Sub-Section Id :	64065380255
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 176 Question Id : 640653563286 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

Find the total numbers greater than 6000 that can be formed using the digits 2, 3, 5, 6 and, 9 without repetition.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

168

Sem1 CT

Section Id :	64065338308
Section Number :	7
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	21
Number of Questions to be attempted :	21
Section Marks :	100
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and	Yes

Clear Response :

Maximum Instruction Time : 0

Sub-Section Number : 1

Sub-Section Id : 64065380256

Question Shuffling Allowed : No

Is Section Default? : null

Question Number : 177 Question Id : 640653563288 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 :

6406531883197. ✔ YES

6406531883198. ✖ NO

Question Number : 178 Question Id : 640653563289 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

SeqNo	Name	Gender	DateOfBirth	TownCity	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

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

Library

SeqNo	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							
SeqNo	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 :

6406531883199. ✔ Useful Data has been mentioned above

6406531883200. ✖ This data attachment is just for a reference & not for an evaluation.

Sub-Section Number : 2

Sub-Section Id : 64065380257

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 179 Question Id : 640653563290 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 "Scores" dataset. What will **count** represent at the end of the execution?

```
count = 0
while(Table 1 has more rows){
    flag1 = False, flag2 = False
    Read the first row X in Table 1
    if(X.Gender == 'M'){
        flag1 = True
    }
    if(X.CityTown == "Chennai"){
        flag2 = True
    }
    if(flag1 == flag2){
        count = count + 1
    }
    Move X to Table 2
}
```

Options :

6406531883201. ✖ Number of students who are either male or are from Chennai.

6406531883202. ✖ Number of female students from other than Chennai.

6406531883203. ✔ Number of male students from Chennai + number of female students from other than Chennai.

6406531883204. ✖ Number of all students except male students from other than Chennai.

Question Number : 180 Question Id : 640653563291 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 **B** represent at the end of the execution?

```
A = 0, B = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    if(X.PartOfSpeech == "Noun"){
        A = A + 1
    }
    else{
        if(X.LetterCount > 4){
            B = B + 1
        }
    }
    Move X to Table 2
}
```

Options :

6406531883205. ✖ Number of nouns with letter count more than 4.

6406531883206. ✔ Number of words other than nouns with letter count more than 4.

6406531883207. ✖ Number of nouns with letter count less than or equal to 4.

6406531883208. ✖ Number of words other than nouns with letter count less than or equal to 4.

Sub-Section Number : 3

Sub-Section Id : 64065380258

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 181 Question Id : 640653563292 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

The following pseudocode is executed using the "Words" dataset. The variable **count** stores the number of words which are either nouns or have letter count at least 5, but not both. Choose the correct code fragment to complete the pseudocode.

```
count = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    if(checkSomething(X)){
        count = count + 1
    }
    Move X to Table 2
}

Procedure checkSomething(Y)
    A = False, B = False
    if(X.PartOfSpeech == "Noun"){
        A = True
    }
    if(X.LetterCount >= 5){
        B = True
    }
    ************************
    *** Fill the code   ***
    ************************
End checkSomething
```

Options :

```
if(A and B){
    return(True)
}
else{
    return(False)
}
```

6406531883209. ✖

```
if(A or B){
    return(True)
}
else{
    return(False)
}
```

6406531883210. ✖

6406531883211. ✖

```
if(not(A and B) or (A or B)){
    return(True)
}
else{
    return(False)
}
```

6406531883212. ✔

```
if(not(A and B) and (A or B)){
    return(True)
}
else{
    return(False)
}
```

Question Number : 182 Question Id : 640653563293 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

The following pseudocode is executed using the "Library" dataset. At the end of the execution, **N** captures the name of a book written in a language other than English with the maximum number of pages, and **A** captures the number of pages in the book.

```
A = 0, N = "None"
while(Table 1 has more rows){
    Read the first row X in Table 1
    if(X.Language != "English" and X.Pages > A){
        A = X.Pages
        N = X.Name
    }
    Move X to Table 2
}
```

Assume that the rows of the table are shuffled in any random order, choose the correct option.

