QUIZ -2



AUG - 2023

- CT 1
- Statistics
- **English -1**
- Maths -1

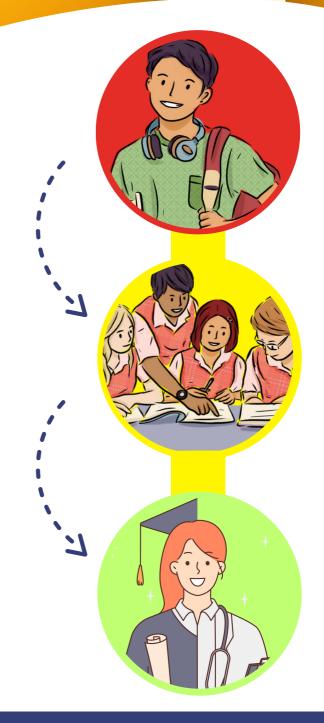












Indian Institute of Technology, Madras - BS in Data Science and Applications

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Actual Answer Key:

Ruler Required?:

Magnifying Glass Required?:

- 1. Options shown in green color and with ✓ icon are correct.
- 2.Options shown in red color and with * icon are incorrect.

IIT M FOUNDATION AN2 EXAM QPF2 06 Aug **Question Paper Name:**

2023

2023 Aug: IIT M FOUNDATION AN2 EXAM **Subject Name:**

QPF2

No

No

No

2023-08-01 17:39:02 **Creation Date:**

Duration:

Total Marks:

Display Marks:

Share Answer Key With Delivery Engine

Calculator: Scientific

Eraser Required?:

Scratch Pad Required?: No

Rough Sketch/Notepad Required?: No

Protractor Required?: No

Show Watermark on Console?: Yes

Highlighter: No

Auto Save on Console? Yes

Change Font Color: No

Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No
Group	I
Group Number :	1
Group Id :	64065313866
Group Maximum Duration :	0
Group Minimum Duration :	90
Show Attended Group?:	No
Edit Attended Group?:	No
Break time :	_0
Group Marks:	745 Joenes
Is this Group for Examiner? :	Note Lidery
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

Section Id: 64065339662 **Section Number:** 1 Online Section type: **Mandatory or Optional:** Mandatory **Number of Questions:** 14 Number of Questions to be attempted: 14 **Section Marks:** 50 **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:** Sub-Section Id: 64065383965 **Question Shuffling Allowed:** Is Section Default?: Question Number: 1 Question Id: 640653585996 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 I: 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 <u>TOP</u> FOR THE SUBJECTS REGISTERED BY YOU)

Options:

6406531955740. ✓ YES

6406531955741. * NO

Sub-Section Number: 2

Sub-Section Id: 64065383966

Question Shuffling Allowed: No

Is Section Default?: null

Question Number: 2 Question Id: 640653585997 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



	S	core	es			
Gender	DateOfBirth	CityTown	Mathematics	Physics	Chemistry	Total
М	7 Nov	Erode	68	64	78	210
Name Bhuvanesh		Name Gender DateOfBirth	Name Gender DateOfBirth CityTown	Name Gender DateOfBirth CityTown Mathematics	Name Gender DateOfBirth CityTown Mathematics Physics	Name Gender DateOfBirth CityTown Mathematics Physics Chemistry
	and the state of the same	Gender DateOfBirth	Gender DateOfBirth CityTown		Gender DateOfBirth CityTown Mathematics Physics	Gender DateOfBirth CityTown Mathematics Physics Chemistry

	V	V ords	
RowNo	Word	PartOfSpeech	LetterCount
0	It	Pronoun	2
0		Name and Address of the Owner, where the Owner, which is the Owner, where the Owner, which is the Owner, whic	2
	•		
64	cane.	Noun	1

Name	Author	Genre	Language	Pages	Publisher	Year
Igniting Minds	Kalam	Nonfiction	English	178	Penguin	2002

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

Three sample cards out of 30 for Shopping Bills dataset



Options:

6406531955742. Vuseful Data has been mentioned above.

6406531955743. * This data attachment is just for a reference & not for an evaluation.

Sub-Section Number: 3

Sub-Section Id: 64065383967

Question Shuffling Allowed: Yes

Is Section Default?: null

Question Number: 3 Question Id: 640653585998 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

What will be the value of mList be at the end of the given pseudocode?

```
L = [[1, 100, 'A'], [2, 99, 'B'], [3, 98, 'C'], [4, 97, 'D'], [5, 96, 'E']]
   mList = [ ]
2
3 foreach element in L{
        z = DoSomething(element)
4
5
        mList = mList ++ [z]
6
   }
   Procedure DoSomething(X)
8
        a = rest(X)
9
        return(first(a))
10
    End DoSomething
11
```

Options:



Sub-Section Number: 4

Sub-Section Id: 64065383968

Question Shuffling Allowed : Yes

Is Section Default?: null

Question Number: 4 Question Id: 640653585999 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 and **explode(X)** returns the list of letters in the word **X**. For example **explode**("sweet") will return ['s', 'w', 'e', 'e', 't']. What will **count** represent at the end of the execution?

```
count = 0, letterList = []
 1
    while(Table 1 has more rows){
 2
        Read the first row X in Table 1
 3
        letterList = explode(X.Word)
 4
        count = count + checkSomething(letterList)
 5
 6
        Move X to Table 2
 7
    }
8
9
    Procedure checkSomething(L)
        lastLetter = first(L)
10
        restList = rest(L)
11
        foreach letter in restList{
12
13
            if(letter == lastLetter){
                 return(1)
14
15
            lastLetter = letter
16
17
        return(0)
18
19
    End checkSomething
```

Options:

6406531955748. Number of words with at most two consecutive occurrences of the same letter 6406531955749. Number of words with at least two consecutive occurrences of the same letter

6406531955750. ** Number of words with exactly two consecutive occurrences of the same letter

6406531955751. Number of words with no consecutive occurrences of the same letter

Question Number: 5 Question Id: 640653586006 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. What will **count** represent at the end of execution?

```
A = 10000, count = 0
 2
   L = []
    while(Table 1 has more rows){
        Read the first row X in Table 1
 4
 5
        L = addSomething(L, X)
        if(X.Word ends with a full stop){
 6
 7
            if(length(L) == A){}
                 count = count + 1
 8
9
            }
            if(length(L) < A){
10
                A = length(L)
11
                count = 1
12
13
14
            L = []
15
        }
        Move X to Table 2
16
17
18
    Procedure addSomething(M, Y)
19
        i = 1
20
21
        while(i <= Y.LetterCount){
            p = ith letter of Y.Word
22
            if(not (member(M, p))){
23
24
                 M = M ++ [p]
25
            }
26
            i = i + 1
27
        }
        return(M)
28
    End addSomething
29
```

