Database Systems and Web_15B11CI312_17Dec (15B11CI312)

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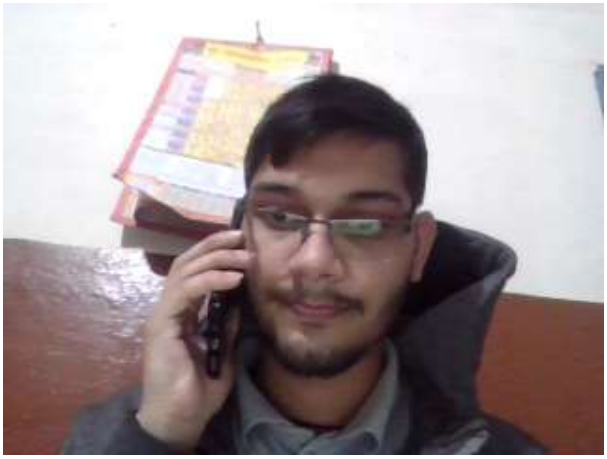
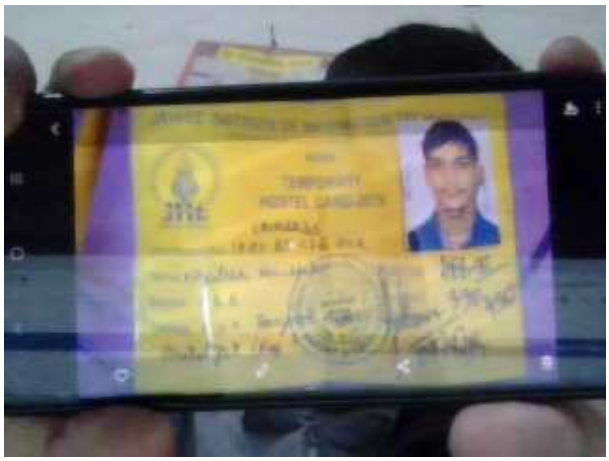
Profile Picture Snapshot



Identity Card Snapshot



Question-wise Details

Section #1

Question 1:

Time: 19 Sec Marks: 1 / 1

Which key ensures the referential integrity of the data

Options	Response	Answer
Primary Key		
Unique Key		
foreign key	✔	✔
Candidate Key		

Question 2:

Time: 4 Min 4 Sec Marks: 0 / 1

The process of defining one or more subtypes/subclass of the supertype/superclass and forming supertype/subtype relationships is known as……

Options	Response	Answer
Specialization		✔
Generalization		
both A and B	✔	
none of the above		

Question 3:

Time: 13 Sec Marks: 1 / 1

With respect to EER, in which of the following case when an entity instance must be a member of only one subtype

Options	Response	Answer
Overlap with partial specialization		
Overlap with total specialization		
Disjoint with partial specialization		
Disjoint with total specialization	✔	✔

Question 4:

Time: 1 Min 2 Sec Marks: 1 / 1

Match the following A-Entity ,B-dervied attribute,C-multi value attribute, D-weak Entity with I-Double ellipse II-dashed ellipse III-Rectangle, IV-Double rectangle

Options	Response	Answer
A-IV,B-I,C-II,D-III		
A-III,B-II,C-I,D-IV	✔	✔
A-I,B-II,C-III,D-IV		
A-II,B-I,C-III,D-IV		

Question 5:

Time: 2 Min 15 Sec Marks: 1 / 1

which of the following statement is true

A.Primary Key – A Candidate Key that is used for unique identification of each row in a table is known as Primary Key.

