

Indian Institute of Technology, Madras - Centre for Continuing Education

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 QUIZ 1 FOUNDATION DIPLOMA QPB1

16 Oct 2022

Subject Name :

2022 Oct: IIT M QUIZ 1 FOUNDATION
DIPLOMA QPB1

Creation Date :

2022-10-10 18:01:31

Duration :

120

Total Marks :

355

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 :	6406539321
Group Maximum Duration :	0
Group Minimum Duration :	90
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	355
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No
Revisit allowed for group Instructions? :	Yes
Maximum Instruction Time :	0
Minimum Instruction Time :	0
Group Time In :	Minutes
Navigate To Group Summary From Last Question? :	No
Disable Submit Button During Assessment? :	No

Sem1 CT

Section Id :	64065323866
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Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	15
Number of Questions to be attempted :	15
Section Marks :	50
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065355122
Question Shuffling Allowed :	No

Question Number : 1 Question Id : 640653385965 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/DIRECT ENTRY DIPLOMA : COMPUTATIONAL THINKING "

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 :

6406531283882. ✓ Yes

6406531283883. ✗ No

Question Number : 2 Question Id : 640653385966 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

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

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

Library							
SeqNo	Name	Author	Genre	Language	Pages	Publisher	Year
0	Igniting Minds	Kalam	Nonfiction	English	178	Penguin	2002
		■ ■ ■					
29	Maigudi 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

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

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

Options :

6406531283884. ✓ Useful Data has been mentioned above.

6406531283885. ✗ This data attachment is just for a reference & not for an evaluation.

Sub-Section Number : 2

Sub-Section Id : 64065355123

Question Shuffling Allowed : Yes

Question Number : 3 Question Id : 640653385967 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 the most appropriate datatype specific to "Scores" dataset for the left column.

Field	Data Type
a. Is Bhuvanesh's total marks > 200 ?	1. String
b. Gender	2. Character
c. TownCity	3. Boolean
d. Sequence number	4. Integer

Options :

6406531283886. ✓ a - (3), b - (2), c - (1), d - (4)

6406531283887. ✗ a - (1), b - (2), c - (4), d - (3)

6406531283888. ✗ a - (2), b - (3), c - (1), d - (4)

6406531283889. ✗ a - (2), b - (1), c - (3), d - (4)

Sub-Section Number : 3

Sub-Section Id : 64065355124

Question Shuffling Allowed : Yes

Question Number : 4 Question Id : 640653385968 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

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

```
1 count = 0, Flag = False
2 while(Table 1 has more rows){
3     Read the first row X in Table 1
4     if(X.PartOfSpeech == "Noun"){
5         Flag = True
6     }
7     else{
8         if(Flag){
9             count = count + 1
10        }
11    }
12    Move X to Table 2
13 }
```

Options :

6406531283890. ❌ Number of nouns in the dataset

6406531283891. ❌ Number of words before the first noun in the dataset

6406531283892. ❌ Number of words after the first noun in the dataset

6406531283893. ✓ Number of words except nouns after the first noun in the dataset

Question Number : 5 Question Id : 640653385969 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

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

```

1 count = 0, A = 0
2 while(Table 1 has more rows){
3     Read the first row X in Table 1
4     if(X.Gender == 'F' or X.Mathematics > X.Physics){
5         A = 1
6     }
7     else{
8         count = count + 1
9     }
10    Move X to Table 2
11 }
```

Options :

6406531283894. ❌ Number of male students whose Physics marks are greater than Mathematics marks

6406531283895. ✓ Number of male students whose Physics marks are greater than or equal to Mathematics marks

6406531283896. ❌ Number of female students whose Physics marks are greater than or equal to Mathematics marks

6406531283897. ❌ Number of female students whose Physics marks are less than or equal to Mathematics marks

Question Number : 6 Question Id : 640653385971 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 "Shopping Bills" dataset. Procedure **findCommon** takes pair of cards **X** and **Y** as input and returns True if the two cards share at least one common item otherwise returns False. What will **count** represent at the end of the execution?

```

1 count = 0
2 while(Pile 1 has more cards){
3     Read the top card X from Pile 1
4     Move the card X to Pile 2
5     while(Pile 1 has more Cards){
6         Read the top card Y from Pile 1
7         if(X.ShopName == Y.ShopName and findCommon(X, Y)){
8             count = count + 1
9         }
10        Move the card Y to Pile 3
11    }
12    Move all the cards from Pile 3 to Pile 1
13 }
```

Options :

