

الإسم ..... الرقم .....

أجب عن جميع الأسئلة

\*ورقة الإمتحان تشتمل على 6 صفحات\*

**Question I (12Points)**

**Encircle the letter of the best answer from the following:**

- \_\_\_\_\_ database required that corporate data be stored in a single central site.  
A) Distributed  
B) Centralized  
C) Parallel  
D) Decentralized
- Distributed database stores a logically related database over:  
A) single site  
B) two or more physically dependent sites  
C) two or more logically independent sites  
D) two or more physically independent sites.
- \_\_\_\_\_ is a software component found in each computer that receives and processes the application's requests data  
A) Computer processor  
B) Transaction processor  
C) Transaction coordinator  
D) None of above
- In \_\_\_\_\_ DDBMSs, the same DBMS will be running on different computers.  
A) Multidatabase  
B) Heterogeneous  
C) Homogeneous  
D) Collection
- One of the threats to the database is \_\_\_\_\_  
A) Loss of cost  
B) Loss of storage  
C) Loss of availability  
D) Loss of the server
- The countermeasures to statistical database security problem is called \_\_\_\_\_  
A) inference control  
B) access control  
C) login control  
D) statistic control
- The \_\_\_\_\_ is the central authority for managing a database system.  
A) Database designer  
B) Database planner  
C) Database administrator  
D) Database controller
- A database log that is used mainly for security purposes is sometimes called \_\_\_\_\_  
A) audit trail  
B) system log  
C) modify log  
D) users log
- The process of constructing and using data warehouses is called \_\_\_\_\_  
A) Warehouse processing  
B) data warehousing  
C) data mining  
D) data processing



- 8) In OLAP, the operation Drill Down navigates to lower levels of detail. [    ]
- 9) Datawarehouse is nonevolatile. [    ]
- 10) Datawarehouse allow the operations of update, delete and modify. [    ]

**Question III (10Points)**

**Complete the following statements using the suitable words or phrases from the given table:**

Performance	Homogeneous	Data encryption	decision makers	roles
database audit	data sources	Clearance	Data processor	Heterogeneous

- 1- ..... is a software component residing on each computer that stores and retrieves data located at the site.
- 2- ..... DDBMSs integrate only one type of centralized DBMS over a network.
- 3- ..... DDBMSs integrate different types of centralized DBMSs over a network.
- 4- ..... transparency allows system to perform as if it were a centralized DBMS.
- 5- The basic notion Role-based access control is that permissions are associated with .....
- 6- In mandatory access control, the ..... of a subject S is class(S).
- 7- If any tampering with the database is suspected, a ..... is performed.
- 8- ..... used to protect sensitive data such as credit card numbers.
- 9- Data warehouse focuses on modeling and analysis of data for .....
- 10- Data warehouse integrates multiple, heterogeneous .....

**Question IV (40Points)**

**Answer the following questions:**

- 1) Define what is a distributed database management systems(DDBMSs)?  
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- 2) There are many advantages of distributed database management systems. Mention four of them.  
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3) C. J. Date's provide twelve commandments for distributed databases. List only four of these commandments.

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4) Generally, data can be allocated in three different strategies. What are these strategies?

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5) The types of discretionary privileges portioned to two levels. Mention these levels.

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6) There are two restrictions enforced on data access based on the subject/object classifications. What are these restriction.

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7) What is role-based access control? In what ways it is better than DAC and MAC?

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8) What are the main features of data warehouse?

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9) With only four features, provide a comparison between OLTP and OLAP.

feature	OLTP	OLAP

**Question V (20 Points)**

1) Draw the figure that shows the Generic Architecture of a Data Warehouse.

**[10 Points]**