B.There may be no single attribute which can be treat as key, in this case we use multiple attributes to create a Primary Key then that Primary Key is called Alternate Key

Options	Response	Answer
Only A	✔	✔
Only B		
both A and B		
none		

Question 6:

Time: 2 Min 10 Sec **Marks: 1 / 1**

Statement I An entity instance of a subtype represents the same entity instance of a supertype. Statement II There is cardinality on an EER between the supertype and subtype

Options	Response	Answer
Statement I is true and Statement II is false	✔	✔
Statement II is true and Statement I is false		
Statement II is true and Statement I is ture		
Statement I is false and Statement II is false		

Section #2

Question 1:

Time: 53 Sec Marks: 1 / 1

In html, which attribute is used to specify the number of rows?

Options	Response	Answer
Rownum		
Rowspan	✔	✔
rn		
Rownumb		

Question 2:

Time: 37 Sec Marks: 1 / 1

What will be the value of $a and $b after the function call in the following PHP code?

```
1.  <?php
2.  function doSomething( &$arg ) {
3.      $return = $arg;
4.      $arg += 1;
5.      return $return;
6.  }
7.  $a = 3;
8.  $b = doSomething( $a );
9.  ?>
```

Options	Response	Answer
a is 3 and b is 4		
a is 4 and b is 3	✔	✔
Both are 3		
Both are 4		

Question 3:

Time: 45 Sec Marks: 1 / 1

What will be the output of the following PHP code?

```
1.  <?php
2.  $user = array("Ashley", "Bale", "Shrek", "Blank");
3.  for ($x=0; $x < count($user); $x++) {
4.      if ($user[$x] == "Shrek") continue;
5.          printf ($user[$x]);
6.  }
7.  ?
```

Options	Response	Answer
AshleyBale		
AshleyBaleBlank	✔	✔
ShrekBlank		
Shrek		

Question 4:

Time: 2 Min 46 Sec **Marks: 1 / 1**

Which of the following statements are correct about PHP?

I.You can add, delete, modify elements within your database through PHP.

Ii. Access cookies variables and set cookies.

Iii. Using PHP, you can restrict users to access some pages of your website.

iv. It can encrypt data.

Options	Response	Answer
Only I		
Both I and III		
Both I and IV		
All are correct.	✔	✔

Question 5:

Time: 59 Sec **Marks: 0 / 1**

What will be the output of the following PHP code?

```
1.  <?php
2.  function calc($price, $tax="")
3.  {
4.      $total = $price + ($price * $tax);
5.      echo "$total";
6.  }
7.  calc(42);
8.  ?>
```

Options	Response	Answer
Error	✔	
0		
42		✔
84		

Section #3

Question 1:

Time: 56 Sec Marks: 1 / 1

What is the output of the following statement. mysql> call Variable2();. Where,

```
DELIMITER //
  CREATE PROCEDURE Variable2 ()
  BEGIN
  DECLARE x1 CHAR(5) DEFAULT 'outer';
  SELECT x1;
    BEGIN
    DECLARE x1 CHAR(5) DEFAULT 'inner';
    SELECT x1;
    END;
  SELECT x1;
  END; //
  DELIMITER
```

Options	Response	Answer
inner outer	✔	✔
outer inner		
inner inner		
outer outer		

Question 2:

Time: 37 Sec Marks: 1 / 1

Given two relations R1 and R2, which of the following is a valid relation algebra expression ?

Options	Response	Answer
R1-R2		
R1 U R2		
R1 Intersection R2		
All are valid	✔	✔

Question 3:

Time: 37 Sec Marks: 1 / 1

Which of the following is invalid binary operation in Relational algebra?

Options	Response	Answer
Intersect		
Set difference		
Join		
Project	✔	✔

Question 4:

Time: 1 Min 21 Sec Marks: 1 / 1

which procedure parameter enables the caller to pass in a value and get back a value?