6406531283902. ❌ Number of pair of bills with at least one common items

6406531283903. ✓ Number of pair of bills from the same shop with at least one common items

6406531283904. ❌ Number of pair of bills with at least two common items

6406531283905. ❌ Number of pair of bills from the same shop with no common items

Sub-Section Number : 4

Sub-Section Id : 64065355125

Question Shuffling Allowed : Yes

Question Number : 7 Question Id : 640653385970 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 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     Flag = True
6     while(Table 1 has more rows){
7         Read the first row Y in Table 1
8         if(X.Word == Y.Word){
9             Flag = False
10            Move Y to Table 2
11        }
12        else{
13            Move Y to Table 3
14        }
15    }
16    if(Flag){
17        count = count + 1
18    }
19    Move all rows from Table 3 to Table 1
20 }
```

Options :

6406531283898. ✘ Number of words

6406531283899. ✘ Number of duplicate words

6406531283900. ✘ Number of pair of unique words

6406531283901. ✓ Number of words which occurs only once

Question Number : 8 Question Id : 640653385972 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" table. At the end of the execution, **count** stores the number of pair of nouns such that both nouns have either same letter count or both end with a full stop. 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 == "Noun"){
6         while(Table 1 has more rows){
7             Read the first row Y in Table 1
8             Move Y to Table 3
9             if(***Statement 1***){
10                if(***Statement 2***){
11                    count = count + 1
12                }
13                else{
14                    if(***Statement 3***){
15                        count = count + 1
16                    }
17                }
18            }
19        }
20        Move all rows from Table 3 to Table 1
21    }
22 }
```

Options :

6406531283906. ✓ Statement 1: X.PartOfSpeech == Y.PartOfSpeech

Statement 2: X.LetterCount == Y.LetterCount

Statement 3: X.Word and Y.Word end with a full stop

6406531283907. ✗ Statement 1: X.Word and Y.Word end with a full stop

Statement 2: X.PartOfSpeech == Y.PartOfSpeech

Statement 3: X.LetterCount == Y.LetterCount

6406531283908. ✗ Statement 1: X.LetterCount == Y.LetterCount

Statement 2: X.Word and Y.Word end with a full stop

Statement 3: X.PartOfSpeech == Y.PartOfSpeech

6406531283909. ✗ Statement 1: X.LetterCount == Y.LetterCount

Statement 2: X.PartOfSpeech == Y.PartOfSpeech

Statement 3: X.Word and Y.Word end with a full stop

Sub-Section Number : 5

Sub-Section Id : 64065355126

Question Shuffling Allowed : Yes

Question Number : 9 Question Id : 640653385973 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

Sripriya has used a variable **max** to keep track of the maximum total score to find the maximum total score using "Scores" dataset. There are many ways of initializing **max**. Choose the correct option(s) regarding the initialization of **max**.

It is a Multiple Select Question (MSQ)

Options :

6406531283910. ✓ Pick any random card **X** from the dataset and **max = X.Total**

6406531283911. ✓ Pick the top card **X** from the dataset and **max = X.Total**

6406531283912. ✗ Initialize **max** with any value greater than the possible maximum total score

6406531283913. ✓ Initialize **max** with any value less than the possible minimum total score

Sub-Section Number : 6

Sub-Section Id : 64065355127

Question Shuffling Allowed : Yes

Question Number : 10 Question Id : 640653385974 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Select Question

The following pseudocode is executed using the "Scores" dataset. At the end of the execution, **count** captures the number of girls who scored at least 75 marks in Physics. 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     ****
5     *****Fill the code*****
6     ****
7     Move X to Table 2
8 }
```

Options :

```
1 if(X.Gender == 'F' or X.Physics >= 75){
2     count = count + 1
3 }
```

6406531283914. ✘

```
1 if(X.Gender == 'F'){
2     A = 1
3 }
4 if(X.Physics >= 75){
5     B = 1
6 }
7 if((A + B) > 1){
8     count = count + 1
9 }
```

6406531283915. ✘

```
1 A = 0, B = 0
2 if(X.Gender == 'F'){
3     A = 1
4 }
5 if(X.Physics >= 75){
6     B = 1
7 }
8 if((A + B) > 1){
9     count = count + 1
10 }
```

6406531283916. ✓

6406531283917. ✓

```
1 A = 0, B = 1
2 if(X.Gender == 'F'){
3     A = 1
4 }
5 if(X.Physics < 75){
6     B = 0
7 }
8 if((A + B) > 1{
9     count = count + 1
10 }
```

Question Number : 11 Question Id : 640653385975 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Select Question

The following pseudocode is executed using the “Scores” dataset. At the end of the execution, **A** captures the number of students who are male from Bengaluru or have scored less marks in Physics than the average Physics marks. Assume that the variable **Avg** holds the value of the average Physics marks. But the pseudocode may have mistakes. Identify all such mistakes (if any). Assume that all statements not listed in the options below are free of errors.

It is a Multiple Select Question (MSQ).

