

DBMS OBJECTIVE FA(POSSIBLE ANSWERS)

***** SURE CORRECT *****

Q) Tables Patient and doctor have M : N relationship.....with figure

Ans - (C) join_pd resides in a newly created table

Q) Which of the following statements TRUE with respect to Agile Methodologies?

- (i) Ensures early ROI
- (ii) Risk mitigation and Recovery through short deliveries
- (iii) High Quality and Productivity can not be guaranteed due to frequent deliveries.

Ans- (C) Only (i) and (ii)

Reference : Lex -> SE -> Agile -> S/W Dev. Approach -> Page 7

Q) Which of the following statements TRUE with respect to Agile Methodologies?

- (i) Changes are always welcome
- (ii) Emphasizes more communication and need based documentation.
- (iii) Single delivery after testing

Ans- Only (i) & (ii)

Reference : Lex -> SE -> Agile -> S/W Dev. Approach -> Page 6

Q) An online apparel store is deployed on-premise. The traffic forecast for the apparel store application varies based on various parameters. What are the implications of the on-premise solution?

- (A) Under-utilization of on-premise servers reduces the ROI.
- (B) On-premise servers maybe overloaded with the Traffic.
- (C) Limited Scalability in the on-premise environment, leads to loss of business continuity
- (D) All of the Above

Ans- (D) All of the above

Reference : Software Engineering

Q) An attacker tries to retrieve the data and exploit the websites by altering the Database by inputting queries.

- (A) Broken Authentication
- (B) SQL Injection
- (C) XML External Entities
- (D) Security Misconfiguration

Ans - (B) SQL Injection

Reference : Lex -> Introduction to Cyber Security -> Secure Coding OWASP Top 10 -> A1 Injection

Q) For a symmetric cryptography system having n=10 users, how many secret keys are required?

Ans- (C) 45

Logic - For Symmetric Cryptography:

$$n*(n-1)/2 \text{ keys}$$

For Non-Symmetric Cryptography:

$$2*n \text{ keys}$$

Q) Which of the following are FALSE with respect to the DEFAULT clause....

- (A) DEFAULT option can be provided only for NOT NULL attributes.
- (B) A column can be given the default value by using the DEFAULT option.
- (C) The data type of column and default expression need not to be same
- (D) DEFAULT option can be provided to any attribute.

Ans - (A) and (C)

Q) In a relationship between two entries user and mobile**Crow foot notation.....**

Ans- (C)  A crow foot notation diagram showing a relationship between 'user' and 'mobile'. It consists of two boxes: 'user' on the left and 'mobile' on the right. A line connects them, ending in a crow foot symbol (three lines radiating from a point) at the 'mobile' end.

Q) An employee sends an objectionable email to his colleagues. But the later employee lies that he didn't send this letter. This is known as

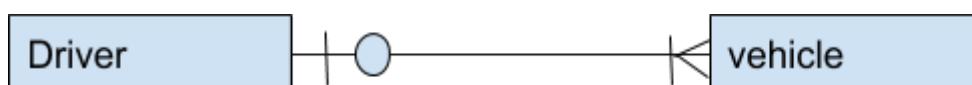
- (A) Spoofing
- (B) Tampering
- (C) Repudiation
- (D) Denial of Service

Ans- (C) Repudiation

Reference : Cyber Security

Q)

Ans-



Q)

**Ans- (B) SELECT SUBSTR(TO_CHAR(dob, 'MM/DD/CCYY'), 1, 2) DOB FROM employee
(D) SELECT TO_CHAR(dob, 'MM') DOB FROM employee**

Q) CREATE TABLE item(
 itemid VARCHAR2(6) PRIMARY KEY,
 itemname VARCHAR2(10) UNIQUE NOT NULL,
 itemdesc VARCHAR2(20) UNIQUE
) ;

Which of the following statements is TRUE with respect to above command?

Ans- (D) One primary key will be created

Q) Consider a Patient table with attributes patientid(primary key), patientname, city, dateofbirth and phone. Except patientid no columns are

IDX1 - patientid

IDX2 - patientname, dateofbirth

IDX3 - dateofbirth, phone

Which of the following queries will result in INDEX UNIQUE SCAN?

- (A) WHERE city<> 'Mumbai' AND dateofbirth > '30-Mar-1995'
- (B) WHERE patientid = 'P1007 AND dateofbirth > '30-Mar-1995'
- (C) WHERE patientname = 'Sam' AND dateofbirth > '30-Mar-1995'
- (D) WHERE patientname LIKE 'R%

Ans- (B) WHERE patientid = 'P1007 AND dateofbirth > '30-Mar-1995'

Q) SoftCenter, an IT Company, is planning to use Software Tools and Framework on Cloud.

