Question Number : 308 Question Id : 640653611228 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Short Answer Question

Let G be a simple graph. The size of the minimum vertex cover of G is 12 and the size of the maximum independent set of G is 16. What are the number of vertices in graph G?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

28

DBMS

Section Id :	64065341315
Section Number :	12
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	20
Number of Questions to be attempted :	20
Section Marks :	50
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1

Sub-Section Id : 64065388094

Question Shuffling Allowed : No

Is Section Default? : null

Question Number : 309 Question Id : 640653611230 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "DIPLOMA LEVEL : DATABASE MANAGEMENT SYSTEMS (COMPUTER BASED EXAM)"

ARE YOU SURE YOU HAVE TO WRITE EXAM FOR THIS SUBJECT?

CROSS CHECK YOUR HALL TICKET TO CONFIRM THE SUBJECTS TO BE WRITTEN.

(IF IT IS NOT THE CORRECT SUBJECT, PLS CHECK THE SECTION AT THE TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406532041340. ✔ YES

6406532041341. ✖ NO

Sub-Section Number : 2

Sub-Section Id : 64065388095

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 310 Question Id : 640653611231 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Short Answer Question

Consider the table Scores given below.

Player	Country	Runs
Kohli	India	86
Dhoni	India	43
Pele	Brazil	89
Gautam	India	100
Lato	Poland	78
Rahn	Germany	55
Muller	Germany	98
Rohit	India	30
Klose	Germany	95
Hardik	India	67

Figure 1: Scores

The following query is executed on the Scores table.

```
SELECT ta.Player FROM Scores AS ta
WHERE ta.Runs > ALL ( SELECT tb.Runs
                      FROM Scores AS tb
                      WHERE tb.Country = 'Brazil' AND tb.Runs > 90 )
  AND ta.Runs > ANY (SELECT tc.Runs
                      FROM Scores AS tc
                      WHERE tc.Country = 'India')
```

How many tuples are returned by the above SQL query?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

9

Question Number : 311 Question Id : 640653611239 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Short Answer Question

Consider the log records at an instance of time and the statements given below.

Table 2: Log records

$< T_0$ start $>$
$< T_0, A, 1000, 3000 >$
$< T_0, B, 500, 300 >$
$< T_1$ start $>$
$< T_1, C, 790, 700 >$
$< T_0, B, 300, 200 >$
$< Commit\ T_1 >$
$< T_2$ start $>$
$< Checkpoint\ L >$
$< T_2, D, 5000, 4500 >$
System crash

Identify the number of correct statements:

- Undo T_0
- Redo T_1
- The value of A is updated to 3000
- The value of B is restored to 500
- The value of C is restored to 790
- The value of D is restored to 5000

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

3

Sub-Section Number :	3
Sub-Section Id :	64065388096
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 312 Question Id : 640653611232 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Max. Selectable Options : 0

Question Label : Multiple Select Question

If a relation R is in Fourth Normal form then, which of the following holds?

Options :

6406532041343. ✔ No partial dependency

6406532041344. ✔ No trivial dependency

6406532041345. ✖ More than one multivalued dependency

6406532041346. ✖ None of these

Question Number : 313 Question Id : 640653611248 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Max. Selectable Options : 0

Question Label : Multiple Select Question

Choose the correct options.

Options :

6406532041397. ✔ The maximum number of nodes at level h of a binary tree is 2^h.

6406532041398. ✖ A tree with n nodes has $n+1$ edges.

6406532041399. ✔ A tree with n nodes has $n-1$ edges.

6406532041400. ✖ The maximum number of nodes at level h of a binary tree is $2^h - 1$.

Sub-Section Number :	4
Sub-Section Id :	64065388097
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 314 Question Id : 640653611233 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the Schedule given below:

T_1	T_2	T_3
		R(D)
	R(A)	
R(C)		
	W(A)	
	R(B)	
	R(C)	
		R(E)
R(A)		
	R(D)	
W(A)		
		W(B)
R(E)		

Which of the following statements is/are correct about the given Schedule?