```

1 A = 0
2 while(Table 1 has more rows){
3     Read the first row X in Table 1
4     C = False, D = False
5     if(X.Gender == 'M' or X.cityTown == "Bengaluru"){
6         C = True
7     }
8     if(X.Physics > Avg){
9         D = True
10    }
11    if(C or D){
12        A = A + 1
13    }
14    Move X to Table 2
15 }
```

Options :

6406531283918. ✓ Line 5

6406531283919. ✓ Line 8

6406531283920. ✗ Line 11

6406531283921. ✗ Line 12

6406531283922. ✗ No error in the code

Question Number : 12 Question Id : 640653385976 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Select Question

The following pseudocode is executed using the “Scores” dataset. At the end of the execution, **count** captures the number of pairs of students having either same gender or from the same city but not both. Choose the correct code fragment 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         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 *****
14 ***** Fill the code *****
15 *****
16 End findPair

```

Options :

```

1 A = 0, B = 0
2 if(X.Gender == Y.Gender or X.CityTown == Y.CityTown){
3     A = A + 1
4 }
5 if(X.Gender == Y.Gender and X.CityTown == Y.CityTown){
6     B = B + 1
7 }
8 return(A-B)

```

6406531283923. ✓

```

1 A = 0, B = 0
2 if(X.Gender == Y.Gender and X.CityTown == Y.CityTown){
3     A = A + 1
4 }
5 if(X.Gender == Y.Gender or X.CityTown == Y.CityTown){
6     B = B + 1
7 }
8 return(A-B)

```

6406531283924. ✘

6406531283925. ✓

```
1 A = False, B = False
2 if(X.Gender == Y.Gender){
3     A = True
4 }
5 if(X.CityTown == Y.CityTown){
6     B = True
7 }
8 if((A and not B) or (not A and B)){
9     return(1)
10}
11 return(0)
```

```
1 A = False, B = False
2 if(X.Gender == Y.Gender){
3     A = True
4 }
5 if(X.CityTown == Y.CityTown){
6     B = True
7 }
8 if((A or not B) and (not A or B)){
9     return(1)
10}
11 return(0)
```

6406531283926. *

Question Number : 13 Question Id : 640653385977 Question Type : MSQ Is Question

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

Time : 0

Correct Marks : 4

Question Label : Multiple Select Question

The following pseudocode is executed using the "Library" dataset. Assume that Table 1 contains all the books authored by "Narayan" only. Also assume that the "Year" field of each book item is distinct in the Table.

```

1 Procedure groupBooks(Table 1)
2     A = 0, B = 0
3     while(Table 1 has more rows){
4         Read the first row Z from Table 1
5         if(Z.Year > A){
6             A = Z.Year
7             B = Z.SeqNo
8         }
9         Move Z to Table 2
10    }
11    while(Table 2 has more rows){
12        Read the first row K from Table 2
13        if(K.SeqNo == B){
14            Move K to Table 3
15        }
16        else{
17            Move K to Table 4
18        }
19    }
20 End groupBooks

```

Which of the following statement(s) are correct at the end of execution of this pseudocode?

It is a Multiple Select Question (MSQ).

Options :

6406531283927. ✓ Table 2 will be empty

6406531283928. ✓ Table 3 will have one record corresponding to the most recently published book of "Narayan".

6406531283929. ✗ Table 3 will have one record corresponding to the earliest published book of "Narayan".

6406531283930. ✗ Table 4 will have one record corresponding to the earliest published book of "Narayan".

6406531283931. ✗ Table 4 will have one record corresponding to the most recently published book of "Narayan".

Question Number : 14 Question Id : 640653385978 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Select Question

The procedure **countGirls** is executed using the "Scores" dataset which counts the number of girls who have got less than the subject-wise average marks in at least one of the three subjects.

Assume that the subject-wise average marks for Physics, Chemistry and Mathematics are stored in variables **P,C** and **M** respectively. Choose the correct code fragment(s) to complete the procedure.