Options:

6406531955781. ★ Number of sentences which have minimum number of letters
6406531955782. ★ Number of sentences which have minimum number of words
6406531955783. ✔ Number of sentences which have minimum number of distinct letters
6406531955784. ★ Number of sentences which have minimum number of distinct words
Sub-Section Number:
5
Sub-Section Id: 64065383969

Question Shuffling Allowed: Yes

Is Section Default?: null

Question Number: 6 Question Id: 640653586000 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 "Olympics" dataset. The template of "Olympics" dataset is attached in the beginning of this paper. At the end of the execution, **medalDict** stores a dictionary with player's name as key mapped to another dictionary. The nested dictionary stores the medal type as key mapped to a list of years in which the player won that medal. For example if player Xyz has won a silver medal in 2006, a gold medal in 2008, and another silver medal in 2011, then

```
medalDict = {"Xyz" : {"Silver" : [2006, 2011], "Gold" : [2008]}, ... }
```

Assume that every player has a distinct name. 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).

```
medalDict = {}
1
    while(Table 1 has more rows){
2
3
        Read the first row X in Table 1
        if(isKey(medalDict, X.Name)){
4
5
            if(not(iskey(medalDict[X.Name], X.Medal))){
                medalDict[X.Name][X.Medal] = medalDict[X.Name][X.Medal] ++
6
    [X.Year]
7
            }
8
            else{
9
                medalDict[X.Name][X.Medal] = [X.Year]
            }
10
11
        else{
12
13
            medalDict[X.Name][X.Medal] = [X.Year]
14
        Move X to Table 2
15
    }
16
```

Options:

6406531955752. Line 1: Incorrect initialization of medalDict

Line 6: The current statement should be replaced by

```
1 medalDict[X.Name][X.Medal] = [X.Year]
```

Line 9: The current statement should be replaced by

```
1 | medalDict[X.Name][X.Medal] = medalDict[X.Name][X.Medal] ++ [X.Year] 6406531955754.
```

Line 13: The current statement should be replaced by

```
1 | medalDict[X.Name] = {X.Medal : [X.Year]}
```

6406531955756. * No Mistakes

Question Number: 7 Question Id: 640653586005 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

Let **LA** be a sorted list of integers in ascending order, and **X** be an integer. The procedure **insert(LA, X)** returns a list **LB** where **X** is added to **LA** such that the **LB** remains sorted. But the procedure 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).

```
Procedure insert(LA, X)
 2
        LB = \{\}
 3
        flag = True
        foreach A in LA{
 4
 5
             if(flag){
 6
                 if(X \le A)
 7
                      LB = LB ++ [A]
                     flag = False
 8
 9
                 }
             }
10
             LB = LB ++ [A]
11
12
13
        if(not flag){
             LB = LB ++ [X]
14
15
16
        return(LB)
17
    End insert
```

Options:

6406531955775. Line 2: LB should be initiated as an empty list

6406531955776. * Line 5: Conditional expression should use "not" operator

6406531955777. ✓ Line 7: X should be appended to the list LB

6406531955778. **X** Line 11: **X** should be appended to the list **LB**

6406531955779. ✓ Line 13: Incorrect Conditional expression

6406531955780. * Line 16: **LA** should be returned

Sub-Section Number: 6

Sub-Section Id: 64065383970

Question Shuffling Allowed: Yes

Is Section Default?: null

Question Number: 8 Question Id: 640653586001 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 "Olympics" dataset. The template of "Olympics" dataset is attached in the beginning of this paper. What will **B** represent at the end of execution?

```
D = \{ \}
 2
    while (Table 1 has more rows) {
        Read the first row X in Table 1
 3
        D = updateDict(D, X.Sport)
 4
 5
        Move X to Table 2
 6
    }
 7
    B = findAValue(D)
8
9
    Procedure updateDict(D, a)
10
        if(isKey(D, a)) {
            D[a] = D[a] + 1
11
12
       else {
13
14
            D[a] = 1
15
        return (D)
16
    End updateDict
17
18
    Procedure findAValue(D)
19
        V = 0
20
21
        foreach a in keys(D) {
            if(D[a] > v) {
22
                v = D[a]
23
24
            }
25
26
        return (v)
27
    End findAValue
```

Options:

6406531955757. * Number of players in each Sport

6406531955758. * Total count of players in the Olympics dataset

6406531955759. ✓ Number of the players in the most frequent sport

6406531955760. * Number of frequent sports

Sub-Section Number:

Sub-Section Id: 64065383971

Question Shuffling Allowed : Yes

Is Section Default?: null

Question Number: 9 Question Id: 640653586002 Question Type: MCQ Is Question

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

Time: 0

Correct Marks: 5

Question Label: Multiple Choice Question

The following pseudocode is executed on the "Words" dataset. What will **Count1** represent at the end of the execution?

```
1 D = {}
   A = 0, Total = 0, Count = 0
    while(Table 1 has more rows){
 4
       Read the first row X in Table 1
        Total = Total + X.LetterCount
 5
        Count = Count + 1
 6
        if(isKey(D, X.Word)){
 7
            D[X.Word]["Freq"] = D[X.Word]["Freq"] + 1
 8
 9
        }
10
        else{
            D[X.Word] = \{\}
11
            D[X.Word]["Freq"] = 1
12
            D[X.Word]["LC"] = X.LetterCount
13
14
        if(D[X.Word]["Freq"] > A){
15
            A = D[X.Word]["Freq"]
16
17
18
        Move row X to Table 2
19
20
    Avg = Total / Count
    Count1 = 0, Count2 = 0
    foreach k in Keys(D){
22
23
        if(D[k]["Freq"] == A){
            if(D[k]["LC"] > Avg){
24
25
                Count1 = Count1 + 1
26
            }
27
            else{
28
                Count2 = Count2 + 1
29
30
        }
31
    }
```

Options:

6406531955761. Number of maximum frequency words with letter count less than average letter count

6406531955762. ✓ Number of maximum frequency words with letter count greater than average letter count

