

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

Notations :

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

Question Paper Name :	IIT M FOUNDATION AN EXAM QDF4 7 July 2024
Subject Name :	2024 July07: IIT M AN EXAM QDF4
Creation Date :	2024-07-01 17:32:53
Duration :	240
Total Marks :	726
Display Marks:	Yes
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Calculator :	Scientific
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
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 :	64065319011
Group Maximum Duration :	0
Group Minimum Duration :	90

Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	726
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No
Revisit allowed for group Instructions? :	Yes
Maximum Instruction Time :	0
Minimum Instruction Time :	0
Group Time In :	Minutes
Revisit Section :	Yes
Action on Revisit Section :	View and Edit
Navigate To Group Summary From Last Question? :	No
Disable Submit Button During Assessment? :	No
Section Selection Time? :	0
No of Optional sections to be attempted :	0

Sem1 CT

Section Id :	64065359310
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	14
Number of Questions to be attempted :	14
Section Marks :	50
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	No
Section Maximum Duration :	0
Section Minimum Duration :	0
Section Time In :	Minutes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	640653123357
Question Shuffling Allowed :	No

Question Number : 1 Question Id : 640653827133 Question Type : MCQ

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 TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406532780180. ✓ YES

6406532780181. ✗ NO

Question Number : 2 Question Id : 640653827134 Question Type : MCQ**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

Item List



SV Stores		Srivatsan		1
Item	Category	Qty	Price	Cost
Carrots	Vegetables/Food	1.5	50	75
Soap	Toiletries	4	32	128
Tomatoes	Vegetables/Food	2	40	80
Bananas	Vegetables/Food	8	8	64
Socks	Footwear/Apparel	3	56	168
Curd	Dairy/Food	0.5	32	16
Milk	Dairy/Food	1.5	24	36
				567

Sun General		Vignesh		14
Item	Category	Qty	Price	Cost
Phone Charger	Utilities	1	230	230
Razor Blades	Grooming	1	12	12
Razor	Grooming	1	45	45
Shaving Lotion	Grooming	0.8	180	144
Earphones	Electronics	1	210	210
Pencils	Stationery	3	5	15
				656

Big Bazaar		Sudeep		2
Item	Category	Qty	Price	Cost
Baked Beans	Canned/Food	1	125	125
Chicken Wings	Meat/Food	0.5	600	300
Cocoa powder	Canned/Food	1	160	160
Capsicum	Vegetables/Food	0.8	180	144
Tie	Apparel	2	390	780
Clips	Household	0.5	32	16
				1525

Options :

6406532780182. ✓ Useful Data has been mentioned above.

6406532780183. ✗ This data attachment is just for a reference & not for an evaluation.

Sub-Section Number :

2

Sub-Section Id :

640653123358

Question Shuffling Allowed :

Yes

Question Number : 3 Question Id : 640653827135 Question Type : MSQ

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

The given information represents "Scores" dataset and it may have some mistakes with respect to the sanity of data. Identify all rows with such mistakes. It is a Multiple Select Question (MSQ).

Row no.	Field	Value
Row 1	Card number	1
Row 2	Name	Harish
Row 3	Gender	M
Row 4	Date of Birth	30 November
Row 5	Mathematics	62
Row 6	Physics	145
Row 7	Chemistry	91
Row 8	Total	398

Options :

6406532780184. ❌ Row 1: Incorrect data type of card number

6406532780185. ✓ Row 4: Invalid Date of Birth

6406532780186. ✓ Row 6: Physics score is out of range

6406532780187. ✓ Row 8: Total score is out of range

Sub-Section Number : 3

Sub-Section Id : 640653123359

Question Shuffling Allowed : Yes

Question Number : 4 Question Id : 640653827136 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

The given pseudocode is executed using "Scores" dataset. Let **B** be a positive integer. What does the procedure **DoSomething** compute?

```
1 Procedure DoSomething (B)
2     C = 0, D = 101
3     while(Table 1 has more rows){
4         Read the first row X in Table 1
5         if(X.Physics > C){
6             C = X.Physics
7         }
8         if(X.Chemistry < D){
9             D = X.Chemistry
10        }
11        Move X to Table 2
12    }
13    if(C - D >= B){
14        return (False)
15    }
16    else{
17        return(True)
18    }
19 End DoSomething
```

Options :

6406532780188. ❌ Returns "True" if and only if the difference between the maximum Physics marks and the minimum Chemistry marks is at least **B**

6406532780189. ❌ Returns "True" if and only if the difference between the maximum Chemistry marks and the minimum Physics marks is at most **B**

6406532780190. ✓ Returns "True" if and only if the difference between the maximum Physics marks and the minimum Chemistry marks is less than **B**

6406532780191. ❌ Returns "True" if and only if the difference between the maximum Chemistry marks and the minimum Physics marks is less than **B**

Question Number : 5 Question Id : 640653827144 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

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

```
1 A = 0
2 while(Pile 1 has more cards){
3     Read the top card X from Pile 1
4     A = A + isInSeq(X)
5     Move X to Pile 2
6 }
7 Procedure isInSeq(X)
8     if(X.Physics < X.Mathematics){
9         if(X.Mathematics < X.Chemistry){
10            return(1)
11        }
12    }
13    return(0)
14 End isInSeq
```

Options :

6406532780214. ✓ Number of students with highest marks in Chemistry and lowest marks in Physics.

6406532780215. ✗ Number of students with highest marks in Mathematics and lowest marks in Physics.

6406532780216. ✗ Number of students with highest marks in Physics among the three subjects.

6406532780217. ✗ Number of students with lowest marks in Physics and highest marks in Mathematics.

Question Number : 6 Question Id : 640653827146 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

The following pseudocode is executed using the "Library" dataset.

```
1 A = 0, count = 0
2 while(Table 1 has more rows){
3     Read the first row X from Table 1
4     if(X.Year > A){
5         A = X.Year
6     }
7     Move X to Table 2
8 }
9 while(Table 2 has more rows){
10    Read the first row Y from Table 2
11    if(Y.Year != A){
12        count = count + 1
13    }
14    Move Y to Table 1
15 }
```

What will **count** represent at the end of execution of the above pseudocode?

Options :

- 6406532780222. ❌ Number of books which were published after the least recent year.
- 6406532780223. ❌ Number of books which were published in the least recent year.
- 6406532780224. ✓ Number of books which were published after the most recent year.
- 6406532780225. ❌ Number of books which were published in the most recent year.