Options	Response	Answer
IN		
OUT		
INOUT	✔	✔
None		

Question 5:

Time: 1 Min 24 Sec Marks: 0 / 1

In SQL the statement select*from R, S is equivalent to

Options	Response	Answer
Select * from R natural join S		
Select * from R cross join S		✔
Select * from R union join S		
Select * from R inner join S	✔	

Question 6:

Time: 1 Min 29 Sec **Marks: 0 / 1**

Local procedure XYZ calls remote procedure PQR. Procedure PQR was compiled at 11 A.M. Procedure
XYZ was modified and recompiled at 12 P.M. Remote procedure PQR was later modified and recompiled at 13 P.M. The dependency mode is set to TIMESTAMP. What happens when procedure XYZ is invoked at 13:30 P.M?

Options	Response	Answer
There is no affect on procedure XYZ and it runs successfully.	✔	
Procedure PQR is invalidated and recompiles when invoked.		
Procedure XYZ is invalidated and recompiles for the first time it is invoked.		
Procedure XYZ is invalidated and recompiles for the second time it is invoked.		✔

Question 7:

Time: 1 Min 23 Sec **Marks: 0 / 1**

DELETE_PERSON(N_ID IN NUMBER) IS BEGIN DELETE FROM PERSON WHERE ID =

N_ID EXCEPTION WHEN STATS_EXISTS_EXCEPTION THEN DBMS_OUTPUT.

PUT_LINE(Cannot delete this Person, child records exist in PERSON_CAT_STAT table);

END;

What prevents this procedure from being created successfully

Options	Response	Answer
A comma has been left after the STATS_EXIST_EXCEPTION exception		
The STATS_EXIST_EXCEPTION has not been declared as a number		
The STATS_EXIST_EXCEPTION has not been declared as an exception		✔
Only predefined exceptions are allowed in the EXCEPTION section.	✔	

Question 8:

Time: 1 Min 25 Sec **Marks: 0 / 1**

Consider the following table to answer the below query:

Pilot(sid: integer, sname: string, rating: integer, age: real)

List the names of those pilots whose name has only five characters and the third alphabet ends with 's'.Which of these is an incorrect query

Options	Response	Answer
Select sname from pilot where length(sname) = 5 and sname like '_ _s%';		
Select sname from pilot where len(sname) = 5 and sname like '_ _s%';		
Select sname from pilot where sname like '_ _s_ _';	✔	
Select sname from pilot where Size(sname) = 5 and sname like '_ _s%';		✔

Question 9:

Time: 19 Sec **Marks: 0 / 1**

The following expression Exp1 is equivalent to? Exp1=(A □ B)- ((A-B) □ (B-A))

Options	Response	Answer
A∩B	✔	
A/B		✔
□(□□□)		
□(□□□□□□□□□)(□□□)		

Question 10:

Time: 5 Min 53 Sec **Marks: 1 / 1**

Given a code: CREATE OR REPLACE PROCEDURE add_dept (p_name departments.department_name%TYPE DEFAULT .unknown ., p_loc departments.location_id%TYPE DEFAULT 1700) IS BEGIN INSERT INTO departments(department_id, department_name, loclation_id) VALUES(dept_seq.NEXTVAL,p_name, p_loc); END add_dept;

Find which is not a valid invocations

Options	Response	Answer
EXECUTE add_dept(p_loc=>2500)		
EXECUTE add_dept('Education', 2500)		
EXECUTE add_dept(p_name=>'Education', 2500)	✔	✔
EXECUTE add_dept(p_loc=>2500, p_name=>'Education')		

Question 11:

Time: 18 Sec

Marks: 0 / 1

Suppose the code will give error:

CREATE OR REPLACE TRIGGER MUSIC_RECORD

AFTER INSERT ON PLAYLIST

BEGIN

INSERT INTO PLAYLIST_BATSTAT (ID, YEAR, Downloaded, HITS)

VALUES (: NEW. I D, 1997, 0, 0) ;

END;

To which type must you convert the trigger to correct the error?

Options	Response	Answer
ROW		✔
STATEMENT	✔	
BEFORE		
AFTER		

Question 12:

Time: 4 Min 16 Sec **Marks: 0 / 1**

Consider the table DPS(staffId, staffname, department, salary). Query is to to find the staff of DPS school who gets higher salary than anyone in the Maths department. Which among thes below queries is correct?