Options :

6406532041347. ✔ A precedence graph of the schedule is acyclic

6406532041348. ✖ The given schedule is not view serializable

6406532041349. ✖ The given schedule is view serializable but not conflict serializable

6406532041350. ✔ The given schedule is view serializable and conflict serializable

Question Number : 315 Question Id : 640653611236 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the instance of a relation R given in Table 1.
Which among the following functional dependencies set can be inferred from the given information?

A	B	C	D
a1	b1	c2	d4
a2	b1	c6	d3
a1	b2	c2	d3
a3	b4	c7	d3
a3	b1	c7	d1
a4	b2	c6	d4
a1	b7	c2	d2
a3	b4	c7	d3

Table 1: Relation R

Options :

6406532041359. ✖ $\{ A \rightarrow C, C \rightarrow AB, AB \rightarrow D, CD \rightarrow AB \}$

6406532041360. ✔ $\{ A \rightarrow C, CD \rightarrow B, AB \rightarrow D, CD \rightarrow A \}$

6406532041361. ✔ $\{ AB \rightarrow C, CD \rightarrow B, BC \rightarrow D, CD \rightarrow A \}$

6406532041362. ✖ $\{ AB \rightarrow C, CD \rightarrow B, C \rightarrow D, BD \rightarrow AC \}$

Question Number : 316 Question Id : 640653611237 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider a relation schema $\mathrm{R}(M,N,P,Q,S,T)$ and the set of functional dependency set, $\mathrm{F} = \{N \rightarrow Q, S \rightarrow T, Q \rightarrow S, Q \rightarrow N, T \rightarrow NQ\}$.
This schema is decomposed into two relations R1 (M,N,Q,S) and R2(N,P,Q,T).

Consider the following statements given below regarding the decomposition of R1 and R2. Which of the following statements is/are true?

Options :

6406532041363. ✔ The decomposition of **R** into **R1** and **R2** is dependency preserving.

6406532041364. ✖ The decomposition of **R** into **R1** and **R2** is lossless.

6406532041365. ✔ The schema **R1** is in 3NF.

6406532041366. ✔ The schema **R2** is in 2NF.

Sub-Section Number :	5
Sub-Section Id :	64065388098
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 317 Question Id : 640653611234 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

For a relation $\mathbf{R}(A, B, C, D, E)$ to be in BCNF, which of the following functional dependencies sets holds true?

Options :

6406532041351. ✖ $\{AC \rightarrow B, BC \rightarrow D, D \rightarrow E\}$

6406532041352. ✔ $\{A \rightarrow B, B \rightarrow CD, D \rightarrow E, E \rightarrow A\}$

6406532041353. ✔ $\{ABC \rightarrow DE\}$

6406532041354. ✖ $\{A \rightarrow D, B \rightarrow CD, E \rightarrow A\}$

Sub-Section Number : 6

Sub-Section Id : 64065388099

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 318 Question Id : 640653611235 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Consider the two functional dependencies **F** and **G**.

$F : \{ A \rightarrow B, AB \rightarrow C, D \rightarrow AC, D \rightarrow E \}$

$G : \{ A \rightarrow BC, D \rightarrow AE \}$

Which of the following is true about **F** and **G**?

Options :

6406532041355. ✖ F covers G but G does not cover F

6406532041356. ✖ G covers F but F does not cover G

6406532041357. ✔ F and G are functionally equivalent

6406532041358. ✖ Neither F covers G nor G cover F

Question Number : 319 Question Id : 640653611238 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Choose the correct output obtained on running the given SQL statements on Table **Employee**.

EID	EName
E01	Arthur
E02	Raina
E03	Meena
E04	Arthur
E06	Joey

Table **Employee**

```
SQL> SAVEPOINT SP1;
SQL> UPDATE Employee SET EName='Jainie'
     WHERE EID='E06';
SQL> COMMIT;
SQL> SAVEPOINT SP2;
SQL> DELETE FROM Employee WHERE EID='E02';
SQL> SAVEPOINT SP3;
SQL> UPDATE Employee SET EName='Raina'
     WHERE EID='E04';
SQL> ROLLBACK TO SP1;
```

Options :

6406532041367. ✔

EID	EName
E01	Arthur
E02	Raina
E03	Meena
E04	Arthur
E06	Jainie

6406532041368. ✖

EID	EName
E01	Arthur
E03	Meena
E04	Arthur
E06	Jainie

6406532041369. ✖

EID	EName
E01	Arthur
E03	Meena
E04	Raina
E06	Jainie

6406532041370. ✖

EID	EName
E01	Arthur
E02	Raina
E03	Meena
E04	Arthur
E06	Joey

Question Number : 320 Question Id : 640653611244 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Consider a relation **Order**(*order_no*, *product_id*, *quantity*, *date*). The attribute *product_id* consists of 6 distinct values. A bitmap index is created on the attribute *product_id*, there are 1200 records in that relation. Find the size of the bitmap index file in the **Order** relation.