Sub-Section Number : 4

Sub-Section Id : 640653123360

Question Shuffling Allowed : Yes

Question Number : 7 Question Id : 640653827137 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "Words" dataset. At the end of the execution, A captures the number of nouns with letter count at least four and at most eight. Choose the correct code fragment(s) to complete the pseudocode. It is a Multiple Select Question (MSQ).

```
1 A = 0
2 while(Table 1 has more cards){
3     Read the first row X from Table 1
4     if(checksomething(X, 4, 8)){
5         A = A + 1
6     }
7     Move X to Table 2
8 }
9 Procedure CheckSomething(Y, C1, C2,)
10    if(Y.PartofSpeech == "Noun"){
11        ****Fill the code*****
12    }
13    else{
14        return(False)
15    }
16 End CheckSomething
```

Options :

```
1 if(C1 >= Y.LetterCount and Y.LetterCount <= C2){
2     return(True)
3 }
4 else{
5     return(False)
6 }
7
```

6406532780192. ❌

```
1 if(C1 <= Y.LetterCount and Y.LetterCount <= C2){
2     return(True)
3 }
4 else{
5     return(False)
6 }
7
```

6406532780193. ✓

6406532780194. ❌

```
1 if(c1 <= Y.LetterCount and Y.LetterCount <= c2){  
2     return(False)  
3 }  
4 else{  
5     return(True)  
6 }  
7
```

```
1 if(c1 > Y.LetterCount or Y.LetterCount > c2){  
2     return(False)  
3 }  
4 else{  
5     return(True)  
6 }  
7
```

6406532780195. ✓

Question Number : 8 Question Id : 640653827138 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "Words" table. At the end of the execution, **count** stores the number of pairs of verbs such that both verbs have either the same letter count or both end with a full stop, but not both. Choose the correct code fragment to complete the pseudocode.

```
1 count = 0  
2 while(Table 1 has more rows){  
3     Read the first row X in Table 1  
4     Move X to Table 2  
5     if(X.Partofspeech == "Verb"){  
6         while(Table 1 has more rows){  
7             Read the first row Y in Table 1  
8             Move Y to Table 3  
9             if(X.Partofspeech == Y.Partofspeech){  
10                 *****Fill the Code*****  
11                 *****Fill the Code*****  
12             }  
13         }  
14     }  
15     Move all rows from Table 3 to Table 1  
16 }  
17 }
```

Options :

6406532780196. ✓

```
1 if(X.LetterCount == Y.LetterCount){  
2     count = count + 1  
3 }  
4 else{  
5     if(X.Word and Y.Word end with a full stop){  
6         count = count + 1  
7     }  
8 }
```

```
1 if(X.LetterCount == Y.LetterCount){  
2     count = count + 1  
3 }  
4 if(X.Word and Y.Word end with a full stop){  
5     count = count + 1  
6 }  
7  
8
```

6406532780197. ✘

```
1 if(X.Word and Y.Word end with a full stop){  
2     count = count + 1  
3 }  
4 else{  
5     if(X.LetterCount == Y.LetterCount){  
6         count = count + 1  
7     }  
8 }
```

6406532780198. ✓

```
1 if(X.LetterCount == Y.LetterCount or X.Word and Y.Word end with a full stop){  
2     count = count + 1  
3 }  
4
```

6406532780199. ✘

Question Number : 9 Question Id : 640653827143 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

In the "Shopping Bills" dataset, the procedure **countBills** counts the number of bills from Big Bazaar with total amount more than the average total bill amount. Assume that the variable **Avg** holds the value of the average total bill amount. Choose the correct code fragment(s) to complete the procedure. It is a Multiple Select Question (MSQ).

```
1 Procedure countBills()
2     Count = 0
3     while(Pile 1 has more cards){
4         Read the top card x from Pile 1
5         *****
6         ** Fill the code    **
7         *****
8         Move card X to Pile 2
9     }
10    return(count)
11 End countBills
```

Options :

```
1 if(x.ShopName == "BigBazaar"){
2     if(x.TotalBillAmount > Avg){
3         Count = Count + 1
4     }
5 }
```

6406532780210. ✓

```
1 if(x.TotalBillAmount > Avg){
2     if(x.ShopName == "BigBazaar"){
3         Count = Count + 1
4     }
5 }
```

6406532780211. ✓

```
1 if(x.TotalBillAmount > Avg or x.ShopName == "BigBazaar"){
2     Count = Count + 1
3 }
```

6406532780212. ✘

```
1 if(x.TotalBillAmount > Avg and x.ShopName == "BigBazaar"){
2     Count = Count + 1
3 }
```

6406532780213. ✓

Sub-Section Number :

5

Sub-Section Id :

640653123361

Question Shuffling Allowed :

Yes

Question Number : 10 Question Id : 640653827139 Question Type : MSQ

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "Words" dataset. At the end of the execution, A represent number of sentences with average letter count less than the average letter count of dataset. 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 SumT = 0, CountT = 0, B = 0
2 while(Table 1 has more rows){
3     Read the first row X in Table 1
4     CountT = CountT + 1
5     SumT = SumT + X.LetterCount
6     Move X to Table 2
7 }
8 B = SumT / CountT
9 SumS = 0, Counts = 0, A = 0, C = 0
10 while(Table 2 has more rows){
11     Read the first row X in Table 2
12     Counts = Counts + 1
13     SumS = SumS + X.LetterCount
14     if(X.word ends with a full stop){
15         C = SumS / CountT
16         if(c > B){
17             A = A + 1
18         }
19         SumS = 0, Counts = 0
20     }
21     Move X to Table 1
22 }
```

Options :

6406532780200. ❌ Line 8: Incorrect expression for B

6406532780201. ✓ Line 15: Incorrect expression for C

6406532780202. ✓ Line 16: Incorrect conditional statement

6406532780203. ❌ No mistake

Question Number : 11 Question Id : 640653827142 Question Type : MSQ

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Two words are said to be conjugate if they fulfill following conditions:

- They are different words.
- Number of vowels are same in both words.
- Number of consonants are different in both words.

For a row X in the "Words" dataset, assume that `vCount(X)` return the number of vowels in `X.Word`. At the end of the execution, `count` stores the number of conjugate pairs. Choose the correct code fragment(s) to complete the pseudocode. It is a Multiple Select Question (MSQ).

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

Options :

```
1 if(x.Word == Y.Word){
2     if(x.LetterCount == Y.LetterCount){
3         if(vCount(x) == vCount(Y)){
4             count = count + 1
5         }
6     }
7 }
```

6406532780206. ✘

```
1 if(x.Word != Y.Word){
2     if(x.LetterCount != Y.LetterCount){
3         if(vCount(x) == vCount(Y)){
4             count = count + 1
5         }
6     }
7 }
```

6406532780207. ✓

6406532780208. ✘

```

1 if(x.Word != Y.Word){
2     if(vCount(X) == vCount(Y)){
3         if(X.LetterCount - vCount(X) == Y.LetterCount - vCount(Y)){
4             count = count + 1
5         }
6     }
7 }
```

```

1 if(x.Word != Y.Word){
2     if(vCount(X) == vCount(Y)){
3         if(X.LetterCount - vCount(X) != Y.LetterCount - vCount(Y)){
4             count = count + 1
5         }
6     }
7 }
```

6406532780209. ✓

Sub-Section Number :

6

Sub-Section Id :

640653123362

Question Shuffling Allowed :

Yes

Question Number : 12 Question Id : 640653827140 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

Consider the procedure **mSum** as shown below.