A) Google Compute Engine on GCP

B) Google App Engine on GCP

C) Citrix Xenserver

Ans - (B) Google App Engine on GCP

Explanation : Google App Engine is a PaaS and Google Compute Engine is IaaS.

Q) Out of the following what are the characteristics of Anomaly-based IDS? (Select 2 Correct Answers)

A) It models the normal usage of network and creates a profile

B) It doesn't detect novel attacks

C) Anything unusual happening from the profile is not assumed to be intrusion activity

D) Observes normal behavior of users to create a behavior profile.

Ans- (A) It models the normal usage of network and creates a profile

(D) Observes normal behavior of users to create a behavior profile.

Explanation/Reference : Intrusion Detection System

Q) The test team is carrying out performance testing for a web based Travel Management System, for "The system shall support access to 100 travel agents and 100000 Travelers at any time". Which of the following is the testing needed for the above requirement?

- (A) Load Testing
- (B) Endurance Testing
- (C) Functional Testing
- (D) Regression Testing

Ans - (A) Load testing

Reference - Software Engineering -> Types of Software Testing

Q) Identify the Activities among the following that are carried out during the coding phase.

(Choose exactly 2 Appropriate options)

- (A) Compilation of Source Code
- (B) Documenting user manual
- (C) Arriving at SRS
- (D) Finding user needs
- (E) Self - Testing of Implemented Code

Ans - (A) Compilation of source code

(E) Self-testing of implemented code

Reference : Software Engineering

Q) A startup is looking for an office automation solution to help its staff collaborate and work efficiently. Which of the following fits best?

Ans: - Deploy a custom-based solution on PaaS offering from cloud

Q) Which of the following is true regarding symmetric cryptography?

- (A) Symmetric cryptography uses public-private keys
- (B) Requires secure exchange of keys before establishing secure communication.
- (C) Symmetric key cryptography provides non-repudiation
- (D) Symmetric key cryptography provides message integrity

Ans- (B) Requires secure exchange of keys before establishing secure communication.

Q) An enterprise provides human resource management services such as reskilling, mock interviews, etc, to study premise costs. Which solution meets the requirement?

- (A) Deploy the workload in the public cloud
- (B) Keep all the data in an on- premise environment and push th apps to the public cloud
- (C) Leverage private cloud computing services

Ans - (B) Keep all the data in an on- premise environment and push th apps to the public cloud

Reference : Cloud Computing

Q) Cloud computing describes the on-demand delivery of resources over the web. Which among the following describes features of Cloud.

- (A) Rapid Scaling
- (B) Dynamic Allocation of Resources
- (C) Reduced Management Overhead
- (D) All of the Above

Ans - (D) All of the above

Reference : Lex -> Introduction to Cloud Technologies -> Cloud Computing and its Capabilities

Q) A firewall is used to inspect _____ that are going in and out of the Computer

- (A) User Requests
- (B) Updates
- (C) Connections
- (D) Data Packets

Ans - (D) Data packets

Reference : Cyber Security

Q) An enterprise has identified other agencies to collaborate with, on common business objectives. Which deployment model should be used?

- (A) Community Cloud
- (B) Private Cloud that exclusively operates for the requesting Agency
- (C) Public Cloud
- (D) Hybrid Cloud

Ans- (A) Community cloud

Reference : Lex -> Introduction to Cloud Technologies -> Cloud Deployment models

Q) Effort involved in a project which started on 15th Jan 2013- 1st Oct 2013....

Ans - 25

Q) Which of the following security controls can be used to mitigate SQL Injection vulnerability.

- (A) Construct queries using Prepared Statement.
- (B) Robust input validation.
- (C) Using HTTPS so that communication between client and server is encrypted.
- (D) Construct Queries using String Concatenation.

Ans- (A),(B) & (C)

Reference : Lex -> Introduction to Cyber Security -> Secure Coding OWASP Top 10 -> A1 Injection Risks Root Causes and its Mitigation -> Page 2

Q) A group of research enterprises decided to collaborate COVID-19 vaccine research, using cloud services. Which cloud Deployment should be used?

