

## INFO90002 Database System & Information Modeling

CPU·火箭班·02

时间：10.16 20:00 ~ 22:00

讲师：Jeams 学长

课程内容：

- 针对 Quiz 2 的习题训练与讲解
- 以下所有题目均出自往年 Quiz 真题，属于墨大官方题库！

### 「ER-Modeling」

#### Question 9

2 pts

All known items belonging to an entity form a(an)

- ☐ fully related entity
- ☐ entity set
- ☐ relational entity
- ☐ relational set

#### Question 3

2 pts

A constraint that specifies the cardinality of a relationship – whether an entity can take part 'one' or 'many' times – is referred to as a:

- ☐ one to many (1:M) constraint
- ☐ participation constraint
- ☐ key constraint
- ☐ domain constraint

#### Question 4

2 pts

Which of the following is an attribute type

- ☐ foreign key
- ☐ primary key
- ☐ derivative
- ☐ composite

#### Question 11

2 pts

Which of the following is a foreign key constraint type?

- ☐ INSERT CASCADE
- ☐ INSERT DELETE
- ☐ UPDATE DELETE
- ☐ UPDATE RESTRICT

**Question 23****2 pts**

Which of the following is a characteristic of physical Entity Relationship modelling?

- ☐ Crows Foot notation
- ☐ ensuring every entity has a key attribute
- ☐ data types
- ☐ resolving many to many entity relationships

**Question 3****0 / 2 pts**

Which of the following is a stage of the database development life cycle?

- ☒ database design
- ☐ testing
- ☐ architectural design
- ☐ scoping

**[Normalization]****Question 16****2 pts**

What statement **best** explains a partial functional dependency in Normalisation?

- ☐ partial functional dependency is where a non key attribute is associated with only part of the key attribute of the entity
- ☐ partial functional dependency is where an attribute is not associated with another non key attribute
- ☐ partial functional dependency is when an insert, update or delete anomaly is still possible
- ☐ partial functional dependency occurs when there are multiple key attributes in an entity

**Question 19****2 pts**

Which of the following is a normalisation anomaly?

- ☐ grant anomaly
- ☐ delete anomaly
- ☐ revised anomaly
- ☐ ceate anomaly

**Question 25**

2 / 2 pts

Which of the following are identical?

- ☐ buffers and pages
- ☐ pages and records
- ☒ records and rows
- ☐ pages and rows

**[SQL]****Question 5**

2 pts

Which of the following is a SQL DDL statement?

- ☐ CREATE TABLE AS SELECT
- ☐ GRANT
- ☐ SELECT
- ☐ UPDATE

**Question 17**

2 pts

Which of the following is a SQL DML statement?

- ☐ SELECT
- ☐ INSERT
- ☐ TRUNCATE
- ☐ CREATE TABLE AS SELECT

**Question 14**

2 / 2 pts

Inspect the following SQL statement

```
SELECT * FROM  
EMP for UPDATE;
```

What kind of SQL statement is this?

- ☐ DDL
- ☒ DML
- ☐ The statement is not valid SQL
- ☐ Transaction Management

## [Transaction]

### Question 15

2 / 2 pts

CHECKPOINT is

- ☐ Involved with database recovery
- ☐ SQL DDL
- ☒ Transaction Management keyword
- ☐ SQL DCL

### Question 18

2 pts

Which of the following statements best explains the SQL statement ROLLBACK?

- ☐ Rolls back all transactions to the last checkpoint
- ☐ is a SQL transaction statement
- ☐ Rolls back all SQL statements to the beginning of the transaction
- ☐ The statement is not valid SQL

### Question 17

0 / 2 pts

Which of the following best describes a database transaction?

- ☐ a payment of money where the final balance is incorrect due to a lost update
- ☐ serial execution of statements
- ☐ any and every change to the database is recorded
- ☒ a grouping of SQL statements which must be entirely completed or aborted

## [Indexing]

### Question 2

2 pts

Which of the following is a property of clustered indexes

- ☐ an unlimited number of clustered indexes
- ☐ A data file can have only one clustered index
- ☐ clustered indexes are inexpensive to maintain when compared with unclustered indexes
- ☐ data retrieval with a clustered index is more expensive than having no index at all on the data file

[ DBMS ]

Question 15

2 pts

What part of database memory manages B+ tree index data?