```

1 Procedure mSum(A, B, C)
2     Sum = 0
3     if(A >= C and A >= B){
4         Sum = B + C
5     }
6     else{
7         if(B >= C and B >= A){
8             Sum = A + C
9         }
10    else{
11        Sum = A + B
12    }
13 }
14 return(Sum)
15 End mSum
```

What will be the value of **mSum(4,4,2)** ?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

6

Sub-Section Number : 7

Sub-Section Id : 640653123363

Question Shuffling Allowed : Yes

Question Number : 13 Question Id : 640653827141 Question Type : SA

Correct Marks : 5

Question Label : Short Answer Question

The following pseudocode is executed using a dataset similar to the "Words" dataset, based on the following paragraph.

"Surrounded by nature, Susan often takes a stroll, savoring the soothing sounds of chirping birds. Rustlings in the trees suggest squirrels beginning their day, searching for sustenance. Surely, the beauty of a sunrise holds unparalleled magic."

```
1 count = 0, flag = True
2 while(Table 1 has more rows){
3     Read the first row X in Table 1
4     Move X to Table 2
5     if(flag){
6         if(1st letter of x.word == 's'){
7             if(2nd letter of x.word == 'u'){
8                 count = count + 1
9             }
10        }
11    }
12    if(x.word ends with full stop){
13        flag = False
14    }
15 }
```

What would be the value of **count** at the end of the execution of the above pseudocode?

Assume that upper case and lower case are ignored during comparison of letters.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

2

Sub-Section Number :	8
Sub-Section Id :	640653123364
Question Shuffling Allowed :	Yes

Question Number : 14 Question Id : 640653827145 Question Type : MCQ

Correct Marks : 5

Question Label : Multiple Choice Question

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