- (A) Private Cloud
- (B) Public Cloud
- (C) Community Cloud
- (D) Hybrid Cloud

Ans - (C) Community Cloud

Reference : Lex -> Introduction to Cloud Technologies -> Cloud Deployment Models

Q) Consider the table **product** given below

Table Product

| productid | productname | manufacturedate | expirydate |
|-----------|--------------------|-----------------|------------|
| P1001 | Hairgro Shampoo | 15-Jan-16 | 15-Jul-17 |
| P1002 | Jones Mixed Jam | 25-Jan-16 | 25-Jul-16 |
| P1003 | Skingrow Soap | 20-Apr-16 | 25-Oct-16 |
| P1004 | Oleano Olive soap | 16-Mar-17 | 16-Sep-17 |
| P1005 | Sweet n Spice Sauc | 25-Mar-17 | 20-Aug-17 |

Query

SELECT * FROM product WHERE ADD_MONTHS(manufacturedate, 6)>= expirydate

How many rows will be fetched when the above query is executed?

Ans- 3

Q)

| companyname | location | ranking |
|-------------|-----------|---------|
| TCS | Delhi | 2 |
| Infosys | Mysore | 1 |
| Accenture | Mumbai | 5 |
| SAP labs | Chennai | 4 |
| Deloitte | Hyderabad | 3 |

What will be the third row when the following query is executed?

SELECT companyname FROM company ORDER BY location DESC;

Ans- Deloitte

Q) Consider the table **purchase** given below

| purchaseid | customerid | compid | discount | purchasedate | paymentmode | billamount |
|------------|------------|--------|----------|--------------|-------------|------------|
| P101 | C101 | COM101 | 8 | 5-Jun-16 | CASH | 34951 |
| P102 | C106 | COM107 | 10 | 7-Mar-16 | CARD | 46195 |
| P103 | C102 | COM105 | 7 | 8-Jul-16 | CARD | 35796 |
| P104 | C103 | COM106 | 5 | 8-Oct-16 | CARD | 34057 |
| P105 | C103 | COM106 | 10 | 10-Oct-16 | CASH | 32265 |
| P106 | C104 | COM102 | 6 | 11-Jul-16 | CASH | 40232 |
| P107 | C105 | COM103 | 5 | 15-Jul-16 | CARD | 54997 |
| P108 | C106 | COM105 | 8 | 7-Mar-16 | CASH | 35411 |

```
SELECT p1.customerid, p1.compid FROM purchase p1 INNER JOIN purchase p2
ON TO_CHAR(p1.purchasedate, 'MON') = TO_CHAR(p2.purchasedate, 'MON')
AND p1.customerid = p2.customerid AND p1.purchaseid <> p2.purchaseid
```

How many rows will be fetched when the above query is executed?

Ans- 4

Output -

| CUSTOMERID | COMPID |
|------------|--------|
| C103 | COM106 |
| C103 | COM106 |
| C106 | COM105 |
| C106 | COM107 |

***** MAYBE CORRECT *****

Q) Which of the following describes the features of PaaS? (Multi- correct)

- (A) Shared Infrastructure => Vote 1
- (B) Dedicated Infrastructure
- (C) Pre-built runtime
- (D) Reduced deployment overhead => Vote 1

Ans - A,C // As per priya

Explanation: PaaS provides Platform as a service i.e. it provides resources(hardware) as well as application (runtime environment) for the users.

Q) Most employees in an organisation are only granted "Standard User" rights on their computers. Only some employees including IT Administration are granted "Administrator User" rights. What is the Rationale Behind this?

- (A) Users must be granted the minimum level access that is required to carry out their required routine activities
- (B) Software licensing does not allow all users in an organization to have "Administrator User" rights.
- (C) The reason is adherence to Defence in Depth strategy which says users should have the minimum level of access to a resource
- (D) The minimum number of users must be granted the maximum level of access. This ensures access violations are reduced. This approach is called Secure Default Access.

Ans - ?????

***** INCOMPLETE QUESTION *****

Q) The following transaction logic is executed on the trip table

```
BEGIN  
UPDATE trip SET amount.....  
.....
```

Ans - (A) Both the update and delete are reflected in the database.

Q)

eccno and floorno is COMPOSITE PRIMARY KEY and employeenumber is the FOREIGN...

**Ans- (A) INSERT INTO ecc VALUES ('E75', 2, 5894)
(D) INSERT INTO employee(employeenumber) VALUES (5890)**

Q)

```
SELECT p.projectid, p.projectname, a.empid FROM project p  
FULL OUTER JOIN allocation a ON p.projectid=a.projectid IS NOT.....
```

How many rows will be fetched when the above query is executed?

Ans- (B) 3

Q)

```
SELECT COUNT( DISTINCT routeid ) FROM service GROUP BY acfacility;  
How many rows will be fetched when the above SELECT query is executed?
```

**Ans- (A) 5 // Don't know
(C) 2 // which one**

Q)

```
SELECT DISTINCT qtyavailable FROM toys  
WHERE price < ( SELECT MAX(price) FROM toys WHERE qtyavailable > 150 )
```

How many rows will be fetched when the above query is executed?