Options :

6406531883213. ✖ There might be some change in the values of both **A** and **N**, based on the

order of rows

6406531883214. ✔ There might be a change in the value of **N**, based on the order of rows

6406531883215. ✖ There will be NO change in the values of both **A** and **N**, based on the order of rows

6406531883216. ✖ There might be a change in the value of **A**, based on the order of rows

Question Number : 183 Question Id : 640653563294 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

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

```
1  B = 0
2  while(Table 1 has more rows){
3      Read the first row X in Table 1
4      if(X.Gender == 'F'){
5          if(X.Physics > 90){
6              B = B + 1
7          }
8          else{
9              if(X.Mathematics < 90){
10                 B = B + 1
11             }
12         }
13     }
14     Move X to Table 2
15 }
```

Options :

6406531883217. ✖ Number of female students with Physics marks more than 90 and Mathematics marks less than 90

6406531883218. ✖ Number of male students with either Physics marks more than 90 or with Mathematics marks less than 90

6406531883219. ✖ Number of male students with Physics marks more than 90 and Mathematics

marks less than 90

6406531883220. ✔ Number of female students with either Physics marks more than 90 or with Mathematics marks less than 90

Question Number : 184 Question Id : 640653563295 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

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

```
dict = {}
while(Table 1 has more rows){
    Read the first row X in Table 1
    if(isKey(dict, X.Name)){
        if(not member(dict[X.Name], X.Medal)){
            dict[X.Name] = dict[X.Name] ++ [X.Medal]
        }
    }
    else{
        dict[X.Name] = [X.Medal]
    }
    Move X to Table 2

}
```

Options :

6406531883221. ✖ A dictionary with player's names as keys mapped to the list of all the medals won by the player

6406531883222. ✔ A dictionary with player's names as keys mapped to the list of distinct medal types won by the player

6406531883223. ✖ A dictionary with medal types as keys mapped to the list of players who have won that medal

6406531883224. ✖ A dictionary with medal types as keys mapped to the list of unique players who have won that medal

Question Number : 185 Question Id : 640653563296 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

The following pseudocode is executed using the "Scores" dataset. What will **first(D[i]) - last(D[i])** represent for a given key **i** ?

```
D = {}
while(Table 1 has more rows){
    Read the first row X in Table 1
    if(isKey(D, X.TownCity)){
        if(first(D[X.TownCity]) < X.Mathematics){
            D[X.TownCity] = [X.Mathematics, last(D[X.TownCity])]
        }
        if(last(D[X.TownCity]) > X.Mathematics){
            D[X.TownCity] = [first(D[X.TownCity]), X.Mathematics]
        }
    }
    else{
        D[X.TownCity] = [X.Mathematics, X.Mathematics]
    }
    Move X to Table 2
}
```

Options :

6406531883225. ✔ The difference between highest and lowest Mathematics marks of the city **i**

6406531883226. ✖ The difference between overall highest and lowest Mathematics marks of the dataset

6406531883227. ✖ The difference between highest and second highset Mathematics marks of the city **i**

6406531883228. ✖ It will be always 0.

Sub-Section Number : 4

Sub-Section Id : 64065380259

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 186 Question Id : 640653563297 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 6

Question Label : Multiple Choice Question

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

```
wordCount = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    if(checkSomething(X) == 0){
        wordCount = wordCount + 1
    }
    Move X to Table 2
}

Procedure checkSomething(Y)
    i = 1, C = 0
    A = False, B = False
    while(i <= Y.LetterCount){
        if(ith letter of Y.Word is vowel){
            if(A and not B){
                C = 1
            }
            A = True, B = False
        }
        else{
            if(not A and B){
                C = 1
            }
            A = False, B = True
        }
        i = i + 1
    }
    return(C)
End checkSomething
```

Options :