```

1 count = 0
2 while(Table 1 has more rows){
3     Read the first row X in Table 1
4     Move X to Table 2
5     while(Table 1 has more rows){
6         Read the first row Y in Table 1
7         Move Y to Table 3
8         count = count + findPair(X, Y)
9     }
10    Move all rows from Table 3 to Table 1
11 }
12 Procedure findPair(X, Y)
13     A = False, B = False
14     if(X.Gender == Y.Gender){
15         A = True
16     }
17     if(X.CityTown == Y.CityTown){
18         B = True
19     }
20     if((A and B) or (not A and not B)){
21         return(1)
22     }
23     return(0)
24 End findPair

```

Options :

6406532780218. ❌ **count** represents the number of pairs of students having either the same gender or from the same city or both.

6406532780219. ❌ **count** represents the number of pairs of students having the same gender and from the same city.

6406532780220. ✓ **count** represents the number of student pairs who either share the same gender and come from the same city, or who share neither the same gender nor the same city.

6406532780221. ❌ **count** represents the number of pairs of students having the same gender but not from the same city.

Sem1 English1

Section Id :	64065359311
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	24
Number of Questions to be attempted :	24
Section Marks :	50
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	No
Section Maximum Duration :	0
Section Minimum Duration :	0
Section Time In :	Minutes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	640653123365
Question Shuffling Allowed :	No

Question Number : 15 Question Id : 640653827147 Question Type : MCQ

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 TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406532780226. ✓ YES

6406532780227. ✗ NO

Sub-Section Number :	2
Sub-Section Id :	640653123366
Question Shuffling Allowed :	No

Question Id : 640653827148 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Question Numbers : (16 to 25)

Question Label : Comprehension

Read the following passage and answer the given subquestions.

User traffic on Twitter has slowed since the launch of Meta's text-based platform Threads, which has already surpassed 100 million sign-ups since its debut last week.

Threads launched in the U.S. on Wednesday and is being touted by Meta executives like Instagram chief Adam Mosseri as a more positive "public square" for communities "that never really embraced Twitter." So far, users seem to be on board.

"Threads reached 100 million sign ups over the weekend. That's mostly organic demand and we haven't even turned on many promotions yet. Can't believe it's only been 5 days!" Meta CEO Mark Zuckerberg said in a post Monday.

Twitter appears to have taken a hit. Matthew Prince, CEO of Cloudflare, shared a screenshot to Twitter Sunday showing that traffic on the platform was "tanking."

According to Similarweb, a data company that specializes in web analytics, web traffic to Twitter was down 5% for the first two full days. Threads was generally available compared with the previous week. The company said Twitter's web traffic is down 11% compared with the same days in 2022.

Twitter responded to CNBC's request for comment with an automated response. Meta didn't offer additional comment beyond Zuckerberg's post.

Source: cnbc.com - Twitter traffic is 'tanking' as Meta's Threads hits 100 million users - Ashley Capoot

Sub questions

Question Number : 16 Question Id : 640653827149 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

What is the synonym of the word *surpassed*?

Options :

6406532780228. ✓ Exceed

6406532780229. ✗ Pass through

6406532780230. ✗ Go under

6406532780231. ✗ Come second to

Question Number : 17 Question Id : 640653827150 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Choose an appropriate option to replace the word *touted*.

Options :

6406532780232. ✗ Changed paths

6406532780233. ✓ Promoted

6406532780234. ✘ Criticized

6406532780235. ✘ Edited

Question Number : 18 Question Id : 640653827151 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

That's mostly organic demand and we haven't even turned on many promotions yet.

What meaning do the phrases *organic demand* and *[not many] promotions* convey here?

Options :

6406532780236. ✘ Meta has been mindful of climate change in meeting demands.

6406532780237. ✓ The company Meta hasn't tried many marketing tactics to popularize Threads.

6406532780238. ✘ Meta has withheld any promotions to employees in its company.

Question Number : 19 Question Id : 640653827152 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Twitter appears to have taken a hit.

What is the meaning of the phrase *taken a hit*?

Options :

6406532780239. ✓ Be affected badly

6406532780240. ✘ Be popular among its users

6406532780241. ✘ Has made a huge profit

Question Number : 20 Question Id : 640653827153 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

What is the synonym of the word *tanking*?

Options :

6406532780242. ✘ Shooting

6406532780243. ✘ Weighing

6406532780244. ✘ Grateful

6406532780245. ✓ Failing

Question Number : 21 Question Id : 640653827154 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

The company said Twitter's web traffic is down 11% compared with the same days in 2022

What is the meaning of the phrase *down 11%*?

Options :

6406532780246. ✘ The traffic has reduced to 11%

6406532780247. ✘ The traffic has reduced from 11%

6406532780248. ✓ The traffic has reduced by 11%

Question Number : 22 Question Id : 640653827155 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

What is the meaning of the phrase *automated response*?

Options :

6406532780249. ✓ Predetermined reply

6406532780250. ✘ Responsible driving of automobiles

6406532780251. ✘ Highly private message

Question Number : 23 Question Id : 640653827156 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Meta didn't offer additional comment beyond Zuckerberg's post.

What part of speech is the word *beyond* here?

Options :

6406532780252. ✘ Adjective

6406532780253. ✘ Interjection

6406532780254. ✓ Preposition

6406532780255. ✘ Adverb

Question Number : 24 Question Id : 640653827157 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

...users seem to be on board.

What is the meaning of the phrase *on board* here?

Options :

6406532780256. ✘ Enter a vehicle

6406532780257. ✘ Be available

6406532780258. ✓ Agree with

Question Number : 25 Question Id : 640653827158 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

What is the meaning of the word *debut*?

Options :

6406532780259. ✘ Reply in opposite

6406532780260. ✓ First appearance

6406532780261. ✘ Alternative

Sub-Section Number :	3
Sub-Section Id :	640653123367
Question Shuffling Allowed :	Yes

Question Number : 26 Question Id : 640653827159 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the word without an "ii" sound from the following.

Options :

6406532780263. ✩ Meet

6406532780264. ✩ Lead

6406532780265. ✓ Wet

6406532780266. ✩ Wheat