6406531955763. Number of minimum frequency words with letter count less than average letter count

6406531955764. Number of minimum frequency words with letter count greater than average letter count

Sub-Section Number: 8

Sub-Section Id: 64065383972

Question Shuffling Allowed : Yes

Is Section Default?: null

Question Number: 10 Question Id: 640653586003 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

We have a non-empty list, **Location** that stores the city name in each card from the "Scores" dataset, sorted in alphabetical order. This results in many duplicates. The following procedure attempts to extract the unique list of cities, while preserving the sorted order. The pseudocode may have mistakes. Identify all such mistakes (if any). It is a Multiple Select Question.

```
1
   uniqueList = []
   uniqueList = uniqueList ++ [first(Location)]
2
   prev = last(Location)
3
  foreach x in rest(Location){
4
       if(x != prev){
5
6
           uniqueList = uniqueList ++ x
7
8
       prev = x
9
   }
```

Options:

6406531955766. * Error in line 4

6406531955767. * Error in line 5

6406531955768. V Error in line 6

6406531955769. * Error in line 8

6406531955770. [♣] The pseudocode is error free

Question Number: 11 Question Id: 640653586004 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

Alice and Bob are two friends. They decide to play a game of toss, in which each of them holds a coin. They toss their coins alternately for a fixed number of times, and the results of the series of tosses are recorded in **alist** (which is a list of lists). Each entry in the inner list results the outcome of one pair of coin tosses of the form [i, j] where i stores the outcome for Alice and j stores the outcome for Bob.

For example, **alist** = [['H', T'], [T', T'], [T', 'H']] implies that at the first trial Alice has a outcome 'H' and Bob has an outcome 'T', at the second trial Alice has a outcome 'T' and Bob has a outcome 'T', and at third trial Alice has a outcome 'T' and Bob has a outcome 'H'.

To determine the winner, a procedure **findWinner(x)** is called that accepts **aList** as a parameter and returns **c**. If **c** = 0, then Bob is the winner; if **c** = 1, then Alice is the winner; and **c** = 2 if it is a draw. Which of the following procedure(s) correctly identify/identifies the winner? It is a Multiple Select Question (MSQ).

Options:

6406531955771.

```
1
    Procedure findWinner(alist)
 2
        alice_sum = 0
 3
        bob_sum = 0
 4
        c = 2
        foreach toss in alist{
 5
             if(first(toss) == 'H'){
 6
 7
                 alice_sum = alice_sum + 1
 8
            }
 9
             else{
10
                 bob_sum = bob_sum + 1
11
             }
12
        }
13
        if(bob_sum < alice_sum){
14
            c = 1
15
        }
16
        else{
             c = 0
17
18
19
        return(c)
    end findWinner
20
```

```
Procedure findWinner(alist)
 1
 2
        alice_sum = 0
                                            2
 3
        bob_sum = 0
                                            5
        c = 2
 4
        foreach toss in alist{
 5
             if(first(toss) == 'H'){
 6
 7
                 alice_sum = alice_sum + 1
 8
 9
             if(last(toss) == 'H'){
10
                 bob_sum = bob_sum + 1
11
             }
12
        }
13
        if(bob_sum > alice_sum){
14
            c = 0
15
16
        if(bob_sum < alice_sum){
17
             c = 1
18
19
         return(c)
    end findWinner
20
```

6406531955772.

```
Procedure findWinner(alist)
1
 2
        alice_sum = 0
 3
        bob_sum = 0
        c = -1
 4
 5
        foreach toss in alist{
 6
             if(first(toss) == 'H'){
 7
                 alice_sum = alice_sum + 1
 8
 9
             if(last(toss) == 'H'){
10
                 bob_sum = bob_sum + 1
11
             }
12
        if(bob_sum > alice_sum){
13
             c = 0
14
15
        if(bob_sum < alice_sum){
16
17
             c = 1
18
        }
19
        else{
20
             c = 2
21
22
         return(c)
    end findWinner
23
```

6406531955774. **

```
1
    Procedure findWinner(alist)
 2
         alice_sum = 0
 3
         bob_sum = 0
         c = -1
 4
 5
         foreach toss in alist{
 6
             if(first(toss) == 'H'){
                 alice_sum = alice_sum + 1
 7
 8
             }
 9
             else{
                 bob_sum = bob_sum + 1
10
11
             }
12
         if(bob_sum < alice_sum){
13
             c = 0
14
15
         if(bob_sum > alice_sum){
16
17
             c = 1
18
19
         else{
20
             c = 2
21
22
         return(c)
    end findWinner
23
```

Question Number: 12 Question Id: 640653586007 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 a dictionary **dict** = { 'A' : [1, 2, 3, 4, 5], 'B' : [6, 7, 8, 9], 'C' : 19 }. The following procedure DoSomething(X) is executed on the dictionary dict. What does the procedure DoSomething(X)

It is a Multiple Select Question.

```
procedure DoSomething(dict)
1
2
    foreach i in keys(dict){
3
       return(dict[i])
4
   end DoSomething
```

Options:

6406531955785. The procedure may return [6,7,8,9]

3.4,5] since the key A comes first 6406531955786. * The procedure always returns [1

alphabetically

6406531955787. * The procedure may ret

6406531955788. ✓ The procedure may return 19

Sub-Section Number: 9

Sub-Section Id: 64065383973

Question Shuffling Allowed: Yes

Is Section Default?: null

Question Number: 13 Question Id: 640653586008 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

The following pseudocode is executed using the "Library" dataset. The template of "Library" dataset is attached in the beginning of this paper. **p** is a list of authors who have written books in English. **dict[X]** stores the number of books having at least 100 pages and written on or before 2000 by author **X**. Choose the correct code fragment(s) to complete the pseudocode.

