Question Number : 83 Question Id : 640653737358 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

What is the value of $P(1 < X < 2.5)$? Enter the answer correct to two decimal places.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.72 to 0.78

DBMS

Section Id :	64065351354
Section Number :	6
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	16
Number of Questions to be attempted :	16
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 : 640653107607

Question Shuffling Allowed : No

Is Section Default? : null

Question Number : 84 Question Id : 640653737359 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 :

6406532467799. ✔ YES

6406532467800. ✖ NO

Sub-Section Number : 2

Sub-Section Id : 640653107608

Question Shuffling Allowed : Yes

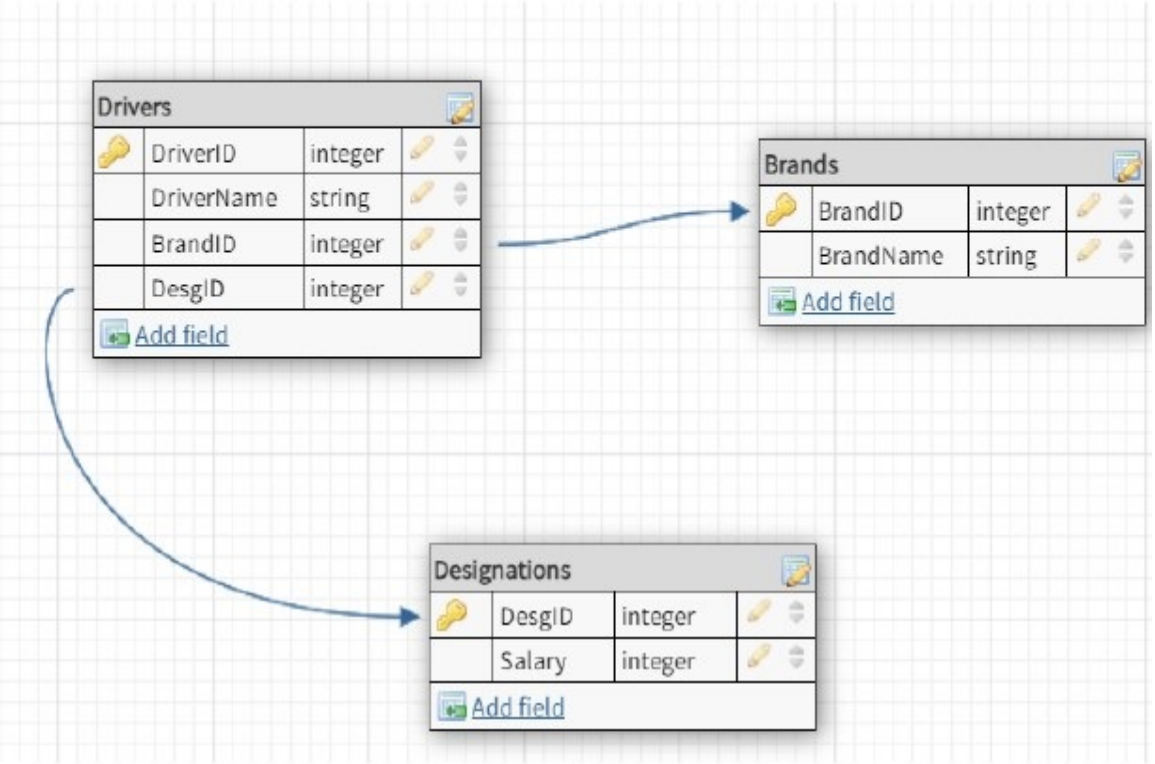
Is Section Default? : null

Question Number : 85 Question Id : 640653737360 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 relational schema given below:



What will be the result of the following query?

```
SELECT DriverName FROM Drivers D NATURAL JOIN Designations T
WHERE T.Salary > ALL (SELECT salary
FROM Designations T, Brands B, Drivers D
WHERE T.DesgID = D.DesgID AND B.BrandID = D.BrandID
AND B.BrandName = 'Mercedes')
INTERSECT
SELECT DriverName FROM Drivers D NATURAL JOIN Designations T
WHERE T.Salary < ALL (SELECT salary
FROM Designations T, Brands B, Drivers D
WHERE T.DesgID = D.DesgID AND B.BrandID = D.BrandID
AND B.BrandName = 'Ferrari')
```