Question Number : 27 Question Id : 640653827160 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the word with an "oo" sound from the following.

Options :

6406532780267. ✓ Court

6406532780268. ✩ Loot

6406532780269. ✩ Cat

6406532780270. ✩ Feat

Question Number : 28 Question Id : 640653827161 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Which semi-vowel occurs in the transition between the words 'me' and 'off' in the sentence 'he pushed me off the chair'?

Options :

6406532780271. ✩ /w/

6406532780272. ✓ /y/

Question Number : 29 Question Id : 640653827162 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Which among the following is a word without a diphthong?

Options :

6406532780273. ✩ Mouth

6406532780274. ✘ South

6406532780275. ✘ Pout

6406532780276. ✓ Moot

Question Number : 30 Question Id : 640653827163 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Pick the odd one out based on the initial sound: near, dear, tear, gear.

Options :

6406532780277. ✘ Near

6406532780278. ✘ Dear

6406532780279. ✘ Tear

6406532780280. ✓ Gear

Question Number : 31 Question Id : 640653827164 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Pick the odd one out based on the initial sound: peat, beat, clear, pear.

Options :

6406532780281. ✘ Peat

6406532780282. ✘ Beat

6406532780283. ✓ Clear

6406532780284. ✘ Pear

Question Number : 32 Question Id : 640653827165 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Select the option which identifies the noun in the sentence:

Raghav is going for a walk.

Options :

6406532780285. ✓ Raghav

6406532780286. ✘ Going

6406532780287. ✘ For

Question Number : 33 Question Id : 640653827166 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the part of speech of the underlined word:

They were quick to throw up their hands in surrender.

Options :

6406532780288. ✘ Noun

6406532780289. ✓ Pronoun

6406532780290. ✘ Verb

6406532780291. ✘ Conjunction

Question Number : 34 Question Id : 640653827167 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete sentence by choosing the correct form of the verb given in brackets:

They ____ (buy) the house last year.

Options :

6406532780292. ✘ Buy

6406532780293. ✓ Bought

6406532780294. ✘ Will buy

6406532780295. ✘ Buying

Question Number : 35 Question Id : 640653827168 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the part of speech of the underlined word:

The house at the end of the street was painted yellow.

Options :

6406532780296. ✓ Adjective

6406532780297. ✘ Adverb

6406532780298. ✘ Verb

6406532780299. ✘ Conjunction

Question Number : 36 Question Id : 640653827169 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the adverb in the following sentence:

Joseph ran faster than everyone else in the relay team.

Options :

6406532780300. ✘ Joseph

6406532780301. ✘ Ran

6406532780302. ✓ Faster

Question Number : 37 Question Id : 640653827170 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the appropriate option:

The fruits are _ the fridge.

Options :

6406532780304. ✎ At

6406532780305. ✎ For

6406532780306. ✓ In

6406532780307. ✎ None of these

Question Number : 38 Question Id : 640653827171 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the conjunction in the following sentence:

'He was an excellent orator and an even better salesman.'

Options :

6406532780308. ✎ He

6406532780309. ✎ Was

6406532780310. ✎ Excellent

6406532780311. ✓ And

Question Number : 39 Question Id : 640653827172 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the correct option:

He gave me _ book on my birthday.

Options :

6406532780312. ✎ An

6406532780313. ✓ A

6406532780314. ✎ The

6406532780315. ✎ None of these

Question Number : 40 Question Id : 640653827173 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the correct option:

___ Sun rises in the east.

Options :

6406532780316. ✘ A

6406532780317. ✘ An

6406532780318. ✓ The

6406532780319. ✘ None of these

Question Number : 41 Question Id : 640653827174 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the correct option:

There were ___ many people in the auditorium.

Options :

6406532780320. ✘ To

6406532780321. ✘ Two

6406532780322. ✓ Too

6406532780323. ✘ Large

Question Number : 42 Question Id : 640653827175 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

A colleague in your office tells you, '*Please keep me in the loop while I'm on my vacation.*' What does the underlined part mean?

Options :

6406532780324. ✘ The colleague wants you not to disturb them.

6406532780325. ✘ The colleague wants you to call them.

6406532780326. ✓ The colleague wants you to keep them updated on events at work.

6406532780327. ✘ The colleague wants you to call them for your wedding.

Question Number : 43 Question Id : 640653827176 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the separable phrasal verb out of the following options.

Options :

6406532780328. ✘ Hit on

6406532780329. ✘ Keep at

6406532780330. ✘ Stand for

6406532780331. ✓ Call by

Question Number : 44 Question Id : 640653827177 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Fill in the blank with the appropriate option.

The meeting _____ just before dinner.

Options :

6406532780332. ✘ Brought out

6406532780333. ✓ Broke up

6406532780334. ✘ Broke into

6406532780335. ✘ Broke out

Question Number : 45 Question Id : 640653827178 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the correct option.

_____ I ask a question? (Context: permission and formal)

Yes, of course.

Options :

6406532780336. ✘ Must

6406532780337. ✓ May

6406532780338. ✘ Should

6406532780339. ✘ Will

Sub-Section Number :

4

Sub-Section Id :

640653123368

Question Shuffling Allowed :

No

Question Id : 640653827179 Question Type : COMPREHENSION Sub Question Shuffling

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

Question Numbers : (46 to 50)

Question Label : Comprehension

Match Column A with suitable options in Column B. (Hint: Word collocation)

A	B
1. Bank	a. Temper
2. Strong	b. Account
3. Lazy	c. Ruins
4. Short	d. Afternoon
5. Ancient	e. Coffee

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 46 Question Id : 640653827180 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Bank _____

Options :

6406532780340. ✘ Temper

6406532780341. ✓ Account

6406532780342. ✘ Ruins

6406532780343. ✘ Afternoon

6406532780344. ✘ Coffee

Question Number : 47 Question Id : 640653827181 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Strong _____

Options :

6406532780345. ✘ Temper

6406532780346. ✘ Account

6406532780347. ✘ Ruins

6406532780348. ✘ Afternoon

6406532780349. ✓ Coffee

Question Number : 48 Question Id : 640653827182 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Lazy_____

Options :

- 6406532780350. ✘ Temper
- 6406532780351. ✘ Account
- 6406532780352. ✘ Ruins
- 6406532780353. ✓ Afternoon
- 6406532780354. ✘ Coffee

Question Number : 49 Question Id : 640653827183 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Short_____

Options :

- 6406532780355. ✓ Temper
- 6406532780356. ✘ Account
- 6406532780357. ✘ Ruins