6406531883229. ✖ Number of words in which vowels occur consecutively

6406531883230. ✖ Number of words in which no two vowels occur consecutively

6406531883231. ✖ Number of words in which vowels and consonants occur consecutively

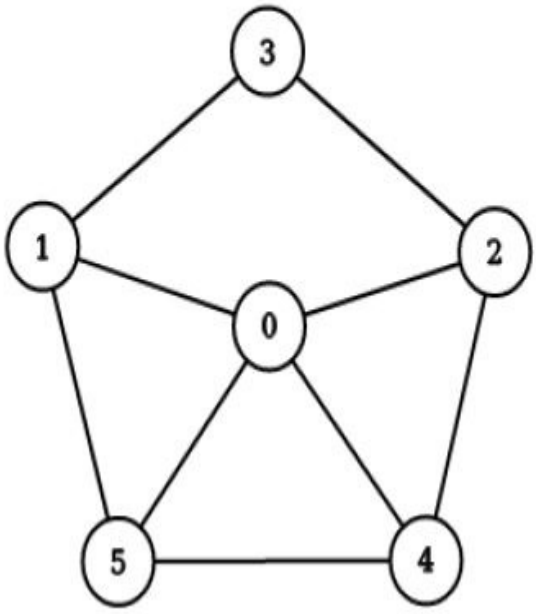
6406531883232. ✔ Number of words in which no two vowels and no two consonants occur consecutively

Question Number : 187 Question Id : 640653563298 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 6

Question Label : Multiple Choice Question

Consider the following graph with six nodes. **M** is the 6 × 6 adjacency matrix corresponding to the graph below. Assume that **M** has already been computed.



What will the value of **L** be after executing the following pseudocode?

```
D = {}
L = []
D[3] = -1
D, L = searchPath(M, D, L, 3)

Procedure searchPath(graph, P, S, i)
    S = S ++ [i]
    foreach j in columns(graph){
        if(graph[i][j] == 1 and not (isKey(P, j))){
            P[j] = i
            P, S = searchPath(graph, P, S, j)
        }
    }
    return(P, S)
End searchPath
```

Options :

6406531883233. ✔ L = [3, 1, 0, 2, 4, 5]

6406531883234. ✖ L = [3, 1, 5, 4, 2, 0]

6406531883235. ✖ L = [0, 1, 2, 3, 4, 5]

6406531883236. ✖ L = [3, 2, 0, 1, 5, 4]

Sub-Section Number : 5

Sub-Section Id : 64065380260

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 188 Question Id : 640653563299 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 procedure given below where **A** and **B** are two rows in the "Words" dataset. Let procedure **getSomething(A)** returns a dictionary with characters of **A.***Word* as keys mapped to their frequency in **A.***Word*.

```
1  Procedure doSomething(A, B)
2      count = 0
3      dictA = getSomething(A)
4      dictB = getSomething(B)
5      foreach letter in keys(dictA){
6          if(iskey(dictB, letter)){
7              if(dictA[letter] == dictB[letter]){
8                  count = count + 1
9              }
10         }
11     }
12     return(count)
13 End doSomething
```

Let **X.***Word* = "computational" and **Y.***Word* = "thinking", then, what will **doSomething(X, Y)** return?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

0

Sub-Section Number : 6

Sub-Section Id : 64065380261

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 189 Question Id : 640653563300 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Short Answer Question

What will the value of **S** be at the end of the execution of the following pseudocode?

```
L1 = [3, 0, 2]
L2 = [1, -4, 5]
S = doSomething(L1, L2) - doSomething(L2, L1)

Procedure doSomething(X, Y)
    if(length(X) != length(Y)){
        return(0)
    }
    if(length(X) == 1 and length(Y) == 1){
        return(first(X) * first(Y))
    }
    return(first(X) * last(Y) + doSomething(rest(X), init(Y)))
End doSomething
```

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

0

Sub-Section Number : 7

Sub-Section Id : 64065380262

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 190 Question Id : 640653563301 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Selectable Option : 0

Question Label : Multiple Select Question

Let **D** be a dictionary. Choose the correct statement(s) about the dictionary **D**. It is a Multiple Select Question (MSQ).