Options :

6406532467801. ✔ Names of all the drivers whose salary is greater than all Mercedes drivers but less than all Ferrari drivers

6406532467802. ✖ Names of all the drivers whose salary is less than all Mercedes drivers but greater than all Ferrari drivers

6406532467803. ✖ Names of all the drivers whose salary is greater than all Mercedes drivers as well as all Ferrari drivers

6406532467804. ✖ Names of all the drivers whose salary is less than all Mercedes drivers as well

as all Ferrari drivers

Question Number : 86 Question Id : 640653737362 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 relational schema **player**(*player_id*, *name*, *jersey_no*, *dob*, *team_id*).

Identify the correct SQL command to create a view **player_name**, by selecting two columns *name* and *team_id* from the **player** relation. Select those players having names containing at least 4 characters and jersey number as 9.

Options :

6406532467809. ✖

```
CREATE VIEW player_name(name,team_id) AS
 SELECT name,team_id from player
 Where name like '%___' AND jersey_no=9
```

6406532467810. ✖

```
CREATE VIEW player_name(name,team_id) AS
SELECT name,team_id from player
Where name like '____%' OR jersey_no=9
```

6406532467811. ✔

```
CREATE VIEW player_name(name,team_id) AS
SELECT name,team_id from player
Where name like '____%' AND jersey_no=9
```

6406532467812. ✖

```
CREATE VIEW player_name(name,team_id) AS
SELECT name,team_id from player
Where name like '___%' AND jersey_no=9
```

Question Number : 87 Question Id : 640653737365 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 following relations:

auto_part($\underline{pid}$, $pname$, $color$)
auto_suppliers($\underline{sid}$, $sname$, $location$)
catalog($\underline{pid}$, $\underline{sid}$,$price$)

Which of the TRC expression will return the sid of auto_suppliers and pname of auto_part, whose price is equal to 5000 and suppliers location is 'Mumbai'?

Options :

6406532467821. ✖ $\{x \mid \exists s \in auto\_suppliers \exists c \in catalog(s.location = `Mumbai' \wedge c.price = 5000 \wedge x.sid = c.sid \wedge s.sid = c.sid)\}$

6406532467822. ✖ $\{x \mid \exists s \in auto\_suppliers \exists c \in catalog \exists p \in auto\_part(s.location = `Mumbai' \wedge c.price = 5000 \wedge s.sid = c.sid \wedge p.pid = c.pid)\}$

6406532467823. ✖ $\{x \mid \exists s \in auto\_suppliers \exists c \in catalog \exists p \in auto\_part(s.location = `Mumbai' \wedge c.price = 5000 \wedge x.sid = c.sid \wedge x.pname = p.pname\}$

6406532467824. ✔ $\{x \mid \exists s \in auto\_suppliers \exists c \in catalog \exists p \in auto\_part(s.location = `Mumbai' \wedge c.price = 5000 \wedge x.sid = c.sid \wedge x.pname = p.pname \wedge s.sid = c.sid \wedge p.pid = c.pid)\}$

Sub-Section Number : 3

Sub-Section Id : 640653107609

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 88 Question Id : 640653737361 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Consider the tables **FoodItems** and **ItemInfo** as shown below:

ItemName	Brand	Rating
Chocolate	Amul	5
Ice-cream	Nestle	4
Cake	Amul	5
Ice-cream	Keventers	3
Chocolate	Nestle	4
Candy	Amul	5
Cake	Nestle	4
Candy	Nestle	3

Table 1: **FoodItems**

Brand	Rating
Amul	5
Nestle	4

Table 2: **ItemInfo**

Which item name(s) will be returned by the operation *FoodItems* ÷ *ItemInfo*?