- 6406532780358. ✘ Afternoon
- 6406532780359. ✘ Coffee

Question Number : 50 Question Id : 640653827184 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Ancient_____

Options :

- 6406532780360. ✘ Temper
- 6406532780361. ✘ Account
- 6406532780362. ✓ Ruins
- 6406532780363. ✘ Afternoon
- 6406532780364. ✘ Coffee

Question Id : 640653827185 Question Type : COMPREHENSION Sub Question Shuffling

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

Question Numbers : (51 to 55)

Question Label : Comprehension

Read the following telephonic conversation and fill in the blanks with appropriate responses:

Jay – Hello? (i)_____

Prateek - Hello. Yes, I am Prateek Agarwal. (ii)_____

Jay - Prateek, it's me Jay Roy from college. Remember?

Prateek - Hey Jay, (iii)_____ It has been such a long time.

Jay - I am doing good. Yes, four long years after college. I got your contact number from Piyush.
(iv)_____

Prateek - Yes, yes, I do remember him. Wasn't he the one who topped our engineering batch last year?

Jay - Yes, that's him! He's in Boston working for a big MNC now.

Prateek- (v)_____

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 51 Question Id : 640653827186 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (i) with an appropriate response.

Options :

6406532780365. ✘ Is this Prateek Agarwal's house?

6406532780366. ✘ Is this Prateek Agarwal's family?

6406532780367. ✓ Am I talking to Prateek Agarwal?

6406532780368. ✘ Is this Prateek Agarwal's son?

Question Number : 52 Question Id : 640653827187 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (ii) with an appropriate response.

Options :

6406532780369. ✘ May I come in?

6406532780370. ✘ May I drop you home?

6406532780371. ✓ May I ask who is speaking?

6406532780372. ✘ May I know why you are here?

Question Number : 53 Question Id : 640653827188 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (iii) with an appropriate response.

Options :

6406532780373. ✘ Could you bring me the office file?

6406532780374. ✘ Is it a new project?

6406532780375. ✘ Where are you going?

6406532780376. ✓ How are you?

Question Number : 54 Question Id : 640653827189 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (iv) with an appropriate response.

Options :

6406532780377. ✘ When will you come home?

6406532780378. ✓ Do you remember him?

6406532780379. ✘ Did you have dinner?

6406532780380. ✘ Did you meet him?

Question Number : 55 Question Id : 640653827190 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (v) with an appropriate response.

Options :

6406532780381. ✓ That is amazing news!

6406532780382. ✘ Thank you!

6406532780383. ✘ You are welcome!

6406532780384. ✘ I am sorry!

Sem1 Maths1

Section Id :	64065359312
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10
Section Marks :	40
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	No
Section Maximum Duration :	0
Section Minimum Duration :	0
Section Time In :	Minutes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	640653123369

Question Shuffling Allowed :

No

Question Number : 56 Question Id : 640653827191 Question Type : MCQ

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 TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406532780385. ✓ YES

6406532780386. ✗ NO

Question Number : 57 Question Id : 640653827192 Question Type : MCQ

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 NAT type question, enter only one right answer even if you get multiple answers for that particular question.
- Notations:
 - \mathbb{R} = Set of real numbers
 - \mathbb{Q} = Set of rational numbers
 - \mathbb{Z} = Set of integers
 - \mathbb{N} = Set of natural numbers
- The set of natural numbers includes 0.

Options :

6406532780387. ✓ Instructions has been mentioned above.

6406532780388. ✗ This Instructions is just for a reference & not for an evaluation.

Sub-Section Number :

2

Sub-Section Id :

640653123370

Question Shuffling Allowed :

No

Question Id : 640653827193 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (58 to 60)

Question Label : Comprehension

Suppose A is the set of even positive integers less than or equal to 20 and B is the set of positive integers less than 20 which are divisible by 6.

Consider the following relations from A to B .

- $R_1 = \{(a, b) \mid a \in A, b \in B, a \text{ is a factor of } b\}$
- $R_2 = \{(a, b) \mid a \in A, b \in B, (a + b) \bmod 10 = 0\}$

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 58 Question Id : 640653827194 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

What is the cardinality of $R_1 \cap R_2$?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

1

Question Number : 59 Question Id : 640653827195 Question Type : SA

Correct Marks : 2

Question Label : Short Answer Question

What is the cardinality of R_1 ?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

9

Question Number : 60 Question Id : 640653827196 Question Type : MSQ

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following statements are correct?

Options :

6406532780391. ✓ R_1 is transitive.

6406532780392. ✗ R_2 is transitive.

6406532780393. ✓ R_2 is not symmetric.

6406532780394. ✓ (2,18) is an element in R_2 .

Question Id : 640653827198 Question Type : COMPREHENSION Sub Question Shuffling

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

Question Numbers : (61 to 62)

Question Label : Comprehension

Suppose that P_1 and P_2 are two different points in a Cartesian coordinate system, with P_1 located at (3,-2) and P_2 at (-1, 5). Let L_1 and L_2 be lines passing through P_1 and P_2 respectively.

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 61 Question Id : 640653827199 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

If the x -intercept of the line L_1 is 1

and the angle between L_1 and L_2 is $\frac{\pi}{2}$ then

Determine the coordinates of the point where
 L_1 and L_2 intersect.

Options :

6406532780396. ✗ $(\frac{5}{2}, \frac{7}{2})$

6406532780397. ✗ (5, 11)

6406532780398. ✗ (-5, 7)

6406532780399. ✓ $(\frac{-5}{2}, \frac{7}{2})$

Question Number : 62 Question Id : 640653827200 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

If the x -intercept of the line L_1 is 1 and y -intercept of the line L_2 is -1 and If θ is the angle between L_1 and L_2 , then $\tan \theta$ is equal to

Options :

6406532780400. ✘ $\frac{-5}{7}$

6406532780401. ✓ $\frac{5}{7}$

6406532780402. ✘ $\frac{5}{3}$

6406532780403. ✘ $\frac{4}{7}$

Sub-Section Number :

3

Sub-Section Id :

640653123371

Question Shuffling Allowed :

Yes

Question Number : 63 Question Id : 640653827197 Question Type : SA

Correct Marks : 4

Question Label : Short Answer Question

A company opened recruitment for the post of data analyst. 500 candidates have applied for the post. 285 candidates are proficient in Python programming, 195 candidates are proficient in C programming, 115 candidates are proficient in Java programming, 45 candidates are proficient in Python and Java, 70 candidates are proficient in C and Python, 50 candidates are proficient in C and Java and 50 candidates don't know any of the programming languages. Find the number of candidates who are proficient in exactly one of the three programming languages.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

