OR)

SECTION -C (40 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks

(5 x 8 = 40)

16. a) Explain about distributed DBMS architecture.
b) Discuss about fragmentation and allocation of memory.

(OR)

17. a) Elaborate the parallel database systems architecture.

(OR)

- b) Explain about database clusters.

18. a) Discuss about applications and integration of database.

(OR)

- b) Elaborate about Database revolution.

19. a) Elaborate about Database revolution.

(OR)

- b) Discuss about Hadoop in detail.

20. a) Explain the characteristics of modern database.

(OR)

- b) Compare the difference between MongoDB and MYSQL.

Z-Z-Z END