

28. a. Sketch the architecture of virtual private database and brief the steps used in the implementation. 10 2 4 1

(OR)

b. Compare the characteristics of application security models. 10 2 3 1

29. a. Demonstrate the syntax that are present in trigger creating with an example code in oracle. 10 2 5 4

(OR)

b. Demonstrate the tasks involved in auditing server activity with SQL server 2000? 10 2 5 4

30. a. Interpret the merits and demerits of randomization method used in privacy preserving data mining. 10 2 6 1

(OR)

b. Analyze the various data mining techniques used for privacy preservation and prepare a survey report with merits and demerits. 10 2 6 1

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B.Tech. DEGREE EXAMINATION, NOVEMBER 2022

Sixth / Seventh Semester

18CSE455T – DATABASE SECURITY AND PRIVACY

(For the candidates admitted from the academic year 2018-2019 to 2019-2020)

Note:

- (i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.
- (ii) **Part - B** should be answered in answer booklet.

Time: 2½ Hours

Max. Marks: 75

PART – A (25 × 1 = 25 Marks)

Answer ALL Questions

- | | Marks | BL | CO | PO |
|---|-------|----|----|----|
| 1. Identify the characteristic when the information is accurate, consistent and validated.
(A) Confidentiality (B) Integrity
(C) Availability (D) Compilation | 1 | 1 | 1 | 1 |
| 2. A known security gap that a company intentionally leaves open
(A) Security risk (B) Security threat
(C) Security vulnerability (D) Security mistake | 1 | 1 | 1 | 1 |
| 3. Business reputation and quality belongs to which type of asset.
(A) Physical asset (B) Logical asset
(C) Intangible asset (D) Human asset | 1 | 1 | 1 | 1 |
| 4. A technique that enables two parties to exchange information over an open network by assigning a unique key called ticket to each user.
(A) Kerberos (B) Netscape
(C) Smart card (D) Audit | 1 | 1 | 1 | 1 |
| 5. Which of the following supports non-structure problems and provide answers to solve the problem?
(A) Decision support system (B) Transaction system
(C) Expert system (D) Data base | 1 | 1 | 2 | 2 |
| 6. The SQL _____ command removes user access rights or privileges to the database objects.
(A) Grant (B) Table
(C) Access (D) Revoke | 1 | 1 | 3 | 1 |
| 7. A guideline that indicates how long the password can be used before it expires.
(A) Password storage (B) Password usage
(C) Password aging (D) Password complexity | 1 | 1 | 3 | 1 |

8. If no default table space has been specified for the database, then the users objects are stored in the _____ table space.
 (A) Global (B) System
 (C) External (D) Client
9. The _____ clause allows as to specify the maximum amount of space the user can allocate in the table space.
 (A) Account (B) Global
 (C) Password (D) Quota
10. Password and _____ are the two aspects of a profile in oracle.
 (A) Resources (B) Policies
 (C) Privilege (D) Data objects
11. A conceptual model that specifies the right that each subject possesses for each object.
 (A) MIS model (B) Business logic model
 (C) Access matrix model (D) Trigger model
12. An access mode that allows the subject to grant the grant privileges to other subjects.
 (A) Delegate (B) Grant
 (C) Revoke (D) Abrogate
13. A component that contains all the codes related to data validations in client server architecture.
 (A) User interface component (B) Business logic component
 (C) Data access component (D) Scaling power component
14. A shared database schema containing data that belongs to many users and each user can view or manipulate the data the user owns.
 (A) Setup test environment (B) Data warehouse
 (C) Application context (D) Virtual private database
15. A user who owns the application tables and objects.
 (A) Application owner (B) Proxy user
 (C) Application administrator (D) Virtual user
16. A type of audit that verifies if an operation is working according to the policies of the company.
 (A) Product audit (B) Financial audit
 (C) Security audit (D) Operational audit
17. A PL/SQL procedure and an event driver program that executes automatically based on the occurrence of events.
 (A) External audit (B) Trigger
 (C) Data definition audit (D) Integrity check
18. Which of the document that contains all activities that are being audited ordered in a chronological manner?
 (A) Audit log (B) Legal document
 (C) Performance log (D) Survey table

19. When audit process gets over of a specific object or command, the following command is used to turn off with oracle.
 (A) Delete audit (B) No audit
 (C) Stop audit (D) Off trigger
20. A classification of audit that is conducted by a staff member of the company being audited.
 (A) External audit (B) Hybrid audit
 (C) Automatic audit (D) Internal audit
21. A technique for privacy preserving data mining in which noise is added to the data to mask the attribute values of records.
 (A) Randomization method (B) Articulation method
 (C) Matrix method (D) Inversion method
22. In which of the following models, the granularity of data is reduced with the use of techniques such as generalization and suppression.
 (A) k-anonymity (B) Group perturbation
 (C) Data compression (D) Matrix model
23. A method in which the values across different records are swapped in order to perform privacy preservation.
 (A) Data swapping (B) Data complement
 (C) Data composition (D) Data mining
24. In this attack, all the values for a sensitive attribute within a group of k records are the same
 (A) Suppression attack (B) Homogeneity attack
 (C) Heterogeneity attack (D) Block attack
25. Many privacy preserving data mining methods are inherently limited by the _____ in the presence of public information.
 (A) Auditing (B) Data publishing
 (C) Asset (D) Curse of dimensionality

PART – B (5 × 10 = 50 Marks)

Answer **ALL** Questions

- | | Marks | BL | CO | PO |
|---|-------|----|----|----|
| 26. a. Sketch the typical use of system applications at various management levels and interpret the characteristics of information system categories. | 10 | 2 | 1 | 1 |
| (OR) | | | | |
| b. Demonstrate the components of information security architecture. | 10 | 2 | 1 | 1 |
| 27. a. Examine the various clauses involved in creating a user with oracle. | 10 | 2 | 2 | 2 |
| (OR) | | | | |
| b. Highlight the importance of password policies and examine the guidelines involved in designing and implementing password policies. | 10 | 2 | 2 | 2 |