Query1 : Select e.staffId

From DPS e

Where not exists

(Select * From DPS s where s.department = “Maths” and

s.salary >=e.salary);

Query 2 : Select e.staffId

From DPS e

Where e.salary > Any

(Select distinct salary From DPS s Where s.department = “Maths”);

Options	Response	Answer
Both Correct	✔	
Query 1 is correct		✔
Query 2 is correct		
Both Incorrect		

Question 13:

Time: 3 Min 37 Sec **Marks: 1 / 1**

Correct statement about stored procedures is?

Options	Response	Answer
A stored procedure uses the DELCLARE keyword in the procedure specification to declare formal parameters.		
A stored procedure is named PL/SQL block with at least one parameter declaration in the procedure specification.		
A stored procedure must have at least one executable statement in the procedure body.	✔	✔
A stored procedure uses the DECLARE keyword in the procedure body to declare formal parameters.		

Question 14:

Time: 2 Min 14 Sec **Marks: 0 / 1**

Given a relation Employee having attributes - Employee id, Name, Address, Salary and Age. What is the correct statement that uses- CURSOR to select Employee id, name, and age from the CUSTOMERS table where salary< 25,000 and age >30.

Options	Response	Answer
CURSOR e_emp is SELECT emp_id, name, age FROM Employee where Salary< 25,000 AND age>30;		
SELECT CURSOR e_emp , emp_id, name, age FROM Employee where Salary< 25,000 AND age>30;	✔	
SELECT emp_id, name, age,CURSOR e_emp FROM Employee where Salary< 25,000 AND age>30 ;		
DECLARE e_emp CURSOR For SELECT emp_id, name, age FROM Employee where Salary< 25,000 AND age>30;		✔

Question 15:

Time: 15 Sec Marks: 1 / 1

Create a table Product(Quantity,Price). Now, insert first record as(Quantity=100, Price=1) in the table.

Assume two variables X and Y that store the minimum value of quantity and and maximum values of price among all records in the table at any point in time. Using these variables, new records are inserted in the table 100 times with Quanity and Price values being X-1, 3*Y-1 respectively. What will be the output of the following SQL query after the steps mentioned above are carried out?

SELECT Price FROM Product WHERE Quantity=95;

Options	Response	Answer
122	✔	✔
127		
102		
107		

Section #4

Question 1:

Time: 2 Min 59 Sec **Marks: 0 / 1**

Consider the relation R(A,B,C,D,E) with the following set of FDs: A->B, A->C, CD->E, B->D, E->A. The number of non-prime attributes in R is_____.

Options	Response	Answer
0		✔
1	✔	
2		
3		

Question 2:

Time: 45 Sec **Marks: 0 / 1**

A relation is not in which normal form, if an attribute of a composite key is dependent on an attribute of other composite key.

Options	Response	Answer
1NF		
2NF		
3NF	✔	
BCNF		✔

Question 3:

Time: 1 Min 38 Sec **Marks: 1 / 1**

Relation R has eight attributes ABCDEFGH and each of them have atomic values. Consider F= {CH->G, A->BC, B->CFH, E->A, F->EG} is a set of functional dependencies (FDs) so that F + is exactly the set of FDs that hold for R. Find the number of attributes in the maximal length candidate key for R.

Options	Response	Answer
1		
2	✔	✔
3		
4		

Question 4:

Time: 1 Min 1 Sec Marks: 1 / 1

In a given relation, each attribute is dependent on every other attribute. What can be the best normal form the relation can be in?

Options	Response	Answer
1NF		
2NF		
3NF		
BCNF	✔	✔

Question 5:

Time: 3 Min 10 Sec Marks: 1 / 1

Consider a table having four attributes Customer (custid,custname,custphone,custaddress) with following dependencies: custid->custname ; custid->custphone; custphone->custaddress ; custaddress->custid. The Customer table follows which normal form optimally

Options	Response	Answer
2NF		
3NF		
BCNF	✔	✔
4NF		

Question 6:

Time: 3 Min 42 Sec Marks: 1 / 1

Let A and B be two distinct attributes in a relation R. A->B holds on R and the closure of A and B are equal, then what can you infer about the relationship between A and B?

Options	Response	Answer
many to many		
many to one		
one to many		
one to one	✔	✔

Section #5

Question 1:

Time: 1 Min 7 Sec Marks: 1 / 1

A transaction completes its execution is said to be

Options	Response	Answer
Partially committed.		
Aborted		
Rolled back		
Committed	✔	✔

Question 2:

Time: 53 Sec Marks: 1 / 1

Consider the following statement:I: There is a possibility of starvation in timeout based approach II: Wait-die approach forcefully take data item from the transaction under certain circumstances.

Options	Response	Answer
Both I and II are true		
Both I and II are false		
I True and II false	✔	✔
I false and II true		

Question 3:

Time: 1 Min 33 Sec Marks: 1 / 1

Consider the following statement about two phase locking (2PL) protocol:

A: Basic 2PL is the subset of Strict 2PL.

B: Strict 2PL is the subset of Rigorous 2PL.

C: Rigorous 2PL is the subset of Strict 2PL.

D: Rigorous 2PL suffered from deadlock

Options	Response	Answer
All are true.		
Only A and B are true.		
Only A, B and D are true.		
Only A, C and D are true.	✔	✔

Question 4:

Time: 2 Min 11 Sec **Marks: 0 / 1**

If schedule contains all committed reads and also if overwriting allowed then given schedule will be

Options	Response	Answer
Cascade less rollback		✔
Strict		
Cascading rollback		
Recoverable	✔	

Question 5:

Time: 3 Min 59 Sec **Marks: 1 / 1**

Transaction processing is associated with everything below except.

Options	Response	Answer
producing detail, summery, or exception reports		
recording a business activity		
confirming an action or triggering a response	✔	✔
maintaining data		

Question 6:

Time: 1 Min 36 Sec **Marks: 1 / 1**

Which instruction can change deadlock state to stable state of database

Options	Response	Answer
Rollback	✔	✔
Save point		
Deadlock		
Commit		

Question 7:

Time: 1 Min 29 Sec **Marks: 1 / 1**

Name the specific concurrency problem wherein two transactions depend on each other for something.

Options	Response	Answer
phantom read problem		
transaction read problem		
deadlock	✔	✔
locking		

Question 8:

Time: 55 Sec Marks: 1 / 1

The protocol gurantees that a set of transactions becomes serialisable.

Options	Response	Answer
two phase locking	✔	✔
two phase commit		
transaction locking		
checkpoints		

Question 9:

Time: 2 Min 49 Sec Marks: 1 / 1

Which one is false about deadlock

Options	Response	Answer
Data items are blocked by the other transactions		
All transactions keep waiting for each other to complete and none get executed		
The waiting scheme for locked items in unfair, giving priority to some transactions over others.	✔	✔
Situation in which two or more transactions are waiting indefinitely for one another to give up locks.		

Question 10:

Time: 22 Sec Marks: 1 / 1

What is the equivalent serial schedule

Given schedule: R3(Y)R3(z)R1(X)W1(X)W3(Y)R2(Z)R1(Y)W1(Y)R2(Y)W2(Y)R2(X)W2(X

Options	Response	Answer
<T1-T2-T3>		
<T2-T1-T3>		
<T3-T2-T1>		
<T3-T1-T2>	✔	✔

Question 11:

Time: 1 Min 6 Sec Marks: 0 / 1

Which of these statements about recoverable schedules is true?