Options :

6406532041384. ✖ 7200 Bytes

6406532041385. ✔ 900 Bytes

6406532041386. ✖ 900 bits

6406532041387. ✖ 1200 Bytes

Question Number : 321 Question Id : 640653611247 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Consider the two relations as shown below:

Roll_no	name	sname
1	Ram	DBMS
2	Rakesh	PDSA
1	Ram	PDSA
4	Pranav	DBMS
2	Rakesh	DBMS

Table 3: **student_course**

sname
DBMS
PDSA

Table 4: **course**

What will the output of the operation **students_course ÷ course** be?

Options :

6406532041393. ✖

Roll_no	name
1	Ram
2	Rakesh
4	Pranav

6406532041394. ✔

Roll_no	name
1	Ram
2	Rakesh

6406532041395. ✖

Roll_no	name
4	Pranav

6406532041396. ✖

Roll_no	name
2	Rakesh

Sub-Section Number : 7

Sub-Section Id :	64065388100
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653611240 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (322 to 323)

Question Label : Comprehension

Consider the following RAID architecture to answer the given subquestions.

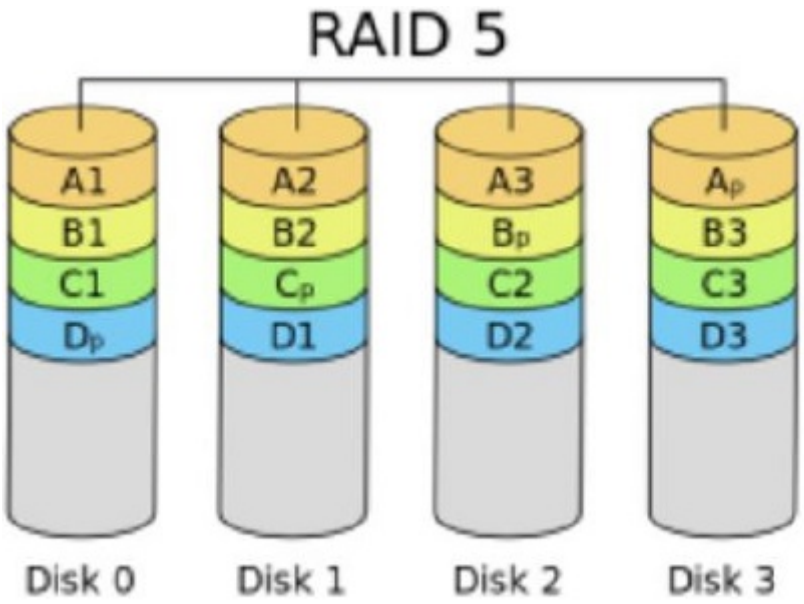

Figure 2: RAID 5 System

Sub questions

Question Number : 322 Question Id : 640653611241 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

A RAID-5 storage system with a similar arrangement of parity blocks as described in Figure 2 is used for storing the following data :

Disk 1	Disk 2	Disk 3	Disk 4	
0100	0101	0101	XXXX	Block 1 row
1000	0101	1101	XXXX	Block 2 row
0100	1110	1111	XXXX	Block 3 row
0010	0010	0101	XXXX	Block 4 row

Figure 3: RAID 5 DATA

According to Figure 3 disk-4 has crashed. What data is present in block-3 of disk-4?

Note: Assume block size is 4 bits

Options :

6406532041372. ✖ 1101

6406532041373. ✖ 1110

6406532041374. ✖ 1010

6406532041375. ✔ 0101

Question Number : 323 Question Id : 640653611242 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the data given in previous question. Assume that the binary values represent 8-bit ASCII code. What is the data word present inside this RAID-5 storage system?