Ans- (C) 2

Q)

```
SELECT customername FROM customer c INNER JOIN .....  
WHERE accounttype IN ( SELECT accounttype FROM .....  
(SELECT MAX(COUNT(accounttype)) FROM account GROUP BY .....)
```

How many rows(s) will be fetched when the above query is executed?

Ans- (D) 2

Q)

```
SELECT empno, empname FROM employee e1 WHERE salary >=  
(SELECT AVG(salary) FROM employee e2 WHERE e1.location=e2.location AS.....
```

How many rows(s) will be fetched when the above query is executed?

Ans- (D) 3

Q)

```
SELECT s1.shopid, s1.salesamount FROM shop s1, shop s2 WHERE s1.dateofsale=s2.dateofsale
```

How many rows(s) will be fetched when the above query is executed?

Ans- (B) 4

Q)

```
INSERT INTO book VALUES('P1005', 'Passion Spent', 'C')
```

Choose the option that correctly identifies the outcome of their statements

Ans - (C) Tom insert fails due to CHECK constraint violation whereas Dick's insert also fails due to CHECK.....

Q)

```
DELETE FROM employee WHERE compid IN(20, 30);  
DELETE FROM computer WHERE model = 'Edge'
```

Which of the following statements are TRUE when the above queries are executed sequentially?

**Ans- (B) There will be two computers of make 'Dell'
(D) There will be two Male employees**

Q)

Maria writes the following query.....

SELECT studentname, subject, marks FROM student ORDER BY subject, marks;

Which of the following STUDENTNAME appears in the third record of the output?

Ans- (C) Louise

Q)

select * from customer where gender in ('M', 'F') and dob like '%Mar%';

Which of the following index will be used for the above query?

Ans- (C) No index will be used

Q)

Ans- SELECT DISTINCT p.prodid, p.name, pp.custid FROM product p LEFT JOIN purchase pp ON p.prodid = pp.prodid

Q)

Ans - (D)

SELECT SUBSTR(studentid, 2) STUDENTID, LOWER(studentname) || '-' || studentid) STUDENT NVL(TO_CHAR(marks), 'NA') MARKS FROM STUDENT WHERE studentname LIKE '%e'

Q)

**Ans- (B) FROM product p LEFT OUTER JOIN orders o ON p.productid=o.productid
GROUP BY p.productid, o.paymode
(D) SELECT DISTINCT p.productid, o.paymode, SUM(p.price) totalprice
FROM orders o RIGHT OUTER JOIN product p ON p.productid=o.productid
AND payment IS NOT NULL GROUP BY p.productid, o.paymode**

Q)

**Ans- (C) ALTER TABLE student DROP (country)
ALTER TABLE student ADD (cgpa NUMBER(3, 2), dept CHAR(3))**

Q)

**Ans- (D) SELECT ename, e.managerid FROM employee e LEFT OUTER JOIN manager m
ON e.managerid = m.mangerid WHERE e.managerid IS NOT NULL**

Q)

Ans- (C) where arrivalcity='Kolkata' and trainname LIKE '%s'

Q)

- (i) Scribe
- (ii) Reviewer
- (iii) Author
- (iv) Moderator

Ans- (C) (i)-(c); (ii)-(a); (iii)-(d); (iv)-(b)

Q)

Ans- (B) teacher(teacherid, teachername, salary)
Subject (subjectid, subjectname)
Allocation (teacherid, subjectid, deliverymode, fee)

Q)

Which will be the resulting relational schema after converting to 3NF?

Ans- (C) player (playerno., playername, playertype)
game(gamename, gametype, duration, amount)
discount(playertype, gamename, discount)

Q)

Ans- (C)

| DATE1 | DATE2 |
|-----------|-----------|
| 26-DEC-17 | 26-MAR-17 |

Q)

Ans- (D)

| BOOKNAME | NOOFSTUDENTS |
|------------|--------------|
| Networking | 2 |

Q)

Ans- (C)

| TOYID | TOYTYPENAME | TOYCATEGORY |
|-------|--------------|-------------|
| T101 | ActionFigure | B |
| T102 | Boardgame | A |
| T103 | SportGame | C |
| T104 | Others | C |
| T105 | SoftToy | A |
| T106 | BoardGame | B |

Q)

| Column Name | Data Type and Size | Constraint |
|-----------------|--------------------|--------------------|
| modelno | VARCHAR2(5) | PRIMARY KEY |
| brand | VARCHAR2(20) | |
| manufacturedate | DATE | DEFAULT SYSDATE |
| sensor | CHAR(3) | CHECK(sensor.....) |
| price | INTEGER | |

- (A) INSERT INTO mobiledetail(model, price) VALUES(M1001, 10000);
(B) INSERT INTO mobiledetail VALUES (M1002, 'Nokia', 25-Aug-1993, 'Yes', 10000)
(C) INSERT INTO mobiledetail(brand, sensor, price, modelno) VALUES('Motog.....')