325

Question Number : 64 Question Id : 640653827201 Question Type : SA

Correct Marks : 4

Question Label : Short Answer Question

Radhika has been tracking her monthly expenses and the corresponding number of outings she has with friends. Here's a table with two rows representing the amount spent on entertainment and the corresponding number of outings. Let's consider y to be the amount spent and x to be the corresponding number of outings. She fitted a best fit line to her data and obtained the equation $y = 4x + 15$. What is the value of SSE (Sum of Squared Errors) in relation to the best fit line?

Amount spent	37	44	53	50	57	64
Number of outings	5	7	9	8	10	12

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

23

Sub-Section Number : 4

Sub-Section Id : 640653123372

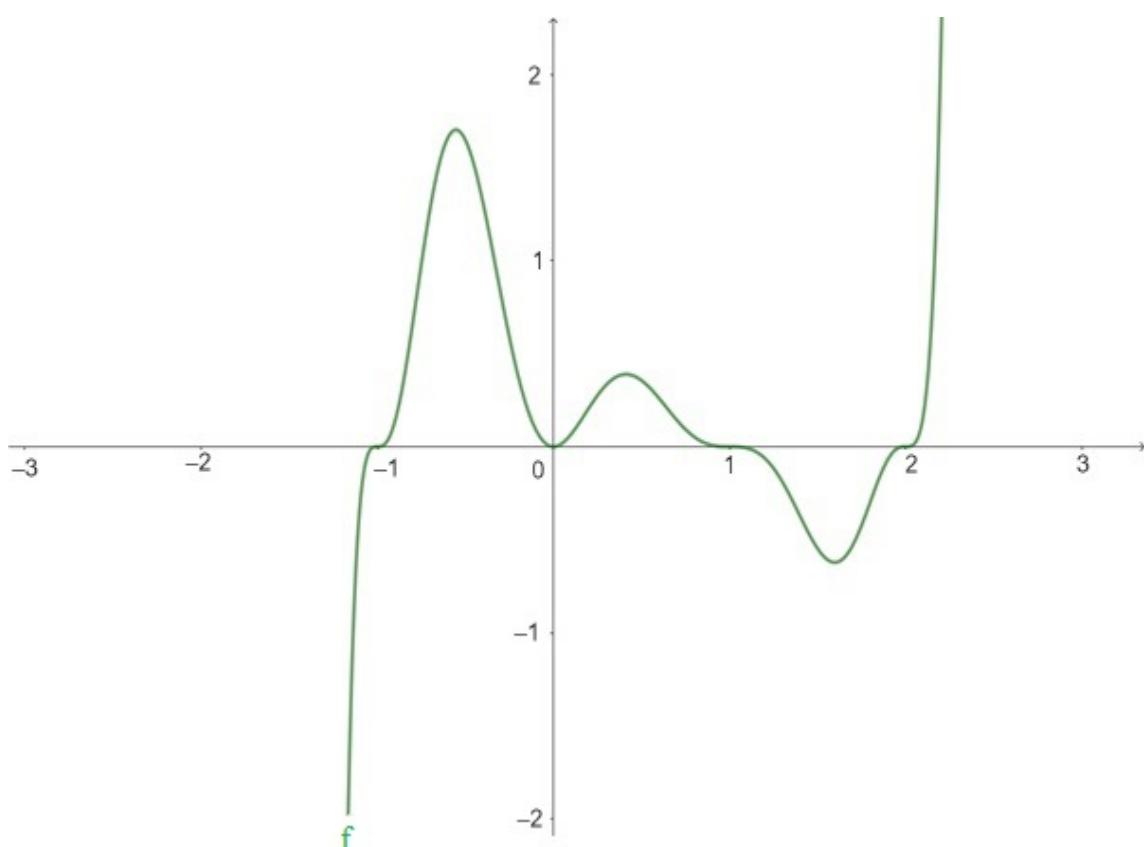
Question Shuffling Allowed : Yes

Question Number : 65 **Question Id :** 640653827202 **Question Type :** MSQ

Correct Marks : 4 **Max. Selectable Options :** 0

Question Label : Multiple Select Question

Consider the following polynomial $p(x)$ whose graph is given below:-



Which of the following options is/are correct?

Options :

6406532780405. ✘ Multiplicity of -1 and 1 must be the same.

6406532780406. ✓ $p(x)$ is an increasing function in the interval $(2, \infty)$.

6406532780407. ✓ $p(x)$ tends to infinity as x tends to infinity.

6406532780408. ✘ The number of turning points is 5.

Question Number : 66 Question Id : 640653827203 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the parabola $y = x^2 + 4x + 12$. Which of the following option(s) are true?

Options :

6406532780409. ✘ The co-ordinates of vertex is $(-8, 2)$.

6406532780410. ✓ The given equation attains its minima at $x = -2$.

6406532780411. ✓ y -intercept of parabola is 12.

6406532780412. ✓ The minimum value for the given equation is 8

Question Number : 67 Question Id : 640653827205 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the polynomials $p(x) = (2x - 1)(x - 5)q(x)$ where the zeros of $p(x)$ with multiplicity 1 are $\frac{1}{2}, 5, 2, \frac{3}{5}$. Which of the following option(s) are true for $q(x)$?

Options :

6406532780417. ✘ $q(x)$ is a cubic polynomial.

6406532780418. ✓ $q(x)$ is a quadratic polynomial.

6406532780419. ✓ $q(x)$ has two distinct zeros.

6406532780420. ✘ $q(x)$ does not have any real zeros.

Sub-Section Number :

5

Sub-Section Id :

640653123373

Question Shuffling Allowed :

Yes

Question Number : 68 Question Id : 640653827204 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

Consider the quadratic equation $ax^2 + bx + c = 0$ where a, b, c are integers with $a \neq 0$.

Which of the following option(s) are true?

Options :

6406532780413. ✓ If $b^2 - 4ac > 0$ and a perfect square then there exists a rational root of the quadratic equation.

6406532780414. ✗ If $b^2 - 4ac > 0$ and not a perfect square then there exists a rational root of the quadratic equation.

6406532780415. ✗ If $b^2 - 4ac < 0$ and a perfect square then there exists a rational root of the quadratic equation.

6406532780416. ✗ If $b^2 - 4ac < 0$ and not a perfect square then there exists a rational root of the quadratic equation.

Sem1 Statistics1

Section Id :	64065359313
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	14
Number of Questions to be attempted :	14
Section Marks :	40
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	No
Section Maximum Duration :	0
Section Minimum Duration :	0
Section Time In :	Minutes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	640653123374
Question Shuffling Allowed :	No

Question Number : 69 Question Id : 640653827206 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL : SEMESTER I : STATISTICS FOR DATA SCIENCE I (COMPUTER BASED EXAM)"

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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 :

6406532780421. ✓ YES

6406532780422. ✗ NO

Sub-Section Number : 2

Sub-Section Id : 640653123375

Question Shuffling Allowed : Yes

Question Number : 70 Question Id : 640653827207 Question Type : MSQ

Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

Figure Q.1 shows the sales distribution of the number of bottles of different types of soft drinks in a shop on a particular day.

Sales distribution of number of bottles of different soft drinks

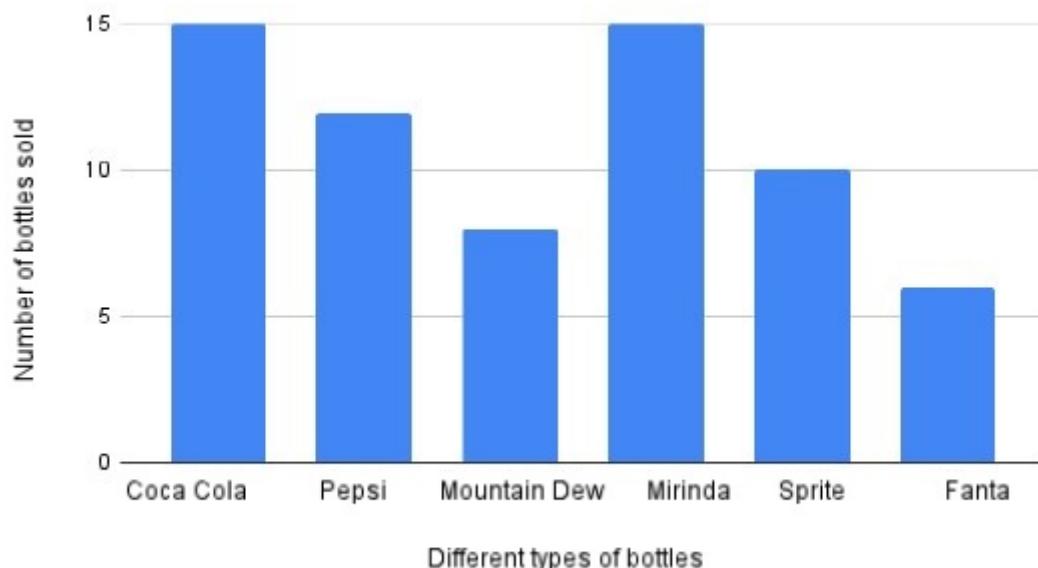


Figure Q.1: Sales Distribution of different types of bottles

Which of the following option(s) is/are true?

Options :

6406532780423. ✗ Median of the data will be either "Mountain Dew" or "Mirinda".

6406532780424. ✓ The data is bimodal.

6406532780425. ✗ Mode is not defined for the given data.

6406532780426. ✓ Median is not defined for the given data.

Question Number : 71 Question Id : 640653827212 Question Type : MSQ

Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

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

Options :

6406532780436. ❌ Structured data does not follow a predefined format, whereas unstructured data does.

6406532780437. ❌ Recording of the data over time comes under Cross Sectional data.

6406532780438. ✓ Time (in minutes) taken by a student to reach school from his home is a continuous variable.

6406532780439. ✓ Comments on a youtube video comes under the unstructured data.

Sub-Section Number : 3

Sub-Section Id : 640653123376

Question Shuffling Allowed : No

Question Id : 640653827208 Question Type : COMPREHENSION Sub Question Shuffling

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

Question Numbers : (72 to 73)

Question Label : Comprehension

Table Q.1 represents the number of books read by five students in a year.

Students	Number of books	Relative frequency
Sunil	15	x
Prateek		y
Kanika	6	0.1
Kunal	15	
Sonakshi		z

Table Q.1

Based on the above data, answer the given subquestions

Sub questions

Question Number : 72 Question Id : 640653827209 Question Type : SA

Correct Marks : 2

Question Label : Short Answer Question

What is the value of x ? Enter the answer correct to two decimal places.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.23 to 0.27

Question Number : 73 Question Id : 640653827210 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

If the number of books read by Prateek is same as the number of books read by Sonakshi, then find the value of $y + z$.

Options :

6406532780428. ✘ 0.2

6406532780429. ✘ 0.24

6406532780430. ✓ 0.4

6406532780431. ✘ Insufficient information.

Question Id : 640653827222 Question Type : COMPREHENSION Sub Question Shuffling

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

Question Numbers : (74 to 75)

Question Label : Comprehension

Amit took a survey of a group of 32 college going students (consisting only of male and female students) to know whether they own a smartphone or not and he got to know the following information.