The ASCII code for A to Z is given below:

Character	A	B	C	D	E	F	G	H	I
ASCII Code	65	66	67	68	69	70	71	72	73

Character	J	K	L	M	N	O	P	Q	R
ASCII Code	74	75	76	77	78	79	80	81	82

Character	S	T	U	V	W	X	Y	Z
ASCII Code	83	84	85	86	87	88	89	90

Options :

6406532041376. ✖ EMPIRE

6406532041377. ✔ EXPORT

6406532041378. ✖ EXCUSE

6406532041379. ✖ EXPECT

Sub-Section Number : 8

Sub-Section Id : 64065388101

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 324 Question Id : 640653611243 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the given schedules S_1 and S_2 given below and the following assumptions :

$W_i(a)$ means that transaction T_i is performing a write operation on data item (a).
$R_i(a)$ means that transaction T_i is performing a read operation on data item (a).
Com_i means that transaction T_i has committed.

S_1 : $R_1(A), R_3(C), W_2(B), R_2(A), W_1(B), W_3(C), Com_1, Com_2, Com_3$
S_2 : $R_1(A), R_2(B), W_1(C), Com_1, R_3(B), R_3(C), W_2(B), W_3(A), Com_2, Com_3$

Which of the above schedule can be strict two-phase lockable?

Options :

6406532041380. ✖ Only S_1

6406532041381. ✔ Only S_2

6406532041382. ✖ Both S_1 and S_2

6406532041383. ✖ None of S_1 and S_2

Question Number : 325 Question Id : 640653611245 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Insert the following key values: 5, 9, 6, 11, 12, 2, 7, 8, 10, 4, 3,1 in the given order into an empty B-tree of order 3. Which key value(s) is(are) on the root node of the B-tree?

Options :

6406532041388. ✖ 4,6

6406532041389. ✔ 4,8

6406532041390. ✖ 8

6406532041391. ✖ 11

Sub-Section Number :	9
Sub-Section Id :	64065388102
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 326 Question Id : 640653611246 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Short Answer Question

Consider a relation schema **student**($\underline{roll\_no}$, $name$, $mobile\_no$)
Consider a B^+-tree index build on the $roll\_no$ attribute, assuming **student** relation has 60000 records, and the order of the B^+-tree is 30. Find out the maximum number of nodes to be accessed to search a key from the given B^+-tree.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

5

Sub-Section Number :	10
Sub-Section Id :	64065388103
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653611249 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (327 to 328)

Question Label : Comprehension

Consider the tables: **vendor** and **component** as shown in Figure 4. Table **component** has attribute *vendor_num* which is a foreign key and refers to table **vendor**(*vendor_num*).

Using the given information answer the given subquestions:

vendor

vendor_num	vendor_name	vendor_location
10	YADAV	CHENNAI
11	AKHTAR	KOLKATA
12	PRASAD	TRICHY
13	SHARMA	BENGALURU

component

item_num	name	cost	vendor_num
1011	RAM	2500.00	11
1012	CPU	8000.50	12
1013	MONITOR	5000.00	10
1014	KEYBOARD	500.50	13
1013	MONITOR	2250.00	13
1014	KEYBOARD	450.50	11
1011	RAM	3300.00	10

Figure 4: Tables vendor and component

Sub questions

Question Number : 327 Question Id : 640653611250 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the possible **Primary Key** for table **component**.

Options :

6406532041401. ✖ item_num

6406532041402. ✖ (item_num, name)

6406532041403. ✔ (item_num, vendor_num)

6406532041404. ✖ vendor_num

Question Number : 328 Question Id : 640653611251 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

We asked ChatGPT to write a SQL query for a particular problem statement and the following are the two suggestions given by ChatGPT:

Suggestion 1:

```
SELECT v.vendor_name
FROM vendor v
JOIN component c ON v.vendor_num = c.vendor_num
JOIN component m ON m.name = 'MONITOR' AND m.vendor_num = 13
WHERE c.cost < m.cost/2;
```

Suggestion 2:

```
SELECT v.vendor_name
FROM vendor v
JOIN component c ON v.vendor_num = c.vendor_num
JOIN (____________________________
) m ON c.cost < m.half_monitor_cost;
```

Given that both suggestions will give the same output. Fill in the blanks with the required sub-query. Choose the correct option.