Options :

6406532467805. ✖ Chocolate

6406532467806. ✖ Chocolate, Candy

6406532467807. ✖ Chocolate, Ice-cream

6406532467808. ✔ Chocolate, Cake

Sub-Section Number : 4

Sub-Section Id : 640653107610

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 89 Question Id : 640653737363 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 A and B.

A	B	C	D
1	2	3	4
5	6	7	8
1	2	3	4

Table 1

A	B	C
1	2	3
4	5	6
7	8	9
1	1	1

Table 2

How many columns will be there in the union of the above two relations?

Options :

6406532467813. ✖ 4

6406532467814. ✖ 6

6406532467815. ✖ 7

6406532467816. ✔ Union not possible

Question Number : 90 Question Id : 640653737364 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 relational schema **instructor**(*id*, *name*, *dept_name*, *salary*).
To change the data type of *id*, which of the following categories of SQL command is used for this purpose?

Options :

6406532467817. ✖ DML

6406532467818. ✖ TCL

6406532467819. ✖ DCL

6406532467820. ✔ DDL

Sub-Section Number : 5

Sub-Section Id : 640653107611

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 91 Question Id : 640653737366 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the tables **Instructor** and **Department** as shown below:

ID	*name*	*dept_name*	*salary*
10101	Srinivasan	Comp. Sci.	65000
12121	Wu	Finance	90000
15151	Mozart	Music	40000
22222	Einstein	Physics	95000
32343	El Said	History	60000
33456	Gold	Physics	87000
45565	Katz	Comp. Sci.	75000
58583	Califieri	History	62000
76543	Singh	Finance	80000
76766	Crick	Biology	72000
83821	Brandt	Comp. Sci.	92000
98345	Kim	Elec. Eng.	80000

Figure 1: **Instructor**

dept_name	*building*	*budget*
Biology	Watson	90000
Comp. Sci.	Taylor	100000
Elec. Eng.	Taylor	85000
Finance	Painter	120000
History	Painter	50000
Music	Packard	80000
Physics	Watson	70000

Figure 2: **Department**

Which of the following queries will find out the names of all instructors whose department is Finance or whose department is in Watson or Taylor building?

Options :

6406532467825. ✔

```
select name
from instructor I, department D
where D.dept_name = I.dept_name
and (I.dept_name = 'Finance'
or building in ('Watson','Taylor'));
```

6406532467826. ✖

```
select name
from instructor I, department D
where D.dept_name = 'Finance'
or building in ('Watson','Taylor');
```

6406532467827. ✖

```
 select name
from instructor I, department D
where D.dept_name = I.dept_name
and (I.dept_name = 'Finance'
and building in ('Watson','Taylor'));
```

6406532467828. ✔

```
select name
from instructor I Natural Join department D
where I.dept_name = 'Finance'
or building in ('Watson','Taylor');
```

Sub-Section Number : 6

Sub-Section Id : 640653107612

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 92 Question Id : 640653737367 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 SQL statement:

```
CREATE TABLE Cars(
CarID VARCHAR (8),
CarName VARCHAR (20),
CarColour VARCHAR (8),
YearOfPurchase INTEGER,
PRIMARY KEY (CarID),
CHECK (YearofPurchase IN ('2001', '2002', '2003', '2004')));
```

The following tuples have already been inserted:

CarID	CarName	CarColour	YearOfPurchase
C1	Ferrari	Red	2001
C2	Mercedes	Black	2002

Table 3: Cars

Which among the following will cause an integrity constraint violation in the Cars table?

Options :

6406532467829. ✖
```
INSERT INTO Cars('C3', 'McLaren', 'Orange', 2003);
```

6406532467830. ✔
```
INSERT INTO Cars('C2', 'Alpine', 'Green', 2001);
```

6406532467831. ✖
```
INSERT INTO Cars('C4', 'Williams', 'Black', 2002);
```

6406532467832. ✔
```
INSERT INTO Cars('C5', 'AlphaTauri', 'Blue', 2005);
```

Sub-Section Number : 7

Sub-Section Id : 640653107613

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 93 Question Id : 640653737368 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 ER Diagram as shown below:

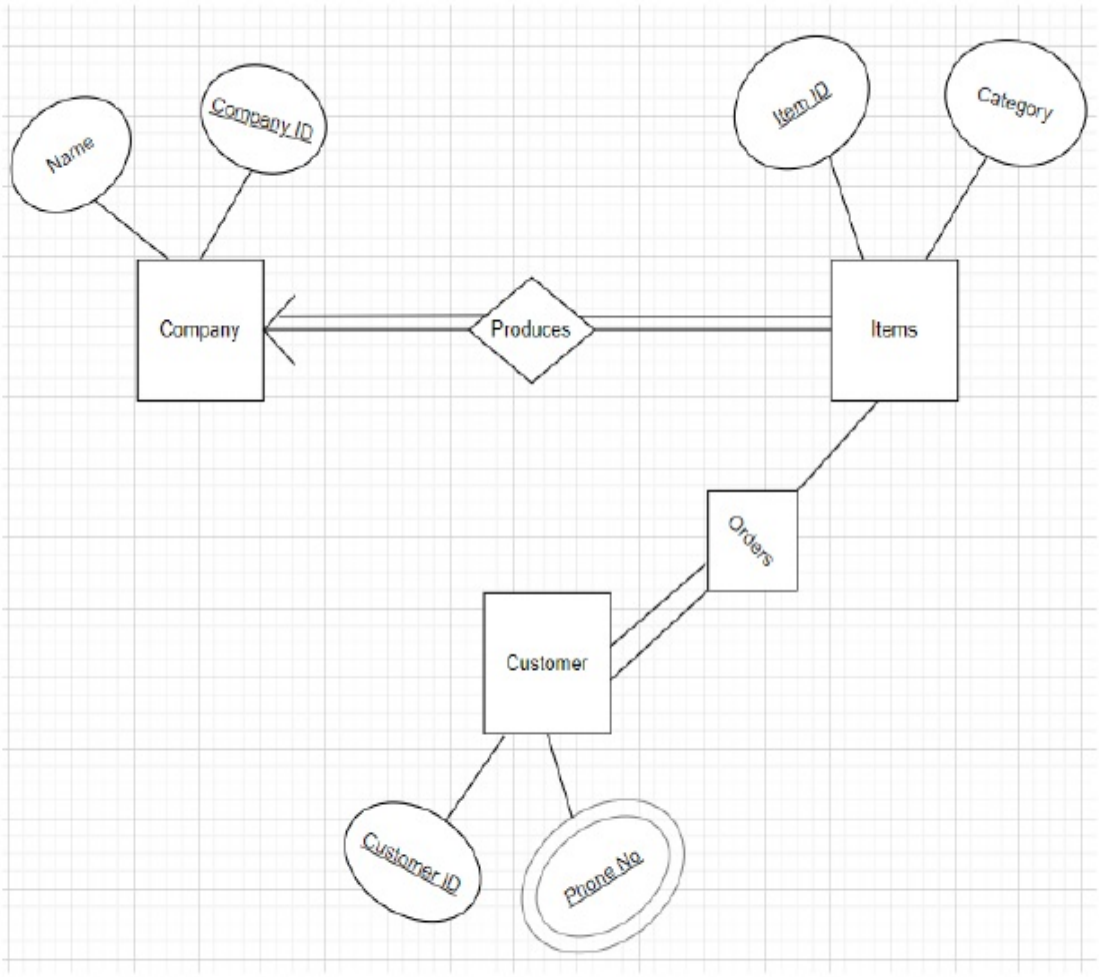


Figure 3: **Instructor**

Which of the following statement(s) is/are correct?

Options :

6406532467833. ✖ There might exist a company that has not produced any items

6406532467834. ✔ There might exist an item that has not been ordered by any customer

6406532467835. ✖ A company can produce at most one item

6406532467836. ✔ A customer can buy more than one item

Sub-Section Number : 8

Sub-Section Id : 640653107614

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 94 Question Id : 640653737369 Question Type : SA Calculator : None

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

Correct Marks : 4

Question Label : Short Answer Question

Consider the following relations $\mathbf{X}(A, B, C)$, $\mathbf{Y}(A, B, D)$, $\mathbf{Z}(A, F)$.

A	B	C
A_1	B_1	C_1
A_2	B_2	C_2
A_3	B_3	C_3
A_3	B_1	C_2
A_4	B_1	C_1

Table 4: **X**

A	B	D
A_1	B_1	D_2
A_2	B_3	D_2
A_1	B_2	D_3
A_3	B_1	D_2

Table 5: **Y**

A	F
A_2	F_3
A_1	F_2
A_3	F_4

Table 6: **Z**

How many tuples will be returned by the following relational algebra query?

$$\Pi_A(\sigma_{((X.B=Y.B)\wedge(Y.D=D_2))}(X \times Y)) \cup \Pi_A(\sigma_{((Y.A=Z.A)\wedge(Z.F=F_3))}(Y \times Z))$$

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

4

Question Number : 95 Question Id : 640653737371 Question Type : SA Calculator : None

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

Correct Marks : 4

Question Label : Short Answer Question

Consider an entity relationship in which entity sets **student** and **course** have a many-to-many relationship. The attributes of **student** entity are *id*, *name*, *dept_name*, *email* and *mobile_no* where *id* is the primary key attribute, *mobile_no* and *email* are multi-valued attributes.The attributes of **course** entity are *c_id*, *name*, *dept_name* and *credits* where *c_id* is the primary key attribute.
What is the minimum number of tables needed to represent the above entity relationship?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

5

Question Number : 96 Question Id : 640653737372 Question Type : SA Calculator : None

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

Correct Marks : 4

Question Label : Short Answer Question

Consider the table **instructor** as shown below.

id	name	dept_name	salary
10101	Srinivasan	Comp. Sci.	65000
12121	Wu	Finance	90000
15151	Mozart	Music	40000
22222	Einstein	Physics	95000
32343	El Said	History	60000
33456	Gold	Physics	87000
45565	Katz	Comp. Sci.	75000
58583	Califieri	History	62000
76543	Singh	Finance	80000
76766	Crick	Biology	72000
83821	Brandt	Comp. Sci.	92000
98345	Kim	Elec. Eng.	80000

Table 9: **instructor**

What will be the output of the following query?

```
with dept_total (dept_name, value) as
    (select dept_name, sum(salary)
     from instructor
     group by dept_name),
dept_total_avg(value) as
    (select avg(value)
     from dept_total)
select count(*)
from dept_total, dept_total_avg
where dept_total.value > dept_total_avg.value
```

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

3

Question Number : 97 Question Id : 640653737373 Question Type : SA Calculator : None

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

Correct Marks : 4

Question Label : Short Answer Question

Consider the relational schema given in Figure 4.

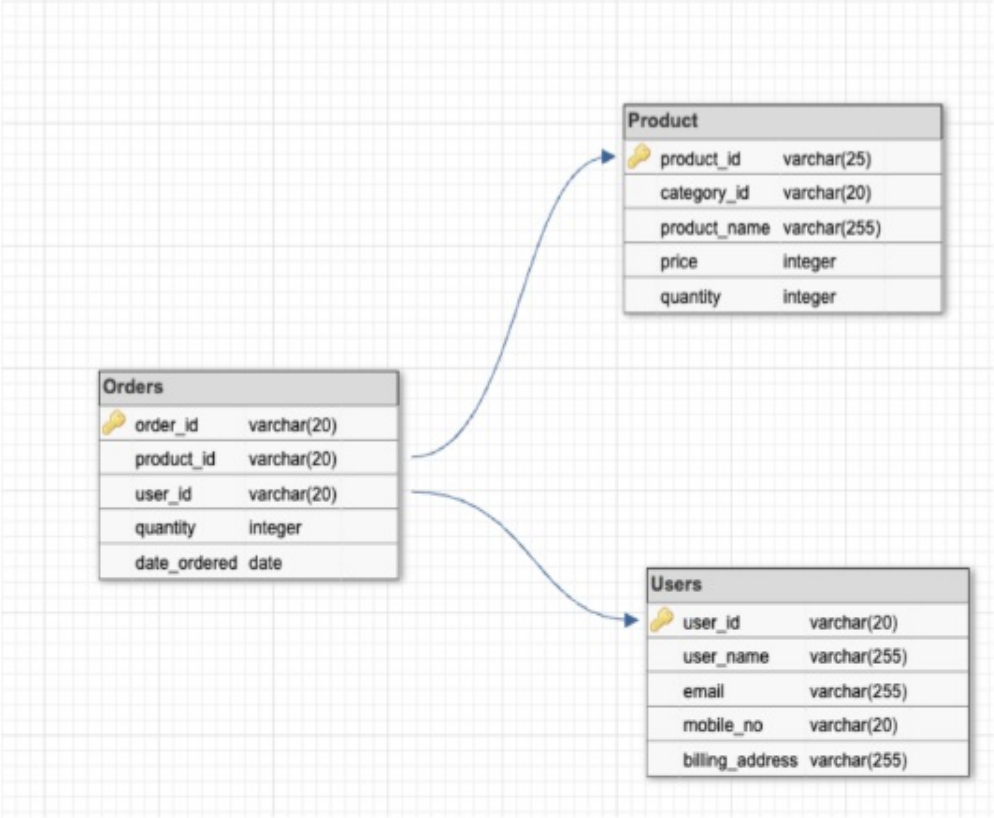


Figure 4: eshop Schema

If the relations **Orders**, **Product** and **Users** have 15, 6, 8 rows respectively, (Note: Consider all the attributes are having NOT NULL constraint.)

Query:

```
SELECT * FROM Orders RIGHT OUTER JOIN Users
ON orders.user_id = Users.user_id;
```

A = Maximum number of rows returned by the above query.
B = Minimum number of rows returned by the above query.

What is the value of A-B?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

7

Sub-Section Number : 9

Sub-Section Id : 640653107615

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 98 Question Id : 640653737370 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 the relation **student** as shown in Table 7

Roll_no	Name	Marks
1	Ram	50
2	Rakesh	65
3	Ram	45
4	Pranav	89
5	Rakesh	99
6	Emily	99
7	Grace	100
8	Lily	95
9	Lily	90
10	Rajib	90

Table 7: **student**

What is the number of tuples returned by the following relational algebra expression
$\prod_{name}(\sigma_{marks>50}(student))$

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

6

Sub-Section Number : 10

Sub-Section Id : 640653107616

Question Shuffling Allowed : No

Is Section Default? : null

Question Id : 640653737374 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 : (99 to 100)

Question Label : Comprehension

Consider the tables **Players** and **Points** as shown below and answer the given subquestions.

Player_ID	Name	Jersey_No
1	Harry	9
2	Jake	22
3	Louis	10
4	John	55
5	Joseph	6
6	Luke	4

Table 10: **Players**

Match_ID	Score	Player_ID
10	200	1
5	170	2
9	166	3
6	250	4

Table 11: **Points**

Sub questions

Question Number : 99 Question Id : 640653737375 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

How many rows will be returned by the output of below query?

```
select *
from Players left outer join Points
on Players.Player_ID=Points.Player_ID
where name like 'J%';
```

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

3

Question Number : 100 Question Id : 640653737376 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

What will be the output of the following query?

```
select distinct name
from Players
except
select t1.name
from Players as t1, Players as t2
where t1.Jersey_No<t2.Jersey_No
```

Options :

6406532467843. ✖ Name of the player having the lowest jersey number

6406532467844. ✖ Name of the player having the second highest jersey number

6406532467845. ✔ Name of the player having the highest jersey number

6406532467846. ✖ Name of the player having the second lowest jersey number

PDSA

Section Id :	64065351355
Section Number :	7
Section type :	Online