Options :

6406531883239. ✖ For different keys **X** and **Y**, **D[X]** $\neq$ **D[Y]**

6406531883240. ✔ **keys(D)** has no duplicate elements

6406531883241. ✖ All the keys of **D** must be of the same datatype

6406531883242. ✔ The values of **D** can be of different datatypes

Sub-Section Number :	8
Sub-Section Id :	64065380263
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 191 Question Id : 640653563302 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Selectable Option : 0

Question Label : Multiple Select Question

reverse is a recursive procedure to reverse a list. Select the correct code fragment to complete the pseudocode given below. It is a Multiple Select Question (MSQ).

```
Procedure reverse(L)
    if(length(L) <= 1){
        return(L)
    }
    **********************
    * Fill the code     *
    **********************
End reverse
```

Options :

6406531883243. ✔ return([last(L)] ++ reverse(init(L)))

6406531883244. ✖ return([first(L)] ++ reverse(rest(L)))

6406531883245. ✔ return([last(L)] ++ reverse(init(rest(L))) ++ [first(L)])

6406531883246. ✖ return([first(L)] ++ reverse(init(rest(L))) ++ [last(L)])

Sub-Section Number :	9
Sub-Section Id :	64065380264
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 192 Question Id : 640653563303 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5 Selectable Option : 0

Question Label : Multiple Select Question

The procedure **visitedShop(B)** returns the list of names of customers who have visited shop **B** in the "Shopping Bills" dataset. Additionally, each customer must be represented exactly once in the returned list. The following 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 (MSQ).

```
1  Procedure visitedShop(shop)
2      S = "None"
3      while(Pile 1 has more cards){
4          Read the top card X from Pile 1
5          if(X.ShopName == shop){
6              if(not(checkMember(S, X.CustomerName))){
7                  S = S ++ [X.ShopName]
8              }
9          }
10         Move X to Pile 2
11     }
12     return(S)
13 End visitedShop
14
15 Procedure checkMember(L, name)
16     present = True
17     foreach x in L{
18         if(x == name){
19             present = True
20             exitloop
21         }
22     }
23     return(present)
24 End checkMember
```

Options :

6406531883247. ✔ **Line 2:** Incorrect initialization of **S**

6406531883248. ✖ **Line 6:** Incorrect condition to update **S**

6406531883249. ✔ **Line 7:** Incorrect update of **S**

6406531883250. ✔ **Line 16:** Incorrect initialization of **present**

6406531883251. ✖ No error

Sub-Section Number : 10

Sub-Section Id : 64065380265

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 193 Question Id : 640653563304 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 6 Selectable Option : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "Shopping Bills" dataset. At the end of the execution, **L** stores the list of distinct shops from which only one category of items have been bought. 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 (MSQ).

```
1  A = {}
2  L = []
3  while(Pile 1 has more cards){
4      Read the top card X from Pile 1
5      if(not isKey(A, X.ShopName)){
6          A = updateDict(A, X)
7      }
8      else{
9          A[X.ShopName] = []
10         A = updateDict(A, X)
11     }
12     Move X to Pile 2
13 }
14 foreach k in keys(A){
15     if(length(A[k]) == 1){
16         L = L ++ [k]
17     }
18 }
19 Procedure updateDict(D, Y)
20     foreach Z in Y.ItemList{
21         if(not member(D, Z.Category)){
22             D[Y.ShopName] = D[Y.ShopName] ++ [Z.Category]
23         }
24     }
25     return(D)
26 End updateDict
```

Options :

6406531883252. ✖ **Line 1:** Incorrect initialization of **A**

6406531883253. ✔ **Line 5:** Incorrect conditional statement

6406531883254. ✖ **Line 16:** Incorrect update of **L**

6406531883255. ✔ **Line 21:** Incorrect conditional statement

6406531883256. ✖ **Line 22:** Incorrect updation of dictionary **D**

Sub-Section Number :	11
Sub-Section Id :	64065380266
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653563305 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 : (194 to 195)