It is a Multiple Select Question (MSQ).

```
dict = { }
2
   foreach author in p{
3
       dict[author] = 0
4
   }
5
   while(Table 1 has more rows){
6
       Read the first row X from Table 1
7
8
                Fill the Code
        **********
9
10
       Move X to Table 2
11
```

Options:

```
1 if(isKey(dict, X.Author) and (X.Pages >= 100 and X.Year <= 2000)){
2     dict[author] = dict[author] + 1
3 }</pre>
```

6406531955789.



```
if(isKey(dict, X.Author) or (X.Pages >= 100 and X.Year <= 2000)){
    dict[author] = dict[author] + 1
}</pre>
```

6406531955790. **

```
C = False, D = False
 1
    if(isKey(dict, X.Author) and (X.Pages >= 100)){
 2
        C = True
 3
 4
    if(isKey(dict, X.Author) and (X.Year <= 2000)){
 5
        D = True
 6
 7
    if(C and D){
        dict[author] = dict[author] + 1
 9
10
    }
```

6406531955791. **✓**

```
C = False, D = False
    if(isKey(dict, X.Author) and (X.Pages >= 100)){
 2
 3
        C = True
 4
 5
    if(isKey(dict, X.Author) and (X.Year <= 2000)){
 6
        D = True
 7
    }
    if(C or D){
8
9
        dict[author] = dict[author] + 1
10
   }
```

Sub-Section Number: 10

Sub-Section Id: 64065383974

Question Shuffling Allowed: No

Is Section Default?: null

Question Id: 640653586009 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 16)

Question Label: Comprehension

The following pseudocode is executed using the "Words" dataset. Answer the subquestions.

```
sList = [], wList = [], flag = 0, count = 0
 2
    while(Table 1 has more rows){
        Read the first row X from Table 1
 3
        if(X.PartOfSpeech == "Adjective"){
 4
            count = count + 1
 5
 6
 7
        wList = wList ++ [X.Word]
        if(X.Word ends with a full stop){
 8
 9
            flag = count
            sList = sList ++ [wList]
10
            wList = [ ]
11
            count = 0
12
13
        Move row X to Table 2
14
15
    }
```

Sub questions

Question Number: 14 Question Id: 640653586010 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 **flag** represent at the end of each sentence?

Options:

6406531955793. * Number of words in each sentence

6406531955794. ✓ Number of adjective(s) in each sentence

6406531955795. Number of non-adjective(s) in each sentence

6406531955796. * Number of adjective(s) that are not repeated in each sentence

Question Number: 15 Question Id: 640653586011 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

wList will contain all words of last sentence of "Words" dataset at the end of execution of given pseudocode.

Options:

6406531955797. * TRUE

6406531955798. ✓ FALSE

Question Number: 16 Question Id: 640653586012 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

The value of **length(sList)** will be same as the number of sentences in the "Words" dataset at the end of execution of given pseudocode.

Options:

6406531955799. V TRUE

6406531955800. * FALSE

Sem1 English1

Section Id: 64065339663

Section Number: 2

Section type: Online

Mandatory or Optional: Mandatory

Number of Questions:

Number of Questions to be attempted:

Section Marks:

Clear Response:

Display Number Panel:

Group All Questions:

Enable Mark as Answered Mark for Review and

Maximum Instruction Time: 0

Sub-Section Number: 1

Sub-Section Id: 64065383975

Question Shuffling Allowed: No

Is Section Default?: null

Question Number: 17 Question Id: 640653586013 Question Type: MCQ Is Question

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

Yes

Time: 0

Correct Marks: 0

Question Label: Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL: SEMESTER I: ENGLISH I (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 <u>TOP</u> FOR THE SUBJECTS REGISTERED BY YOU)

Options:

6406531955801. ✓ YES

6406531955802. * NO

Sub-Section Number:

Sub-Section Id:

Question Shuffling Allowed:

Is Section Default?:

640653839

0-1003303370

ИÓ

nul

Question Id: 640653586014 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: (18 to 27)

Question Label: Comprehension

Read the following passage and answer the given subquestions

Three passions, simple but overwhelmingly strong, have governed my life: the longing for love, the search for knowledge, and unbearable pity for the suffering of mankind. These passions, like great winds, have blown me hither and thither, in a wayward course, over a deep ocean of anguish, reaching to the very verge of despair.

I have sought love, first, because it brings ecstasy— ecstasy so great that I would often have

sacrificed all the rest of life for a few hours of this joy. I have sought it, next, because it relieves loneliness—that terrible loneliness in which one shivering consciousness looks over the rim of the world into the cold unfathomable lifeless abyss. I have sought it, finally, because in the union of love, I have seen, in a mystic miniature, the prefiguring vision of the heaven that saints and poets have imagined. This is what I sought and, though it might seem too good for human life, this is what at least I have found.

With equal passion, I have sought knowledge. I have wished to understand the hearts of men. I have wished to know why the stars shine. And I have tried to apprehend the Pythagorean power by which number holds sway over the flux. A little of this, but not much, I have achieved.

Love and knowledge, so far as they were possible, led upward toward the heavens. But always pity brought me back to earth. Echoes of cries of pain reverberate in my heart. Children in famine, victims tortured by oppressors, helpless old people a hated burden to their sons, and the whole world of loneliness, poverty and pain make a mockery of what human life should be. I long to alleviate the evil, but I cannot, and I too suffer. This has been my life. I have found it worth living, and would gladly live it again if the chance were offered to me.

- My Three Passions- Bertrand Russell

Sub questions

Question Number: 18 Question Id: 640653586015 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

As per this passage, how many passions ruled Betrand Russell's life?

Options:

6406531955803. * One

6406531955804. * Two

6406531955805. V Three

Question Number: 19 Question Id: 640653586016 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 odd one from the following options.

Options:

6406531955807. * The longing for love

6406531955808. * The search for knowledge

6406531955809. **✓** The desire for beauty

6406531955810. **★** The unbearable pity for the suffering of mankind

Question Number: 20 Question Id: 640653586017 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

What is the meaning of *longing*?

Options:

6406531955811. ✓ A strong desire especially for something unattainable

6406531955812. * The state of being happy

6406531955813. * A high degree of trust in something

6406531955814. A feeling of expectation for a particular thing to happen

Question Number: 21 Question Id: 640653586018 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

In this passage, Russell compares passions to ______.

Options:

6406531955815. Water

6406531955816. Wind

6406531955817. * Fire

6406531955818. * Earth

Question Number: 22 Question Id: 640653586019 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

What is the meaning of 'abyss?

Options:

6406531955819. **✓** A deep bottomless chasm

6406531955820. * The abode of angels

6406531955821. * The abode of the just

6406531955822. * The abode of fairies

Question Number: 23 Question Id: 640653586020 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

Select true or false for the following statement.

Betrand Russell sought love first because it brings ecstasy.

Options:

6406531955823. V True

6406531955824. * False

Question Number: 24 Question Id: 640653586021 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

What is the meaning of 'consciousness'?

Options:

6406531955825. * A feeling of intense anger

6406531955826. A feeling of satisfaction

6406531955827. * The state of being annoyed

6406531955828. The state of being aware

Question Number: 25 Question Id: 640653586022 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

Which one of the following words from the passage means the opposite of 'qiant'?