Options	Response	Answer
Every recoverable schedule is serializable.	✔	
In a recoverable schedule, if a transaction T commits, then any other transaction that T read from must also have committed.		✔
In a recoverable schedule, no transaction will ever be aborted because a transaction that it read from has aborted.		
None of the above		

Question 12:

Time: 1 Min 40 Sec Marks: 1 / 1

w1 (A) w2 (A) r3 (B) w3 (B) r1 (B) The given schedule is

Options	Response	Answer
Conflict serializable	✔	✔
View serializable		
Not serializable		
Both i and ii		

Question 13:

Time: 1 Min 32 Sec Marks: 0 / 1

Which problem occurs when one transaction inserts a row in the table while the other transaction is half way through its browsing of table.

Options	Response	Answer
Dirty read problem	✔	
Unrepeatable read problem		
Phantom read problem		✔
None		

Question 14:

Time: 1 Min 5 Sec **Marks: 0 / 1**

Consider the following partial Schedule S involving two transactions T1 and T2. Only the read and the write operations have been shown. The read operation on data item P is denoted by r(P) and the write operation on data item P is denoted by w(P). Suppose that the transaction T1 fails immediately after time instance r1(B). Which one of the following statements is correct? S:r1(A);w1(A);r2(C);w2(C);r2(B);w2(B); Commit 2; r1(B)

Options	Response	Answer
T2 must be aborted and then both T1 and T2 must be re-started to ensure transaction atomicity		
Schedule S is non-recoverable and cannot ensure transaction atomicity	✔	
Only T2 must be aborted and then re-started to ensure transaction atomicity		
Schedule S is recoverable and can ensure atomicity		✔

Question 15:

Time: 1 Min 21 Sec **Marks: 1 / 1**

Consider the following Read (Q) algorithm and three statements as A, B and C of time stamp based protocol:

Read(Q)

{If TS(Ti) < W-timestamp(Q), then Statement1

Hence, the read operation is rejected, and Ti is rolled back.

If TS(Ti) >= W-timestamp(Q), then Statement2

}

A: Ti needs to read a value of Q that was already overwritten

B: The value of Q that Ti is producing was needed previously, and the system assumed that that value would never be produced

C: The read operation is executed, and R- timestamp(Q) is set to max(R-timestamp(Q), TS(Ti)).

Match the following

Options	Response	Answer
Statement1-A; Statement 2-B		
Statement1-B; Statement 2-A		
Statement 1-B; Statement 2-C		
Statement 1-A; Statement 2-C	✔	✔

Question 16:

Time: 1 Min 12 Sec **Marks: 0 / 1**

S: r 1 (A) r2 (A) w1 (A) r2 (B). The given schedule S is

Options	Response	Answer
Conflict serializable		✔
View serializable		
Not serializable	✔	
both i and ii		

Question 17:

Time: 38 Sec Marks: 1 / 1

Which deadlock prevention technique is used by the given schedule S when the time stamp for all the transcations are as follows: TS(T1)= 1050, TS(T2)= 1070, TS(T3)= 1100, and TS(T4)= 1150.

S: L1(X), R1(X), L2(X), L3(Y), R3(Y), L4(X), L1(Y), W1(Y), U1(X), U1(Y), L2(X), L2(Z), R2(Z), W2(X), U2(Z), U2(X), L4(X), L4(P), R4(P), W4(P), U4(P), U4(X), L3(Y), R3(Y), L3(Z), W3(Z), U3(Y), U3(Z)

Options	Response	Answer
Wound-wait	✔	✔
Wait-die		
Wound-wait and Wait-die		
None		

Question 18:

Time: 58 Sec Marks: 0 / 1

Consider two transactions T1 and T2 for given schedule S:

S: Read2(A)Read1(A)Read2(B)Read2(B)Write1(B)Read1(B)Write2(A)abort1abort2

In this, S

Options	Response	Answer
is non-recoverable		
does not have cascading abort		✔
is strict	✔	
is recoverable and has cascading abort		