Question Label : Comprehension

stations is a list that contains the sequence of stations visited by a train from the "Trains" dataset. Each element in **stations** is a pair: [*Name*, *Distance*], the first entry is the name of the station, while the second entry is the distance of this station from the first station in the list.

minDist is a procedure that accepts **stations** as a parameter and returns the names of a pair of consecutive stations which have the shortest distance between them on this route. Complete the following procedure.

```
1  Procedure minDist(stations)
2      pair = ["None", "None"]
3      min = 10000, diff = 0
4      prev = first(stations)
5      foreach x in rest(stations){
6          diff = last(x) - last(prev)
7          **************************
8          *   Fill the code        *
9          **************************
10         prev = x
11     }
12     return(pair)
13 End minDist
```

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 194 Question Id : 640653563306 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

There may be multiple pairs having the same minimum distance. If we wish to find a pair of stations closest to the first station in the list, which of the following is the correct code fragment?

Options :

6406531883257. ✔

```
if(diff < min){
    min = diff
    pair = [first(prev), first(x)]
}
```

6406531883258. ✖

```
if(diff <= min){
    min = diff
    pair = [first(prev), first(x)]
}
```

6406531883259. ✖

```
if(diff < min){
    min = diff
    pair = [last(prev), last(x)]
}
```

6406531883260. ✖

```
if(diff <= min){
    min = diff
    pair = [last(prev), last(x)]
}
```

Question Number : 195 Question Id : 640653563307 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

There may be multiple pairs having the same minimum distance. If we wish to find a pair of stations closest to the last station in the list, which of the following is the correct code fragment?

Options :

6406531883261. ✖

```
if(diff < min){
    min = diff
    pair = [first(prev), first(x)]
}
```

6406531883262. ✔

```
if(diff <= min){
    min = diff
    pair = [first(prev), first(x)]
}
```

6406531883263. ✖

```
if(diff < min){
    min = diff
    pair = [last(prev), last(x)]
}
```

6406531883264. ✖

```
if(diff <= min){
    min = diff
    pair = [last(prev), last(x)]
}
```

Sub-Section Number : 12

Sub-Section Id : 64065380267

Question Shuffling Allowed : No

Is Section Default? : null

Question Id : 640653563308 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 : (196 to 198)

Question Label : Comprehension

trains is a list that contains information about trains associated with a station **stn**. Specifically, each element in this list is a pair: [*Arrival*, *Departure*]. If the arrival or departure time is empty, it is represented as "None".

```
flag1 = False, flag2 = True
count = 0
foreach x in trains{
    if(first(x) == "None" or last(x) == "None"){
        flag1 = True
    }
    else{
        count = count + 1
    }
}
if(count == length(trains)){
    flag2 = False
}
```

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 196 Question Id : 640653563309 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

Which of the following statements about the variable **flag1** is True at the end of execution of the given pseudocode?

Options :

6406531883265. ✔ It is True if and only if **stn** is a starting or ending station for at least one train in the list

6406531883266. ✖ It is False if and only if **stn** is a starting or ending station for at least one train in the list

6406531883267. ✖ It is True if and only if **stn** is a starting station for one train and ending station for some other train in the list

6406531883268. ✖ It is False if and only if **stn** is a starting station for one train and ending station for some other train in the list

Question Number : 197 Question Id : 640653563310 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 does the variable **count** represent at the end of execution of the given pseudocode?

Options :

6406531883269. ✖ It is the number of trains associated with **stn**

6406531883270. ✖ It is the number of trains for which **stn** is a starting station

6406531883271. ✖ It is the number of trains for which **stn** is an ending station

6406531883272. ✔ It is the number of trains for which **stn** is neither a starting nor an ending station

Question Number : 198 Question Id : 640653563311 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

At the end of execution of the code given , what can be said about the values stored by the

Boolean variables **flag1** and **flag2**?