- ☐ Buffer Pool
- ☐ Storage
- ☐ Disk space management
- ☐ File and Access Methods

Question 1

2 pts

Which of the following is a type of database failure

- ☐ an input device (card reader) no longer functions
- ☐ A laptop crashes before an online purchase is completed
- ☐ an employee changes job roles and can no longer see the human resources data
- ☐ A user issues a rollback statement because they notice an error

Question 13

2 pts

Which of the following is a statement failure?

- ☐ `SELECT col1 FROM FRUIT;`
- ☐ `DROP TABEL FRUIT;`
- ☐ `INSERT INTO FRUIT (col1, col2) VALUES (1, 'banana');`
- ☐ `UPDATE FRUIT SET col2 = 'apricot';`

Question 10

2 pts

What part of database memory manages the execution plan of an SQL statement?

- ☐ Optimizer
- ☐ Transaction Manager
- ☐ Executor
- ☐ Concurrency Manager

**Question 20****2 pts**

What part of database memory manages user transaction information?

- ☐ Crash Recovery
- ☐ Log Manager
- ☐ Transaction Manager
- ☐ Concurrency Manager

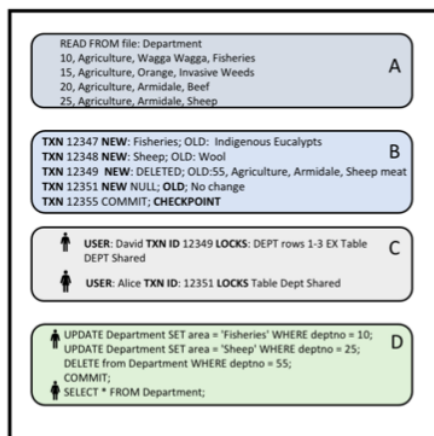
**Question 21****2 pts**

What part of database memory manages locks?

- ☐ Transaction Manager
- ☐ Concurrency Manager
- ☐ Concurrency Control
- ☐ Log Manager

**Question 14****2 pts**

Which of the following areas of Database memory is labelled "D"



- ☐ Executor in Query Processing
- ☐ Query Processing
- ☐ Parser/Compiler in Query Processing
- ☐ Transaction Manager in Query Processing

[Backup]

Question 24

2 pts

Data stored in separate physical and logical databases is known as

- ☐ Horizontally segregated partitions
- ☐ Horizontally partitioned databases
- ☐ Decentralized independent partitions
- ☐ Decentralized dependent partitions

[NoSQL]

Question 6

2 pts

Which of the following is **NOT** a characteristic of "big" data

- ☐ variety
- ☐ volume
- ☐ veracity
- ☐ velocity

Question 7

2 pts

Key-Value NoSQL databases can store

- ☐ JSON files
- ☐ All of the above (A,B and C)
- ☐ Pictures
- ☐ Arrays

[WEB]

## Question 8

2 pts

Inspect the following HTML file:

```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">
2 <html>
3 <head>
4 <title> IMDB Top 10 Films</title>
5 <style>
6 body {
7   background-color: yellow;
8 }
9 h1 {
10   color: blue;
11   text-align: center;
12   font-family: verdana;
13 }
14 p {
15   color: green;
16   font-family: American Typewriter;
17 }
18 </style>
19 </head>
20 <body>
21 <p> This is a html file </p>
22 <h1>IMDB's Top 10 films </h1>
23 <ol>
24 <li>The Shawshank Redemption</li>
25 <li>The Godfather </li>
26 <li>The Dark Knight</li>
27 <li>The Godfather Part II</li>
28 <li>The Lord of the Rings Return of the King</li>
29 <li>Pulp Fiction</li>
30 <li>Schindler's List</li>
31 <li>12 Angry Men</li>
32 <li>Inception</li>
33 <li>Fight Club</li>
34 </ol>
35 </body>
36 </html>
```

What color is the text 'This is a html file' ?

- ☐ Can not be determined
- ☐ Yellow
- ☐ Default (black)
- ☐ Green

Can you identify the third highest film from this information?

- ☐ Unable to determine that information from the code provided
- ☐ No, the list is an unordered list
- ☒ Yes, the list is ordered and the film is 'The Dark Knight'
- ☐ While it the film list could have been listed in order, it is displayed as an unordered list and can not be determined