Ans- Either (A) AND (B) (more pressure) || (B) AND (D)

Q)

Ans- (C)

| BOOKID | BOOKNAME |
|--------|-----------------------|
| 303 | Sense and Sensibility |
| 302 | Persuasion |
| 304 | Lady Susan |
| 301 | Emma |

Q)

| | | | |
|-------|-------|-------|------------|
| | | | |
| C901 | P802 | HSBC | UK |
| C902 | P803 | SWD | Canada |
| C903 | P805 | ICICI | California |
| C904 | P803 | SWD | Canada |
| C905 | P806 | RBS | Netherland |
| C906 | P807 | Amron | Canada |

Ans- (B) DELETE FROM client WHERE clientlocation = 'Canada AND clientname='SWD'
(D) DELETE FROM project WHERE projectcode IN ('P804', 'P801')

Q)

Ans- (B)

| PROJECTDOMAIN | AVGSAL | TOTALBONUS |
|---------------|--------|------------|
| Insurance | 40000 | 1300 |
| Telecom | 21667 | 600 |

Q)

Ans- (C)

| STUD_NAME | COURSEID |
|-----------|----------|
| Katherine | C3 |

Q)

Ans- (B)

| CUSTOMERID | CUSTOMERNAME |
|------------|--------------|
| C703 | Phillip |
| C702 | Scott |
| C701 | Halen |

Q)

Ans- (C)

| CUSTNAME | CUSTTYPE |
|----------|------------|
| Felix | PRIVILIGED |
| Jack | REGULAR |

Q) Consider a mongodb collection **book** given below

.....
db.book.update({ _id : 903}, { \$set: { Rating: 8 } })

.....
How many documents will be retained in the collection book after executing the above query

Ans- (B) 3

Q) Consider a mongodb collection **book** given below

```
>db.boof.find();
```

```
.....  
db.book.update({_id : 1002}, {$set: { Rating: 4.....
```

.....
How many documents will be retained in the collection book after executing the above query

Ans- ?????

Q)

| planid | customerid | weight | target |
|--------|------------|--------|--------|
| P101 | C101 | 70 | 50 |
| P102 | C102 | 90 | 70 |
| P103 | C103 | 110 | 80 |
| P104 | C106 | 80 | 50 |
| P105 | C105 | 90 | 70 |

Query

SELECT customerid **FROM** customer **WHERE** customername **LIKE** '%e%

UNION

SELECT planid **FROM** dietplan **WHERE** weight **BETWEEN** 90 **AND** 100

How many rows will be fetched when the above query is executed?

Ans- ???

Q)

| | | | |
|-----|----|----------|----|
| | | | |
| | | | |
| SA3 | B1 | Seattle | S2 |
| SA4 | B2 | New York | S4 |
| SA5 | B1 | Detroit | S2 |
| SA6 | B3 | Boston | S1 |
| SA7 | B3 | Seattle | S2 |
| SA8 | B4 | New York | S4 |

Query

```
SELECT bookname, studentname FROM student s, book b, booksale bs  
WHERE b.bookid=bs.bookid AND s.studentid=bs.studentid  
AND gender = 'F' AND bs.studentid IN ( SELECT studentid FROM booksale  
GROUP BY studentid HAVING COUNT( DISTINCT bs.bookid ) =  
(SELECT MIN(COUNT(bookid)) FROM booksale GROUP BY bookid) ) AND LENGTH(bookname)<12
```

What will be the output when the above query is executed?

(A)

| BOOKNAME | STUDENTNAME |
|--------------------|-------------|
| Brain Teasers | Maria |
| Science Revolution | Alice |

(B)

| BOOKNAME | STUDENTNAME |
|-------------|-------------|
| Tech World | Maria |
| India Today | Susan |

(C)

| BOOKNAME | STUDENTNAME |
|--------------------|-------------|
| Brain Teasers | Maria |
| India Today | Susan |
| Science Revolution | Alice |

(D)

| BOOKNAME | STUDENTNAME |
|--------------------|-------------|
| Science Revolution | Alice |
| Tech World | Maria |

| | |
|-------------|-------|
| India Today | Susan |
|-------------|-------|

Ans- ???