Options :

6406531883273. ✔ **flag1** and **flag2** always store the same value

6406531883274. ✖ **flag1** and **flag2** always store opposite values

6406531883275. ✖ **flag1** always stores the value True

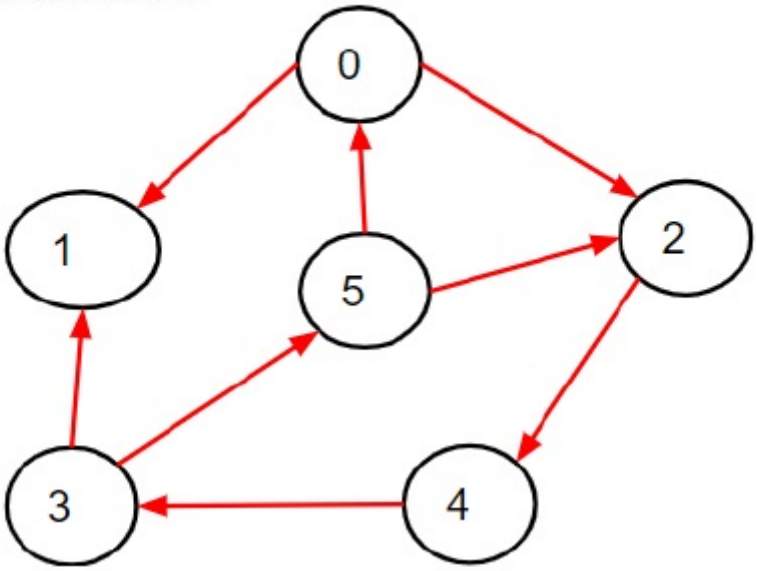
6406531883276. ✖ **flag2** always stores the value True

Question Id : 640653563315 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 : (199 to 201)

Question Label : Comprehension

Let **M** be the adjacency matrix of the graph G given below. Consider the procedure given below.




```
Procedure nWays(M, p, q)
    count = 0
    if(M[p][q] == 1){
        count = 1
    }
    foreach i in rows(M){
        if(M[p][i] == 1 and M[i][q] == 1){
            count = count + 1
        }
    }
    return(count)
End nWays
```

Based on above information, answer the given subquestions

Sub questions

Question Number : 199 Question Id : 640653563316 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 will be the value of **B** at the end of the execution of the pseudocode given below?

```
B = nWays(M, 1, 0)
```

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

0

Question Number : 200 Question Id : 640653563317 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 will be the value of **B** at the end of the execution of the pseudocode given below?

```
1 | B = nWays(M, 0, 2)
```

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

1

Question Number : 201 Question Id : 640653563318 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 will be the value of **B** at the end of the execution of the pseudocode given below?

```
1 | B = nWays(M, 5, 2)
```

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

2

Sub-Section Number :	13
Sub-Section Id :	64065380268
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653563312 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 : (202 to 203)

Question Label : Comprehension

Consider the procedure **evaluate** given below, where **P** and **Q** are the lists of same length.
If **L1** = [2, 0, 4, 3] and **L2** = [0, 2, 3, 5] then answer the given subquestions

```
1  Procedure evaluate(P, Q)
2       if(P == []){
3           return(P)
4       }
5       else{
6           c = first(P) * first(Q)
7           return([c] ++ evaluate(rest(P), rest(Q)))
8       }
9  End evaluate
```

Sub questions

Question Number : 202 Question Id : 640653563313 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

What will **evaluate(L1, L2)** return?

Options :

6406531883277. ✔ [0, 0, 12, 15]

6406531883278. ✖ [2, 2, 12, 15]

6406531883279. ✖ [0, 0 , 15, 12]

6406531883280. ✖ [2, 2, 7, 8]

Question Number : 203 Question Id : 640653563314 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 times will the procedure **evaluate** be called, excluding the main call?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

4

Sem1 English1

Section Id :	64065338309
Section Number :	8
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	36