- (i). There are 3 males who do not own a smartphone.
- (ii). There are total 27 females.
- (iii). There are total 26 students who do not own a smartphone.

Based on the above information, answer the given subquestions.

Sub questions

Question Number : 74 Question Id : 640653827223 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Create a two-way contingency table and find out the number of males in this group who own a smartphone?

Options :

6406532780453. ✘ 0

6406532780454. ✓ 2

6406532780455. ✘ 3

6406532780456. ✘ 4

Question Number : 75 Question Id : 640653827224 Question Type : MSQ

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Choose the correct option(s) after making a two-way contingency table.

Options :

6406532780457. ✘ There are 40% of the males who do not own a smartphone.

6406532780458. ✓ There are 14.81% of the females who own a smartphone.

6406532780459. ✓ 18.75% of the total students own a smartphone.

6406532780460. ✘ We can calculate covariance to find the association between "Gender" and "Ownership of the smartphone".

Sub-Section Number : 4

Sub-Section Id : 640653123377

Question Shuffling Allowed : Yes

Question Number : 76 Question Id : 640653827211 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following three statements:

Statement 1 : Election symbol is a categorical variable.

Statement 2 : Election symbol has a nominal scale of measurement.

Statement 3 : Number of votes received by a candidate is a continuous variable.

Choose the correct option from the following:

Options :

6406532780432. ✘ Statement-2 and statement-3 both are correct.

6406532780433. ✘ Statement-1 and statement-3 both are correct.

6406532780434. ✓ Statement-1 and statement-2 both are correct.

6406532780435. ✘ All statements are correct.

Sub-Section Number : 5

Sub-Section Id : 640653123378

Question Shuffling Allowed : Yes

Question Number : 77 Question Id : 640653827213 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Choose the correct statement from the following:

Options :

6406532780440. ✘ Descriptive statistics is concerned with drawing of conclusions from the sample data.

6406532780441. ✘ Inferential statistics is concerned with describing and summarizing the data.

6406532780442. ✘ Inferential statistics doesn't require sample data.

6406532780443. ✓ All statements are incorrect.

Question Number : 78 Question Id : 640653827225 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Consider the following four images of the Scatter plot.

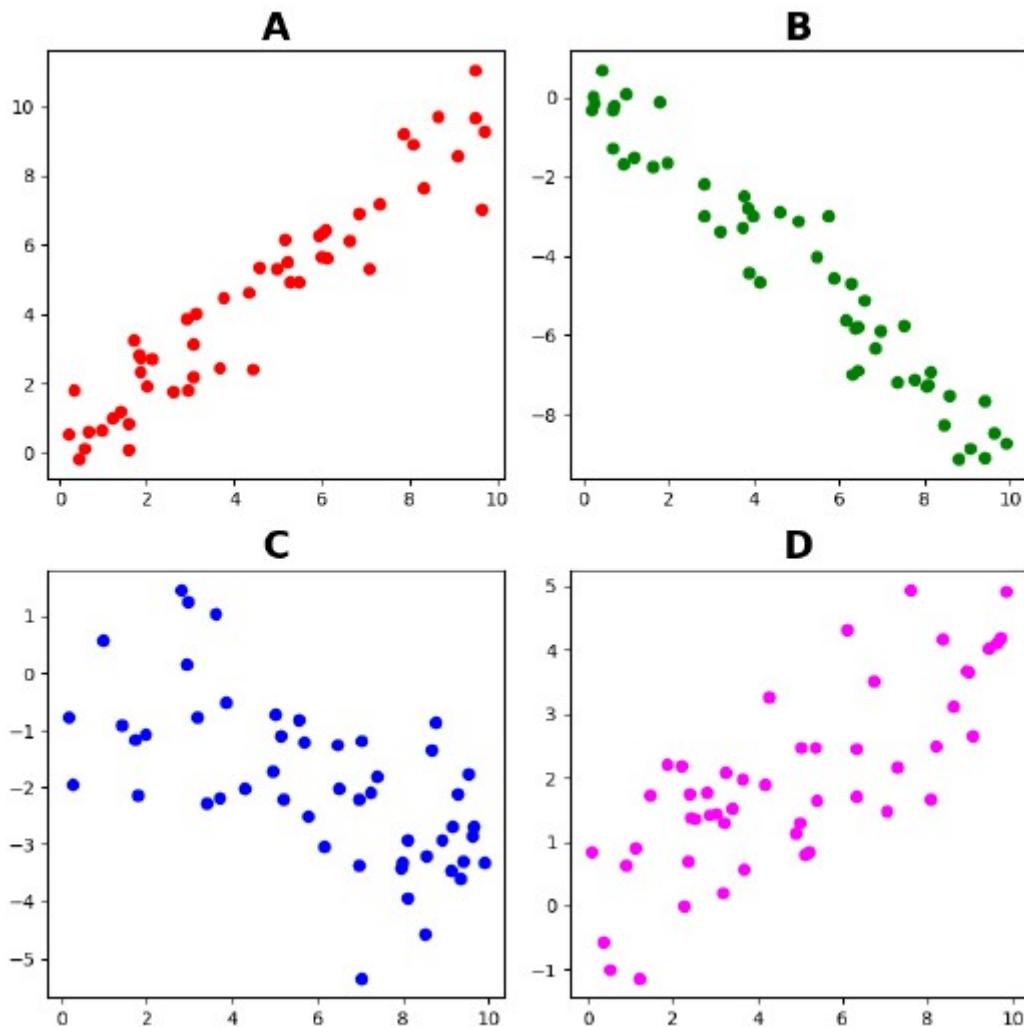


Figure Q.2 : Scatterplots

Please select the option that will represent the correlation values arranged in ascending order.

Options :

6406532780461. ❌ $A < B < C < D$

6406532780462. ✓ $B < C < D < A$

6406532780463. ❌ $B < A < C < D$

6406532780464. ❌ $A < D < C < B$

Sub-Section Number :

6

Sub-Section Id :

640653123379

Question Shuffling Allowed :

Yes

Question Number : 79 Question Id : 640653827214 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

If the mean of the observations x_1, x_2, \dots, x_8 is 6 and the mean of observations x_8, x_9, \dots, x_{15} is 13. Given that $x_8 = 3$, what will be the mean of the observations x_1, x_2, \dots, x_{15} ?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

9.90 to 9.96

Question Number : 80 Question Id : 640653827226 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

Find the population covariance between X and Y for the dataset given in Table Q.2.

X	-3	-4	-5	5	4	3
Y	10	5	3	3	5	10

Table Q.2

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 : 640653123380

Question Shuffling Allowed : No

Question Id : 640653827215 Question Type : COMPREHENSION Sub Question Shuffling

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

Question Numbers : (81 to 83)

Question Label : Comprehension

The marks (out of 100) scored by Manoj in a semester exam are given as 60, 70, 65, 75, 80. If Nitin has scored 5 marks more than Manoj in each subject.

Based on the given information, answer the subquestions.

Sub questions

Question Number : 81 Question Id : 640653827216 Question Type : SA

Correct Marks : 2

Question Label : Short Answer Question

Find the mean of the marks scored by Nitin.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

75

Question Number : 82 Question Id : 640653827217 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

If the teacher wants to give the marks out of 50 and modify the marks for every student as

$$\text{Modified marks} = \frac{\text{Marks} \times 50}{100}$$

What is the population variance of the modified marks scored by Manoj?

Options :

6406532780446. ✘ 25

6406532780447. ✘ 50

6406532780448. ✓ 12.5

6406532780449. ✘ Cannot determine

Question Number : 83 Question Id : 640653827218 Question Type : SA

Correct Marks : 2

Question Label : Short Answer Question

Calculate the correlation coefficient between the marks scored by Manoj and Nitin.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

1

Sub-Section Number : 8

Sub-Section Id : 640653123381

Question Shuffling Allowed : No

Question Id : 640653827219 Question Type : COMPREHENSION Sub Question Shuffling

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

Question Numbers : (84 to 85)

Question Label : Comprehension

The stem and leaf diagram below shows the ages (in years) of a group of people attending the Paradox event.

Stem	Leaf
1	4 5 8
2	1 2 4
3	1 1 2 3 3 3 4

Here, 1 | 4 represents 14 years.

Based on the above data, answer the given subquestions

Sub questions

Question Number : 84 Question Id : 640653827220 Question Type : SA

Correct Marks : 2

Question Label : Short Answer Question

What will be the median age for this group?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

31

Question Number : 85 Question Id : 640653827221 Question Type : SA

Correct Marks : 1

Question Label : Short Answer Question

How many people are above 23 years of Age in the given stem and leaf plot?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

8

Sub-Section Number :

9

Sub-Section Id :

640653123382

Question Shuffling Allowed :

Yes

Question Number : 86 Question Id : 640653827227 Question Type : SA

Correct Marks : 1

Question Label : Short Answer Question

The mode of the observations x_1, x_2, \dots, x_n is 40. What is the mode of the observations $2x_1 + 10, 2x_2 + 10, \dots, 2x_n + 10$?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

90

Sub-Section Number : 10

Sub-Section Id : 640653123383

Question Shuffling Allowed : Yes

Question Number : 87 Question Id : 640653827228 Question Type : MSQ

Correct Marks : 1 Max. Selectable Options : 0

Question Label : Multiple Select Question

Choose the correct option(s):

Options :

6406532780467. ✓ 25th percentile is known as the first quartile.

6406532780468. ✗ Median is the 60th percentile of any data.

6406532780469. ✗ Inter-quartile range is defined as the difference between third quartile and second quartile.

6406532780470. ✓ We need to arrange the data in ascending order to calculate the percentile.