Options:

6406531955829. * Tiny

6406531955830. V Miniature

6406531955831. * Pygmy

6406531955832. * Dwarf

Question Number: 26 Question Id: 640653586023 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

What is the meaning of 'pity'?

Options:

6406531955833. ✓ A feeling of sadness for someone else's difficult situation

6406531955834. * A feeling of revulsion aroused by something highly distasteful

6406531955835. * A feeling of unhappiness and anger

6406531955836. * A feeling of satisfaction and bliss

Question Number: 27 Question Id: 640653586024 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

Which one of the following words from the passage means the opposite of 'hell'?

Options:

6406531955837. * Afterworld

6406531955838. * Paradise

6406531955839. ✓ Heaven

6406531955840. * Eden

Sub-Section Number:

Sub-Section Id: 64065383977

Question Shuffling Allowed: No

Is Section Default?: null

Question Id: 640653586025 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 : (28 to 37)

Question Label: Comprehension

Listen to the audio sample and answer the given subquestions.



885_640653_0_1984128_hs1001q2fe1s1q2mq.mp3

Sub questions

Question Number: 28 Question Id: 640653586026 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

The brain's executive control centre is ______.

Options:

6406531955841. ✓ Prefrontal cortex

6406531955842. * Cerebellum

6406531955843. * Cerebral cortex

6406531955844. None of these

Question Number: 29 Question Id: 640653586027 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

The back and forth in play do not help create neural connections in the brain.

Options:

6406531955845. * True

6406531955846. V False

Question Number: 30 Question Id: 640653586028 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

Play-based learning is far superior to rote memorisation.

Options:

6406531955847. ✓ True

6406531955848. * False

Question Number: 31 Question Id: 640653586029 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

Which among the following is the scientific institution for the study of child development that is mentioned in the audio?

Options:

6406531955849. * Harvard Medical School

6406531955850. * Harvard Center for Child and Mother

6406531955851. ✓ Harvard Center on the Developing Child

Question Number : 32 Question Id : 640653586030 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
The prefrontal cortex in the brain
Options :
6406531955853. * Manages emotions
6406531955854. * Solves problems
6406531955855. * Makes plans
6406531955856. ✓ All of these
Question Number : 33 Question Id : 640653586031 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
When we look at play from the perspective of the activities that the brain performs during it, play
is
Options:
6406531955857. * Easy
6406531955858. * Moderately easy
6406531955859. ✓ Hard work

6406531955860. ***** Indifferent work

Question Number: 34 Question Id: 640653586032 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

How many syllables are there in the word 'cortex'?

Options:

6406531955861. * 4

6406531955862. **4** 2

6406531955863. * 3

6406531955864. * 1

Question Number: 35 Question Id: 640653586033 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

How many syllables are there in the word 'interactions'?

Options:

6406531955865. * 3

6406531955866. * 2

6406531955867. * 1

Question Number: 36 Question Id: 640653586034 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

Which among the following is a synonym of the word 'countless'?

Options:

6406531955869. V Numerous

6406531955870. * Few

6406531955871. * Seldom

6406531955872. * Countable

Question Number: 37 Question Id: 640653586035 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

Which among the following is a close antonym of the word 'ambitious'?

Options:

6406531955873. * Aspiring

6406531955874. ✓ Lazy

6406531955875. * Driven

6406531955876. * Enthusiastic

Sub-Section Number:

Sub-Section Id: 64065383978

Question Shuffling Allowed : Yes

Is Section Default?: null

Question Number: 38 Question Id: 640653586036 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

Choose the correct option.

He ______ four languages: English, Tamil, French, and Spanish.

Options:

6406531955877. * Speaking

6406531955878. ✓ Speaks

6406531955879. * Speak

Question Number: 39 Question Id: 640653586037 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

Select true/false for the following statement.

The sentence, 'I have been living in this building for 20 years' is an example of the present perfect tense.

Options:

6406531955880. * True

6406531955881. ✓ False

Question Number: 40 Question Id: 640653586038 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

Choose the correct option.

Venu has his umbrella.		
Options:		
6406531955882. ** Forgetting		
6406531955883. ✓ Forgotten		
6406531955884. * Forget		
Question Number : 41 Question Id : 640653586039 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		
Choose the correct option.		
Ramu and Shyamu will be exhausted. They slept for 24 hours. Options:		
6406531955886. ※ Will not be 6406531955887. ✓ Will not have		
6406531955886. * Will not be		
6406531955887. ✔ Will not have		
Question Number : 42 Question Id : 640653586040 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		
Choose the correct option.		
Tomorrow morning, I on a beach somewhere.		
Options:		

6406531955888.

Relax

6406531955889. **Will be relaxing**

6406531955890. ***** Will being relax

Question Number: 43 Question Id: 640653586041 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

Fill in the blank with future perfect progressive tense form.

The workers _____ for a month by the time the deal is made.

Options:

6406531955891. Will strike

6406531955892. Will be striking

6406531955893. **Will have been striking**

Question Number: 44 Question Id: 640653586042 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

How many syllables are there in the word 'disturb'?

Options:

6406531955894. * 1

6406531955895. **4** 2

6406531955896. 3

Question Number: 45 Question Id: 640653586043 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

How many syllables are there in the word 'cloudy'?

Options:

6406531955898. * 1

6406531955899. **2**

6406531955900. 3

6406531955901. * 4

Question Number: 46 Question Id: 640653586044 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

The word repeat is stressed as _____ (stress is indicated in bold)

Options:

6406531955902. **✓** Re**peat**

6406531955903. **Re**peat

Question Number: 47 Question Id: 640653586045 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		
The word 'combustion' is		
Options:		
6406531955904. ✔ Trisyllabic		
6406531955905. ** Polysyllabic		
6406531955906. * Disyllabic		
Question Number : 48 Question Id : 640653586046 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		
The word 'evaluation' is		
Options:		
6406531955907. * Trisyllabic		
6406531955909. ♥ Polysyllabic 6406531955909. ▼ Disyllabic		
6406531955909. ** Disyllabic		
Question Number : 49 Question Id : 640653586047 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		
The consonant cluster in the word <i>text</i> is an instance of		
Options:		
6/06531055010 % Initial CC		

6406531955911. * Final CC

6406531955912. * Initial CCC

6406531955913. V Final CCC

Question Number: 50 Question Id: 640653586048 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

The verb 'produce' is stressed on the ______

Options:

6406531955914. First syllable.

6406531955915. ✓ Second syllable

Question Number: 51 Question Id: 640653586049 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

Fill in the blank with the correct verb form.

Deepa _____ state the obvious.

Options:

6406531955916. Were not

6406531955917. V Doesn't

6406531955918. Was not

6406531955919. * Don't

Question Number: 52 Question Id: 640653586050 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 Fill in the blank with the correct verb form. The director, as well as his assistant, _____ to pack up. **Options:** 6406531955920. V Wants 6406531955921. * Wanting 6406531955922. * Wanton 6406531955923. Want Question Number: 53 Question Id: 640653586051 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 Civics ______ Bibeesh's favourite discipline, while Mathematics _____ Ambika's favourite subject. **Options:**

6406531955924. * Is, are

6406531955925. VIs, is

6406531955926. Was, were

6406531955927. * Are, are

Question Number: 54 Question Id: 640653586052 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		
Five kilometres such a long distance.		
Options:		
6406531955928. ** Are		
6406531955929. * Were		
6406531955930. ** Are not		
6406531955931. ✔ Is		
Question Number : 55 Question Id : 640653586053 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		
'Either Sonu or Leela responsible for the accident.'		
'Either Sonu or Leela responsible for the accident.' Options:		
6406531955932. ✔ Is		
6406531955933. ** Are		
Question Number : 56 Question Id : 640653586054 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		
In the plural noun 'photos', the plural marker sounds as		
Options:		

6406531955934. * [s] 6406531955935. **V** [z] 6406531955936. * [iz] Question Number: 57 Question Id: 640653586055 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 The plural markers for the words 'friends', 'romans', and 'citizens' are _____. **Options:** 6406531955937. * /s/, /s/, and /s/ respectively 6406531955938. * /z/, /s/, and /z/ respectively 6406531955939. \(\sqrt{z}\), \(\frac{z}{z}\), and \(\frac{z}{z}\) respectively. Section Id: 64065339664 **Section Number:** 3 Section type: Online **Mandatory or Optional:** Mandatory **Number of Questions:** 12 Number of Questions to be attempted: 12 **Section Marks:** 50 **Display Number Panel:** Yes No **Group All Questions: Enable Mark as Answered Mark for Review and** Yes **Clear Response:**

Maximum Instruction Time: 0

Sub-Section Number :

Sub-Section Id: 64065383979

Question Shuffling Allowed: No

Is Section Default?: null

Question Number: 58 Question Id: 640653586056 Question Type: MCQ Is Question

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

1

Time: 0

Correct Marks: 0

Question Label: Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL: SEMESTER I: MATHEMATICS FOR DATA SCIENCE I (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 <u>TOP</u> FOR THE SUBJECTS REGISTERED BY YOU)

Options:

6406531955940. VES

6406531955941. * NO

Question Number: 59 Question Id: 640653586057 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

Instructions:

- There are some questions which have functions with discrete valued domains (such as day, month, year etc). For simplicity, we treat them as continuous functions.
- For NAT type question, enter only one right answer even if you get multiple answers for that particular question.
- Notations:
 - R= Set of real numbers
 - Q= Set of rational numbers
 - Z= Set of integers
 - N= Set of natural numbers
- The set of natural numbers does not include 0.

Options:

6406531955942. ✓ Useful Data has been mentioned above.

6406531955943. * This data attachment is just for a reference & not for an evaluation.

Sub-Section Number:

Sub-Section Id:

Question Shuffling Allowed:

Is Section Default?:

64065383980

04003383380

II. ow.

Question Number: 60 Question Id: 640653586058 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

If n is the number of solutions of the equation $2^{2x+3} - 6 \cdot 2^x + 1 = 0$, then find the value of 4n.

Response Type: Numeric

Evaluation Required For SA: Yes

Show Word Count: Yes

Answers Type: Equal

Text Areas : PlainText

Possible Answers:

8

Question Number: 61 Question Id: 640653586059 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

Consider the equation $\log_3(\log_4(x^2+1)^2 + \log_8 8x^3) = 0$. Then find the value of $x(x^2+1)+7$.

Response Type: Numeric

Evaluation Required For SA: Yes

Show Word Count: Yes

Answers Type: Equal

Text Areas : PlainText

Possible Answers:

8

Sub-Section Number:

Sub-Section Id:

Question Shuffling Allowed:

Is Section Default?:

3 64065383981

null

Question Id: 640653586060 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: (62 to 63)

Question Label: Comprehension

Consider the following functions $f_1: D_1 \to \mathbb{R}$, $f_2: D_2 \to \mathbb{R}$, $f_3: D_3 \to \mathbb{R}$ and $g: D \to \mathbb{R}$, defined as:

- $f_1(x) = \sin 2x$.
- $f_2(x) = \ln(x^2 6x + 8)$.
- $f_3(x) = e^{3x} + 5$.
- $g(x) = f_1(x) + f_2(x) + f_3(x)$.

Let D_1, D_2, D_3 and D be the (largest) domains of the functions $f_1(x), f_2(x), f_3(x)$ and g(x), respectively. Use this information to answer the subquestions.

Sub questions

Question Number: 62 Question Id: 640653586061 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

Which of the following options is/are true?

Options:

6406531955946.
$$\checkmark D = D_1 \cap D_2 \cap D_3$$
.

6406531955947. \checkmark $D_1 = D_3$ and $D = D_2$.

6406531955948. \checkmark $D = (-\infty, 2) \cup (4, \infty)$.

6406531955949. * $D = (-\infty, 2] \cup [4, \infty)$.

Question Number: 63 Question Id: 640653586062 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

Which of the following options is/are true?

Options:

6406531955950. \Rightarrow Function g(x) is not differentiable in its domain.

6406531955951. \checkmark Function g(x) is continuous in its domain.

If function g(x) is differentiable in its domain, then derivative of the function is $g'(x) = 2\cos 2x + \frac{2x-6}{x^2-6x+8} + 3e^{3x}$.

If function g(x) is differentiable in its domain, then derivative of the function is $g'(x) = 2\cos 2x + \frac{1}{x^2 - 6x + 8} + 3e^{3x}$.

6406531955953. **

Sub-Section Number:

Sub-Section Id:

Question Shuffling Allowed:

Is Section Default?:

64065383982

04005305902

1, 4

Question Number : 64 Question Id : 640653586063 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

Which of the following options is/ are true?

Options:

6406531955954. * If a function is continuous at a particular point, then the function is differentiable at that point.

6406531955955. ✓ If a function is differentiable at a particular point, then the function must be continuous at that point.

6406531955956. ✓ If a function is continuous at a particular point, then the limit of the function exists at that point.

6406531955957. ***** If the limit of a function exists at a particular point, then the function is continuous at that point.

Sub-Section Number: 5

Sub-Section Id: 64065383983

Question Shuffling Allowed: No

Is Section Default?: null

Question Id: 640653586064 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: (65 to 66)

Question Label: Comprehension

Let $\{a_n\}$ be a sequence defined as $a_n = \frac{2n+1}{4n+3}$. Consider the

sequence $\{b_n\}$ defined by $b_n = 4(3a_n^2 + 2a_n + 5)$. Use this

information to answer the subquestions.

Sub questions

Question Number: 65 Question Id: 640653586065 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

What is the limit of the sequence $\{a_n\}$?

Response Type: Numeric

Evaluation Required For SA: Yes

Show Word Count: Yes

Answers Type: Equal

Text Areas : PlainText

Possible Answers:

0.5

Question Number: 66 Question Id: 640653586066 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

What is the limit of the sequence $\{b_n\}$?

Response Type: Numeric

Evaluation Required For SA: Yes

Show Word Count: Yes

Answers Type : Equal

Text Areas: PlainText

Possible Answers:

27

Sub-Section Number:

Sub-Section Id:

Question Shuffling Allowed: No

Is Section Default?: null

Question Id: 640653586067 Question Type: COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

4065383984

Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

Question Numbers : (67 to 68)

Question Label: Comprehension

Consider three differentiable functions f(x), g(x) and h(x) such that

$$f(x) = g(2x^2 + x)h(3x^3 + x)$$
, $g'(0) = g(0) = 3$, and $h'(0) = h(0) = 1$.

Use this information to answer the subquestions.

Sub questions

Question Number: 67 Question Id: 640653586068 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

Which of the following options is/are true?

Options:

6406531955960. * $f'(x) = (4x+1)(9x^2+1)g'(2x^2+x)h'(3x^3+x)$

6406531955961. $\checkmark f'(x) = (4x+1)g'(2x^2+x)h(3x^3+x) + (9x^2+1)g(2x^2+x)h'(3x^3+x)$ $6406531955962. \checkmark f'(0) = 2g(0)h(0)$

6406531955962. $\checkmark f'(0) = 2g(0)h(0)$

6406531955963. $\checkmark f(0) = g(0)h(0)$

Question Number: 68 Question Id: 640653586069 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

Find the value of $\frac{f'(0)}{f(0)} + \lim_{x \to 0} f(x) + \lim_{x \to 0} g(x) + \lim_{x \to 0} h(x)$.

Response Type: Numeric

Evaluation Required For SA: Yes

Show Word Count: Yes

Answers Type: Equal

Text Areas: PlainText

Possible Answers:

9

Sub-Section Number: 7

Sub-Section Id: 64065383985

Question Shuffling Allowed: No

Is Section Default?: null

Question Id: 640653586070 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: (69 to 70)

Question Label: Comprehension

Consider the function f(x) given below:

$$f(x) = \begin{cases} 2x^2 \sin\left(\frac{1}{x}\right) + b & \text{if } x \neq 0, \\ 5 & \text{if } x = 0 \end{cases}$$

Assume that f is continuous at x = 0. Use this information to answer the subquestions.

Sub questions

Question Number : 69 Question Id : 640653586071 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

Find the value of *b*.

Response Type: Numeric

Evaluation Required For SA: Yes

Show Word Count: Yes

Answers Type: Equal

Text Areas : PlainText

Possible Answers:

5

Question Number: 70 Question Id: 640653586072 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

Which of the following options is/are true for the function f(x) at x = 1?

Options:

The best linear approximation is

6406531955966. \checkmark $L_f(x) = (4\sin 1 - 2\cos 1)x - 2\sin 1 + 2\cos 1 + 5.$



The best linear approximation is

6406531955967. * $L_f(x) = (4\sin 1 + 2\cos 1)x - 2\sin 1 + 2\cos 1 + 5$.

cial the grunit.

6406531955968. * The tangent line is $y = (4 \sin 1 + 2 \cos 1) x - 2 \sin 1 + 2 \cos 1 + 5$.

6406531955969. \checkmark The tangent line is $y = (4 \sin 1 - 2 \cos 1) x - 2 \sin 1 + 2 \cos 1 + 5$.

Sub-Section Number: 8

Sub-Section Id: 64065383986

Question Shuffling Allowed : Yes

Is Section Default?: null

Question Number : 71 Question Id : 640653586073 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

Define a function

$$f(x) = \begin{cases} x^2 + 1 & \text{if } x < 1 \\ x^3 & \text{if } x \ge 1 \end{cases}$$

Which of the following options is/are true?

Options:

6406531955970. * f(x) is invertible in its domain.

6406531955971. \checkmark f(x) is invertible when the domain is restricted to $[1, \infty)$.

6406531955972. * f(x) is invertible when the domain is restricted to [-1,1].

6406531955973. \checkmark The inverse of f(x) when the domain is restricted to $[1,\infty)$ is $f^{-1}(x)=x^{\frac{1}{3}}$.

6406531955974. The inverse of f(x) when the domain is restricted to $(-\infty,0)$ is $f^{-1}(x) = \sqrt{x-1}$.

Sub-Section Number:

Sub-Section Id: 64065383987

Question Shuffling Allowed: Yes

Is Section Default?: null

Question Number: 72 Question Id: 640653586074 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

Consider the functions $f(x) = \log x^2$ and g(x) = 2x + 1. Which of following options is/are true?

Options:

6406531955975. \checkmark The domain of the function $(f \circ g)(x)$ is $\mathbb{R} \setminus \{-\frac{1}{2}\}$.

6406531955976. $(f \circ g)(x) = \log(2x+1)$.

6406531955977. \blacksquare The domain of the function $(g \circ f)(x)$ is $\mathbb{R} \setminus \{-\frac{1}{2}\}$.

6406531955978. \checkmark $(g \circ f)(x) = 2 \log x^2 + 1$.

6406531955979. \checkmark The domain of the function $(g \circ f)(x)$ is $\mathbb{R} \setminus \{0\}$.

Question Number: 73 Question Id: 640653586075 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

Define a function

$$f(x) = \begin{cases} \frac{|x-3|}{x-3} & \text{if } x \neq 3\\ 1 & \text{if } x = 3 \end{cases}$$

Which of the following options is/are true?

Options:

$$\lim_{x \to 3^+} f(x) = f(3).$$

 $\lim_{x\to 3^-} f(x) \text{ does not exist.}$ 6406531955981. ** $^{x\to 3^-}$

6406531955982. $\checkmark f$ is not continuous at x = 3.

6406531955983. ***** f is differentiable at x = 3.

6406531955984. * f'(7) = 1.

Sem1 Statistics1

Section Id: 64065339665

Section Number: 4

Section type: Online

Mandatory or Optional: Mandatory

Number of Questions:

Number of Questions to be attempted: 11

Section Marks:

Display Number Panel :

Enable Mark as Answered Mark for Review and

Maximum Instruction Time: 0

Sub-Section Number: 1

Sub-Section Id: 64065383988

Question Shuffling Allowed: No

Is Section Default?: null

Question Number: 74 Question Id: 640653586076 Question Type: MCQ Is Question

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

Time: 0

Correct Marks: 0

Group All Questions:

Clear Response:

Question Label: Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL: SEMESTER I: STATISTICS FOR DATA SCIENCE I (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 <u>TOP</u> FOR THE SUBJECTS REGISTERED BY YOU)

Options:

6406531955985. VYES

6406531955986. * NO

Sub-Section Number: 2

Sub-Section Id: 64065383989

Question Shuffling Allowed: Yes

Is Section Default?:

Question Number: 75 Question Id: 640653586077 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

Out of 8 boys and 5 girls, how many queues of 3 boys and 2 girls can be formed?

Options:

6406531955987. * 560

6406531955988. * 1200

6406531955989. **4** 67200

6406531955990. * 6720

Question Number: 76 Question Id: 640653586082 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

A locker can be opened by 3 digit number between 000 to 999. A thief want to steal the locker. During the background check about the locker, he found that all the digits of the pass code are unique and one of the digit is 4. What is the probability that the thief will open the locker?

Options:

$$6406531956001. \checkmark \frac{1}{216}$$



Question Number : 77 Question Id : 640653586086 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

An analyst wants to conduct a survey for testing the maintenance of hospitals in a particular district in Madhya Pradesh, for which he selects 15 hospitals randomly from that district. Identify the sample and population.

Options:

6406531956008. * The population is all the hospitals in Madhya Pradesh and the sample is all the

hospitals in the district.

6406531956009. * The population is all the hospitals in Madhya Pradesh and the sample is 15 selected hospitals in Madhya Pradesh.

6406531956010. ✓ The population is all hospitals in the district of Madhya Pradesh and the sample is 15 selected hospitals in the district.

6406531956011. None of these

Sub-Section Number: 3

Sub-Section Id: 64065383990

Question Shuffling Allowed : Yes

Is Section Default?: null

Question Number: 78 Question Id: 640653586078 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

Ajay speaks truth in 50% cases, while Vijay speaks truth in 90% cases. What is the probability that

Ajay and Vijay will contradict in stating the same fact?

Response Type: Numeric

Evaluation Required For SA: Yes

Show Word Count: Yes

Answers Type: Equal

Text Areas: PlainText

Possible Answers:

0.5

Question Number: 79 Question Id: 640653586080 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

In how many ways can letters in the word "ADAMANT" be arranged such that no two A's are			
adjacent to each other?			
Response Type: Numeric			
Evaluation Required For SA : Yes			
Show Word Count: Yes			
Answers Type: Equal			
Text Areas : PlainText			
Possible Answers :			
240			
Question Number: 80 Question Id: 64065358608	34 Ouestion Type : SA Calculator : None		
Response Time: N.A Think Time: N.A Minimum:			
Correct Marks : 4			
Question Label : Short Answer Question			
In a gaming room, 2 brothers and 4 other boys are playing together. In a particular game, how			
many ways can all the boys be seated in a circular order so that two brothers are not seated			
together?			
Response Type: Numeric			
Response Type : Numeric Evaluation Required For SA : Yes			
Show Word Count: Yes			
Answers Type: Equal			
Text Areas : PlainText			
Possible Answers :			
72			
Sub-Section Number :	4		
Sub-Section Id :	64065383991		
Question Shuffling Allowed :	Yes		

Question Number: 81 Question Id: 640653586081 Question Type: MCQ Is Question

null

Is Section Default?:

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 sum of three natural numbers (starting from 1) is 9. How many ordered triplets (a,b,c) exist?

(**Note:** a = b or b = c, also, a = b = c is allowed. For example, ordered triplet, (4,3,2) and (2,4,3) are

different.)

Options:

6406531955994. * 24

6406531955995. **✓** 28

6406531955996. * 22

6406531955997. * 31

Sub-Section Number:

Sub-Section Id:

Question Shuffling Allowed:

Is Section Default?:

5 6406**5**383992 Yes

Question Number: 82 Question Id: 640653586083 Question Type: MCQ Is Question

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

Time: 0

Correct Marks: 5

Question Label: Multiple Choice Question

A logo is to be designed with five horizontal stripes using some or all of the colours Black, Blue, Red, and Green. In how many ways that can be done such that no two adjacent stripes have same colour?

Options:

6406531956002. * 324

6406531956003. * 516

6406531956004.

528

6406531956005. * 243

Sub-Section Number: 6

Sub-Section Id: 64065383993

Question Shuffling Allowed : Yes

Is Section Default?: null

Question Number: 83 Question Id: 640653586079 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

A blood test indicates the presence of Amyotrophic lateral sclerosis (ALS) 93% of the time when ALS is actually present. The same test indicates the presence of ALS 0.5% of the time when ALS is not actually present. One percent of the population actually has ALS. Calculate the probability that a person actually has ALS given that the test indicates the presence of ALS. (Enter your 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:

0.62 to 0.68

Sub-Section Number: 7

Sub-Section Id: 64065383994

Question Shuffling Allowed: Yes

Is Section Default?: null

Question Number: 84 Question Id: 640653586085 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

The dataset consists of three distinct observations, say x, y and z, and the sum of their frequencies is 100. Relative frequencies corresponding to x and z are 35% and 45% respectively. Find the cumulative frequency(in %)of y and z.

Response Type: Numeric

Evaluation Required For SA: Yes

Show Word Count: Yes

Answers Type: Equal

Text Areas: PlainText

Possible Answers:

65

Sem2 English2

Section Id: 64065339666

Section Number:

Section type:

Mandatory or Optional: Mandatory

Number of Questions: 23

Number of Questions to be attempted: 23

Section Marks: 50

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: 64065383995

Question Shuffling Allowed: No