



Database Management Systems

PUZZLES

1. What is an alternative name for a weak entity?

- a. Dominant
- b. Owner
- c. Child
- d. All of the above

Answer: (c) Child

2. We can add or remove the user IDs using which of these fixed roles?

- a. db_setupadmin
- b. db_securityadmin
- c. db_accessadmin
- d. db_sysadmin

Answer: (c) db_accessadmin

3. Section (sect name, wing, expenses) and Student (student_ID, name, sect name, fees).

Here in both of these relations, the sect_name attribute appears commonly. In this case, using common attributes in the relation schema is a way in which we can relate the _____ relations.

- a. Tuple of common
- b. Attributes of common
- c. Attributes of distinct
- d. Tuple of distinct

Answer: (d) Tuple of distinct

4.

```
SELECT title
```

```
FROM teacher
```

```
WHERE fees <= 200000 AND fees >= 80000;
```

We can replace this query by which of these?

a.

```
SELECT title
```

```
FROM teacher
```

```
WHERE fees BETWEEN 200000 AND 80000;
```

b.

```
SELECT title
```

```
FROM staff
```

```
WHERE fees BETWEEN 80000 AND 200000;
```

c.

```
SELECT title
```

```
FROM staff
```

```
WHERE fees <= 80000 AND fees >=200000;
```

d.

```
SELECT title
```

```
FROM teacher
```

```
WHERE fees BETWEEN 80000 AND 200000;
```

Answer: (d)

```
SELECT title
```

```
FROM teacher
```

```
WHERE fees BETWEEN 80000 AND 200000;
```

5. Which symbol do we use in place of the except?

- a. \sim
- b. \neg
- c. \forall
- d. \wedge

Answer: (b) \neg

6. What is an alternative name for a weak entity?

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- d. All of the above

Answer: (c) Child

7. Assume a relation X (M, N, O, P, Q) that has the following functional dependencies:

MNO \rightarrow PQ and

P \rightarrow MN

The total number of superkeys of X would be:

- a. 12
- b. 10
- c. 7
- d. 2

Answer: (b) 10

8. Fifth Normal form is concerned with:

- a. Join dependency
- b. Domain-key
- c. Multivalued dependency
- d. Functional dependency

Answer: (a) Join dependency

9. The _____ system does not require a password to travel across the internet.

- a. Response
- b. Challenge-response
- c. Manipulation
- d. Readable

Answer: (b) Challenge-response

10. We can force a log switch by using:

- a. ALTER SYS LOGFILES
- b. ALTER SYSTEM SWITCH LOGS
- c. ALTER SYSTEM LOG
- d. ALTER SYSTEM SWITCH LOGFILE

Answer: (d) ALTER SYSTEM SWITCH LOGFILE

11. When recovering from a failure:

- a. examination of each pair of physical blocks occurs
- b. examination of a specified pair of physical blocks occurs
- c. examination of the first pair of physical blocks occurs
- d. none of the above

Answer: (a) examination of each pair of physical blocks occurs

12. The Optical disk technology utilises:

- a. RAID
- b. A laser beam
- c. DAT
- d. Helical scanning

Answer: (a) RAID

13. The node pointing towards another node in a B+ tree is known as:

- a. External node

- b. Leaf node
- c. Internal node
- d. Final node

Answer: (c) Internal node

14. Identify the statement among the following that is FALSE:

- a. The relation in which all keys have only a single attribute is in its 2NF
- b. A relation that has two attributes is in its BCNF
- c. The prime attribute can depend transitively on any key in the case of a relation that is in its BCNF
- d. The prime attribute can depend transitively on any key in the case of a relation that is in its 3 NF

Answer: (c) The prime attribute can depend transitively on any key in the case of a relation that is in its BCNF

15. A transaction enters into its _____ state when it finishes the final statement.

- a. Abort state
- b. Partially committed state
- c. Committed state
- d. Active state

Answer: (b) Partially committed state

16. An operator shall provide the transaction file's name, and the file consisting of the edited transactions (that are ready for execution) must be called:

- a. Trans. Exe
- b. Batch. Exe
- c. Edit. Exe
- d. Opt. Exe

Answer: (d) Opt. Exe

17. In crabbing, the protocol locking goes:

- a. down the tree, back up
- b. up the tree, back down
- c. down the tree, releases
- d. up the tree, releases

Answer: (a) down the tree, back up

18. The name of the very first microprocessor chip available commercially was:

- a. Intel 4004
- b. Intel 639
- c. Intel 308
- d. Motorola 33

Answer: (a) Intel 4004

19. The easiest way in which we can transfer control is when the old backup site sends _____ to the old primary.

- a. Redo logs
- b. Primary Logs
- c. Undo Logs
- d. All of the above

Answer: (b) Primary Logs

20. A linear search algorithm's complexity would be:

- a. $O(n^2)$
- b. $O(n \log n)$
- c. $O(n)$
- d. $O(\log n)$

Answer: (c) $O(n)$