Options :

6406532041405. ✖
```
SELECT item_num, cost/2 AS half_monitor_cost
FROM component NATURAL JOIN vendor
WHERE name = 'MONITOR' AND vendor_id = 13
GROUP BY item_num
```

6406532041406. ✖
```
(SELECT cost/2
FROM component
WHERE name = 'MONITOR' AND vendor_id = 13) as half_monitor_cost
```

6406532041407. ✖
```
(SELECT item_num, cost/2
FROM component NATURAL JOIN vendor
WHERE name = 'MONITOR' AND vendor_id = 13
) AS half_monitor_cost
```

```
SELECT cost/2 AS half_monitor_cost
FROM component
WHERE name = 'MONITOR' AND vendor_id = 13
```

6406532041408. ✔

Sub-Section Number : 11

Sub-Section Id : 64065388104

Question Shuffling Allowed : No

Is Section Default? : null

Question Id : 640653611252 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (329 to 330)

Question Label : Comprehension

Consider the tables 5 and 6 and answer the given subquestions.

Table 5: Relation team

team_id	name	ranking	country
Cric-1	BCCI	1	India
Cric-2	ACB	3	Australia
Cric-3	PCB	10	Pakistan
Cric-4	NCB	9	Nepal
Cric-5	ECB	4	England

Table 6: Relation players

team_id	player_id	name	ranking
Cric-1	BCCI-11	Virat	1
Cric-1	BCCI-23	Rohit	3
Cric-3	PCB-22	Azam	2
Cric-2	ACB-12	David	6
Cric-2	ACB-29	Smith	3
Cric-5	ECB-88	Cris	4
Cric-5	ECB-82	Ben	1

Sub questions

Question Number : 329 Question Id : 640653611253 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1

Question Label : Multiple Choice Question

Consider the SQL query given below:

```
SELECT *
FROM players RIGHT OUTER JOIN team
ON players.team_id = team.team_id;
```

How many rows will be returned by the query?

Options :

6406532041409. ✖ 7

6406532041410. ✖ 5

6406532041411. ✖ 9

6406532041412. ✔ 8

Question Number : 330 Question Id : 640653611254 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

Using the SQL query shown below, a view named **best3** is created.

```
CREATE VIEW best3 AS
SELECT player_id, name
FROM players
WHERE ranking < 4;
```

Which among the following SQL query will display the table shown below?

player_id	name
BCCI-11	Virat
BCCI-23	Rohit

Options :

6406532041413. ✖ `SELECT * FROM best3;`

6406532041414. ✔ `SELECT player_id, name FROM players NATURAL JOIN best3 where name like '%t';`

6406532041415. ✖ `VIEW * FROM best3 WHERE name like '%t' ;`

6406532041416. ✔ `SELECT * FROM best3 where name like '%t';`

Sub-Section Number : 12

Sub-Section Id : 64065388105

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 331 Question Id : 640653611255 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the following relations:
employee$(emp\_id, emp\_name, dob, dept\_id, desg\_id)$
department$(dept\_id, name, building)$

Choose the correct Relational Algebra expression(s) equivalent to the below expression.

$\Pi_{emp\_id}(\sigma_{dob>'1996-06-09' \wedge name='HR'}(employee \bowtie department))$

Options :

6406532041417. ✖ $\Pi_{emp\_id}((\sigma_{name='HR'}(employee)) \bowtie (\sigma_{dob>'1996-06-09'}(department)))$

6406532041418. ✖ $\Pi_{emp\_id}((\sigma_{dob>'1996-06-09' \wedge name='HR'}(department)) \bowtie employee)$

6406532041419. ✖ $\Pi_{emp\_id}((\sigma_{dob>'1996-06-09' \wedge name='HR'}(employee)) \bowtie department)$

6406532041420. ✔ $\Pi_{emp\_id}((\sigma_{dob>'1996-06-09'}(employee)) \bowtie (\sigma_{name='HR'}(department)))$

Business Analytics

Section Id :	64065341316
Section Number :	13
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	17
Number of Questions to be attempted :	17
Section Marks :	45
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes