Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No

Group I

Group Number :	1
Group Id :	64065313726
Group Maximum Duration :	0
Group Minimum Duration :	90
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	705
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No
Revisit allowed for group Instructions? :	Yes
Maximum Instruction Time :	0
Minimum Instruction Time :	0
Group Time In :	Minutes
Navigate To Group Summary From Last Question? :	No
Disable Submit Button During Assessment? :	No
Section Selection Time? :	0
No of Optional sections to be attempted :	0

Sem1 CT

Section Id :	64065339021
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	15
Number of Questions to be attempted :	15
Section Marks :	50
Display Number Panel :	Yes
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 :	64065382271
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 1 Question Id : 640653576783 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 "FOUNDATION LEVEL : SEMESTER 1: COMPUTATIONAL THINKING (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 :

6406531926413. ✔ YES

6406531926414. ✖ NO

Question Number : 2 Question Id : 640653576784 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

Scores

RowNo	Name	Gender	DateOfBirth	CityTown	Mathematics	Physics	Chemistry	Total
0	Bhuvanesh	M	7 Nov	Erode	68	64	78	210
■ ■ ■								
29	Naveen	M	13 Oct	Vellore	72	66	81	219

Words

RowNo	Word	PartOfSpeech	LetterCount
0	It	Pronoun	2
■ ■ ■			
64	cane.	Noun	4

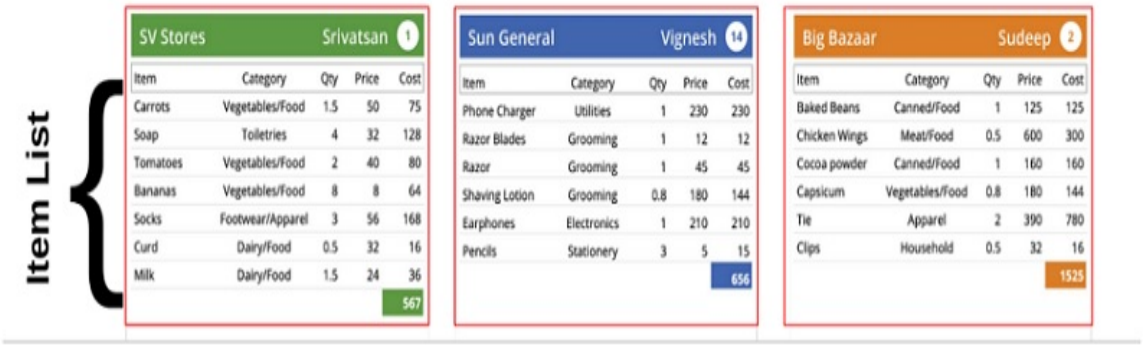
Library

RowNo	Name	Author	Genre	Language	Pages	Publisher	Year
0	Igniting Minds	Kalam	Nonfiction	English	178	Penguin	2002
■ ■ ■							
29	Malgudi Days	Narayan	Fiction	English	150	Indian Thought	1943

Olympics

Seq. No.	Name	Gender	Nationality	Host country	Year	Sport	Medal
0	Karnam Malleswari	F	Indian	Australia	2000	Weightlifting	Bronze
			- - -				
49	Michael Phelps	M	American	China	2008	Swimming	Gold

Three sample cards out of 30 for Shopping Bills dataset



Options :

6406531926415. ✔ Useful Data has been mentioned above.

6406531926416. ✖ This data attachment is just for a reference & not for an evaluation.

Sub-Section Number :	2
Sub-Section Id :	64065382272
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 3 Question Id : 640653576785 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

The following pseudocode is executed using the "Words" dataset. What will **count** represent at the end of the execution?

```
count = 0
while(Table 1 has more rows){
    flag = False
    Read the first row X in Table 1
    if(X.PartOfSpeech == "Adjective"){
        flag = True
    }
    if(X.LetterCount <= 2){
        flag = True
    }
    if(flag){
        count = count + 1
    }
    Move X to Table 2
}
```

Options :

6406531926417. ✖ Number of words which are adjectives and have at least two letters

6406531926418. ✖ Number of words which are either adjectives or have at most two letters but not both

6406531926419. ✔ Number of words which are adjectives or have at most two letters or both

6406531926420. ✖ Number of words which are not adjectives and have exactly two letters

Question Number : 4 Question Id : 640653576786 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

The following pseudocode is executed using the “Library” dataset. What will **A** represent at the end of execution?

```
A = 0
count = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    count = count + 1
    if(X.Author != “Kalam” and X.Language != “English”){
        A = A + 1
    }
    Move X to Table 2
}
A = count - A
```

Options :

6406531926421. ✖ Number of books written by author Kalam in English

6406531926422. ✖ Number of books not written by author Kalam in English

6406531926423. ✖ Number of English books written by authors other than Kalam

6406531926424. ✔ Number of books that are written by Kalam or in English or both

Question Number : 5 Question Id : 640653576787 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

The given pseudocode is executed using the “Words” dataset. Assume that **vCount(X)** returns the number of vowels in **X**.Word. What will **B** represent at the end of the execution?

```
SumT = 0, CountT = 0, B = 0
while(Pile 1 has more cards){
    Read the top card X from Pile 1
    if(vCount(X) > 1){
        SumT = SumT + X.LetterCount
        CountT = CountT + 1
    }
    Move X to Pile 2
}
B = SumT / CountT
```

Options :

6406531926425. ✖ Average letter count of words in the dataset

6406531926426. ✖ Sum of words that contain at least two vowels

6406531926427. ✔ Average letter count of words containing at least two vowels in the dataset

6406531926428. ✖ Average letter count of words containing at most two vowels in the dataset

Question Number : 6 Question Id : 640653576788 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 "Scores" dataset. What will **C** represent at the end of the execution?

```
C = 0
A = DoSomething(Table 1)
while(Table 2 has more rows){
    Read the first row X from Table 2
    if(X.Physics > A){
        C = C + X.Total
    }
    Move X to Table 1
}

Procedure DoSomething(Table 1)
    sum = 0
    n = 0
    while(Table 1 has more rows){
        Read the first row X in Table 1
        sum = sum + X.Physics
        n = n + 1
        Move X to Table 2
    }
    avg = sum / n
    return (avg)
End DoSomething
```

Options :

6406531926429. ✖ Sum of Total marks of students whose Physics marks are less than the average

Physics marks

6406531926430. ✔ Sum of Total marks of students whose Physics marks are more than the average Physics marks

6406531926431. ✖ Sum of Physics marks of students whose Physics marks are more than the average Physics marks

6406531926432. ✖ Sum of Physics marks of students whose Physics marks are less than the average Physics marks

Question Number : 7 Question Id : 640653576789 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

The following pseudocode is executed using the “Words” dataset. What will **A** represent at the end of the execution?

```
A = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    i = 1, B = 0
    while(i <= X.LetterCount){
        if(ith letter of X.Word is a vowel){
            B = B + 1
        }
        i = i + 1
    }
    if(B > 2){
        A = A + 1
    }
    Move X to Table 2
}
```

Options :

6406531926433. ✖ Number of words with at most two vowels

6406531926434. ✔ Number of words with at least three vowels

6406531926435. ✖ Number of words with at least two vowels

6406531926436. ✖ Number of words with exactly two vowels

Sub-Section Number : 3

Sub-Section Id : 64065382273

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 8 Question Id : 640653576790 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 **Player** dataset given below that keeps track of the runs scored by each player in the test matches held.

PlayerID	Name	Trial	TestSeries	WorldCup
1	Virat Kohli	167	186	104
2	MS Dhoni	177	184	123
3	Harbhajan Singh	89	74	93
4	Gautam Gambhir	100	100	100
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
99	Qureshi Ahmed	22	134	67
100	Afzal Khan	130	130	130

The following pseudocode is executed using the "Player" dataset. A player can join a sports club if his runs are above 75 in Trial, Test Series and World Cup. The variables **A**, **B** and **C** store the number of players in GoldStriker, SliverStriker and BronzeStriker clubs respectively based on the execution of the pseudocode.

```
A = 0, B = 0, C = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    if(X.Trial > 75 and X.TestSeries > 75 and X.WorldCup > 75){
        match = maxMatch(X)
        if(match == "WorldCup"){
            A = A + 1
        }
        if(match == "TestSeries"){
            B = B + 1
        }
        if(match == "Trial"){
            C = C + 1
        }
    }
    Move X to Table 2
}
Procedure maxMatch(Z)
    if(Z.Trial > Z.TestSeries){
        if(Z.Trial > Z.WorldCup){
            return("Trial")
        }
        else{
            return("WorldCup")
        }
    }
    else{
        if(Z.TestSeries > Z.WorldCup){
            return("TestSeries")
        }
        else{
            return("WorldCup")
        }
    }
End maxMatch
```

Which club will be allotted to a player if he gets 167, 180, 180 runs in Trial, TestSeries, and WorldCup respectively ?

Options :

6406531926437. ✔ GoldStriker

6406531926438. ✖ SilverStriker

6406531926439. ✖ BronzeStriker

6406531926440. ✖ SilverStriker and BronzeStriker

Question Number : 9 Question Id : 640653576791 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

The following pseudocode is executed using the “Scores” dataset. At the end of the execution, **A** captures the lowest Chemistry marks scored by a male student from Vellore. Choose the correct code fragment(s) to complete the pseudocode. It is a Multiple Select Question.

```
A = 101
while (Table 1 has more rows) {
    Read the first row X in Table 1
    **********************
    *    Fill the code    *
    **********************
    Move X to Table 2
}
```

Options :

```
if(X.Gender != 'F' and X.CityTown == "Vellore"){
    if(X.Chemistry > A){
        A = X.Chemistry
    }
}
```

6406531926441. ✖

```
if(X.Gender == 'M' and X.CityTown == "Vellore"){
    if(X.Chemistry < A){
        A = X.Chemistry
    }
}
```

6406531926442. ✔

```
if(X.Gender == 'M' and X.CityTown == "Vellore"){
    if(X.Chemistry > A){
        A = X.Chemistry
    }
}
```

6406531926443. ✖

```
if(X.Gender != 'F'){
    if(X.CityTown == "Vellore"){
        if(X.Chemistry < A){
            A = X.Chemistry
        }
    }
}
```

6406531926444. ✔

Question Number : 10 Question Id : 640653576792 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

The following pseudocode is executed using the “Olympics” dataset. At the end of the execution, **A** stores the number of players who are either female from India or have won the match hosted by Australia in the year 2006 or both. But the pseudocode may have mistakes. Identify all such mistakes (if any). Assume that all statements not listed in the options below are free of errors. It is a Multiple Select Question .

```
A = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    C = False, D = False
    if(X.Gender == 'F' and X.HostCountry == "Australia"){
        C = True
    }
    if(X.Year == 2006 and X.Nationality == "India"){
        D = True
    }
    if(C or D){
        A = A + 1
    }
    Move X to Table 2
}
```

Options :

6406531926445. ✖ Line 1: Incorrect initialization of **A**

6406531926446. ✔ Line 5: Condition to update **C** is incorrect

6406531926447. ✔ Line 8: Condition to update **D** is incorrect

6406531926448. ✖ No error in the code

Sub-Section Number : 4

Sub-Section Id : 64065382274

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 11 Question Id : 640653576793 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Two words are said to be **Special** if they fulfill the following conditions:

- They are different words
- Number of letters are not same in both words
- Number of vowels are same in both words

The given pseudocode is executed using the "Words" dataset. Assume that **vCount(X)** returns the number of vowels in **X**.Word. At the end of the execution, **count** stores the number of **Special** pairs. Choose the correct code fragment(s) to complete the pseudocode. It is a Multiple Select Question

```
1  count = 0
2  while(Table 1 has more rows){
3        Read the first row X in Table 1
4        Move X to Table 2
5        while(Table 1 has more rows){
6              Read the first row Y in Table 1
7              *****************
8              * Fill the code *
9              *****************
10             Move Y to Table 3
11       }
12       Move all rows from Table 3 to Table 1
13 }
```

Options :

6406531926449. ✔

```
if(X.Word != Y.Word){
    if(X.LetterCount != Y.LetterCount){
        if(vCount(X) == vCount(Y)){
            count = count + 1
        }
    }
}
```

6406531926450. ✖

```
if(X.Word == Y.Word){
    if(X.LetterCount != Y.LetterCount){
        if(vCount(X) == vCount(Y)){
            count = count + 1
        }
    }
}
```

6406531926451. ✖

```
if(X.Word != Y.Word){
    if(vCount(X) == vCount(Y)){
        if(X.LetterCount - vCount(X) == Y.LetterCount - vCount(Y)){
            count = count + 1
        }
    }
}
```

6406531926452. ✔

```
if(X.Word != Y.Word){
    if(vCount(X) == vCount(Y)){
        if(X.LetterCount - vCount(X) != Y.LetterCount - vCount(Y)){
            count = count + 1
        }
    }
}
```

Sub-Section Number :	5
Sub-Section Id :	64065382275
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 12 Question Id : 640653576794 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

What would be the value of **s** at the end of the execution of the following pseudocode if the value of **n** is 1024 ?

The operator '**//**' returns the quotient.

For instance, 8 **//** 7 = 1 and 10 **//** 5 = 2

The operator '**%**' returns the remainder.

For instance, 8 **%** 7 = 1 and 10 **%** 5 = 0.

```
r = 0, s = 0, n = 1024
while(n > 0){
    r = n % 10
    s = s + r
    n = n // 10
}
```

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

7

Sub-Section Number :	6
Sub-Section Id :	64065382276
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 13 Question Id : 640653576795 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 the value of **X** be "**aeroplane**". What is the value of **A** at the end of the execution of the pseudocode ?

```
i = 1
A = 1
while(i <= X.LetterCount){
    if(ith letter of X is a vowel){
        A = A*2
    }
    i = i + 1
}
```

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

32

Sub-Section Number :	7
Sub-Section Id :	64065382277
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653576796 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 : (14 to 15)

Question Label : Comprehension

The SouthCo Electricity Board charges consumers according to the number of the units consumed by them per month. However, the amount is to be paid quarterly in advance as per the tariff :

Units consumed	Charges
up to 50 units	₹ 2 / unit
more than 50 units	₹ 3 / unit

For instance, suppose a consumer has consumed 30 units. He/she has to pay **₹ 2** per unit, i.e. **₹ 60**.

If a customer has consumed 60 units, he/she has to pay **₹ 2** per unit for the first 50 units and **₹ 3** per unit for the remaining units so the total amount is **₹ 100** + **₹ 30** = **₹ 130**

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 14 Question Id : 640653576797 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

Let **unit** be the number of units consumed by the consumer and **cost** be the amount of the bill to be paid. Choose the correct implementation to compute the **cost**.

Options :

```
cost = 0
if(unit <= 50){
    cost = unit * 2
}
if(unit > 50){
    cost = unit * 3
}
```

6406531926455. ✖

6406531926456. ✖

```
cost = 0
if(unit <= 50){
    cost = unit * 2
}
if(unit > 50){
    cost = cost + ( unit - 50 ) * 3
}
```

6406531926457. ✔

```
cost = 0
if(unit <= 50){
    cost = unit * 2
}
if(unit > 50){
    cost = 50 * 2 + ( unit - 50 ) * 3
}
```

6406531926458. ✖

```
cost = 0
if(unit <= 50){
    cost = unit * 2
}
if(unit > 50){
    cost = 50 * 2 + unit * 3
}
```

Question Number : 15 Question Id : 640653576798 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

The SouthCo Electricity Board rates its consumers by the units consumed yearly in the following fashion :

Units (per annum)	Grade
less than 200	1
200 to 350	2
351 to 550	3
> 550	4

Consider the dataset of the SouthCo Electricity Board given below.

ConsumerID	FirstName	LastName	MeterNumber	Units	Area	YearOfRegistration
SEB000001	Shyam	Bansal	201902477	456	MG Road	2004
SEB000002	Kartik	Ahuja	202304876	512	JD Road	2004
SEB000003	Payal	Singh	202232846	234	MG Road	2005
.....	.....	.....	.....	.....	.....	.....
SEB189672	Neha	Kashyap	202283384	199	RNB Townhall	2023

The following pseudocode is executed using the above dataset. At the end of the execution, **A**, **B**, **C** and **D** capture the number of pairs of users who have scored the same grade , reside in the same area but have different *YearOfRegistration*. Choose the correct code fragment(s) to complete the pseudocode.

```
A = 0, B = 0, C = 0, D = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    if(X.Units < 200){
        Move X to Table 2
    }
    if(X.Units >= 200 and X.Units <= 350){
        Move X to Table 3
    }
    if(X.Units >= 351 and X.Units <= 550){
        Move X to Table 4
    }
    if(***** Statement I *****){
        Move X to Table 5
    }
}
A = findMatch(Table 2)
B = findMatch(Table 3)
C = findMatch(Table 4)
D = findMatch(Table 5)

Procedure findMatch(Table T1)
    E = 0
    while(Table T1 has more rows){
        Read the first row Y in Table T1
        Move Y to Table T2
        while(Table T1 has more rows){
            Read the first row Z in Table T1
            Move Z to Table T3
            if(****** Statement II ******){
                E = E + 1
            }
        }
        Move all rows from Table T3 to Table T1
    }
    return(E)
End findMatch
```

Options :

6406531926459. ✖

```
I : X.Units > 550
II : Y.YearOfRegistration == Z.YearOfRegistration and Y.Area != Z.Area
```

6406531926460. ✖

```
I : X.Units < 550

II : Y.YearOfRegistration != Z.YearOfRegistration or Y.Area == Z.Area
```

6406531926461. ✖

```
I : X.Units > 550
II : Y.YearOfRegistration != Z.YearOfRegistration or Y.Area == Z.Area
```

6406531926462. ✔

```
I : X.Units > 550
II : Y.YearOfRegistration != Z.YearOfRegistration and Y.Area == Z.Area
```

Sub-Section Number :	8
Sub-Section Id :	64065382278
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 16 Question Id : 640653576799 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "Scores" dataset. At the end of the execution, **count** captures the number of pairs of students who are of the same gender or are from the same city but not both. Choose the correct code fragment to complete the pseudocode. It is a Multiple Select Question.

```
count = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    Move X to Table 2
    while(Table 1 has more rows){
        Read the first row Y in Table 1
        Move Y to Table 3
        count = count + findPair(X, Y)
    }
    Move all rows from Table 3 to Table 1
}
Procedure findPair(X, Y)
    **************************
    ***** Fill the code ******
    **************************
End findPair
```

Options :

```
A = 0, B = 0
if(X.Gender == Y.Gender or X.TownCity == Y.TownCity){
    A = A + 1
}
if(X.Gender == Y.Gender and X.TownCity == Y.TownCity){
    B = B + 1
}
return(A-B)
```

6406531926463. ✔

```
A = 0, B = 0
if(X.Gender == Y.Gender and X.TownCity == Y.TownCity){
    A = A + 1
}
if(X.Gender == Y.Gender or X.TownCity == Y.TownCity){
    B = B + 1
}
return(A-B)
```

6406531926464. ✖

6406531926465. ✔

```
A = False, B = False
if(X.Gender == Y.Gender){
    A = True
}
if(X.TownCity == Y.TownCity){
    B = True
}
if((A and not B) or (not A and B)){
    return(1)
}
return(0)
```

```
A = False, B = False
if(X.Gender == Y.Gender){
    A = True
}
if(X.TownCity == Y.TownCity){
    B = True
}
if((A or not B) and (not A or B)){
    return(1)
}
return(0)
```

6406531926466.

Sem1 English1

Section Id :	64065339022
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	50
Display Number Panel :	Yes
Group All Questions :	No