It is a Multiple Select Question (MSQ).

```
1 Procedure countGirls(P,C,M)
2     count = 0
3     while(Table 1 has more rows){
4         Read the first row X from Table 1
5         *****
6         ****Fill in the code**** 
7         ****
8         Move X to Table 2
9     }
10    return(count)
11 End countGirls
```

Options :

```
1 if(X.Gender == 'F'){
2     if(X.Mathematics < M or X.Physics < P or X.Chemistry < C){
3         count = count + 1
4     }
5 }
```

6406531283932. ✓

```
1 if(X.Gender == 'F'){
2     if(not(X.Mathematics >= M and X.Physics >= P and X.Chemistry >= C)){
3         count = count + 1
4     }
5 }
```

6406531283933. ✓

```
1 if(X.Gender == 'F' and (X.Mathematics < M or X.Physics < P or X.Chemistry <
2     C)){
3     count = count + 1
4 }
```

6406531283934. ✓

```
1 if(X.Gender == 'F' and (X.Mathematics < M and X.Physics < P and X.Chemistry <
2   C)){
3   count = count + 1
4 }
```

6406531283935. *

Sub-Section Number : 7

Sub-Section Id : 64065355128

Question Shuffling Allowed : No

Question Id : 640653385979 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (15 to 16)

Question Label : Comprehension

Answer the given subquestions.

Sub questions

Question Number : 15 Question Id : 640653385980 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

The following pseudocode is executed using the “Olympics” dataset. Procedure **doSomething** accepts a Table of rows which contains rows of same player. Assume that every player has won at least two medals and only one medal in any year. What will **(B-A)** represent at the end of the execution?

```

1 Procedure doSomething(Table T1)
2     A = 2030, B = 2030
3     while(Table T1 has more rows){
4         Read the first row Z from Table T1
5         if(Z.Year < A){
6             B = A
7             A = Z.Year
8         }
9         if(Z.Year > A and Z.Year < B){
10            B = Z.Year
11        }
12        Move the row Z to Table T2
13    }
14    return((B - A))
15 End doSomething

```

Options :

6406531283936. ✓ Year gap between first and second medal won by a player

6406531283937. ✗ Year gap between first and latest medal won by a player

6406531283938. ✗ Year gap between latest and second latest medal won by a player

6406531283939. ✗ Year gap between first and second latest medal won by a player

Question Number : 16 Question Id : 640653385981 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 on the "Olympics" dataset. Use the procedure

doSomething in the previous question. What will **count** represent at the end of the execution?

Assume that every player has won at least two medals and only one medal in a year.

```

1 count = 0, max = 0
2 while(Table 1 has more rows){
3     Read the first row X from Table 1
4     Move the row X to Table 2
5     while(Table 1 has more rows){
6         Read the first row Y from Table 1
7         if(X.Name == Y.Name){
8             Move the row Y to Table 2
9         }
10        else{
11            Move the row Y to Table 3
12        }
13    }
14    diff = doSomething(Table 2)
15    if(diff == max){
16        count = count + 1
17    }
18    if(diff > max){
19        max = diff
20        count = 1
21    }
22    Delete all the rows from Table 2
23    Move all the rows from Table 3 to Table 1
24 }
```

Options :

6406531283940. ✓ Number of players with maximum year gap between first and second medal
6406531283941. ✗ Number of players with minimum year gap between first and second medal
6406531283942. ✗ Number of players with maximum year gap between latest and second latest medal
6406531283943. ✗ Number of players with minimum year gap between latest and second latest medal

Sem1 English1

Section Id : 64065323867

Section Number : 2

Section type : Online

Mandatory or Optional : Mandatory

Number of Questions : 27

Number of Questions to be attempted :	27
Section Marks :	50
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065355129
Question Shuffling Allowed :	No

Question Number : 17 Question Id : 640653385982 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL: SEMESTER 1: ENGLISH 1"

**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 :

6406531283944. ✓ Yes

6406531283945. ✗ No

Sub-Section Number :	2
Sub-Section Id :	64065355130
Question Shuffling Allowed :	No

Question Id : 640653385983 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (18 to 22)

Question Label : Comprehension

Nature is an infinite source of beauty. Sunrise and sunset, mountains and rivers, lakes and glaciers, forests and fields provide joy and bliss to the human mind and heart for hours together. Everything in nature is splendid and divine. Every day and every season of the year has a peculiar beauty to unfold. Only one should have eyes to behold it and heart to feel it like the English poet William Wordsworth who after seeing daffodils said; "*And then my heart with pleasure fills and dances with the daffodils*". Nature is a great teacher. The early man was thrilled with beauty and wonders of nature. The Aryans worshipped nature. One can learn the lessons in the vast school of nature.

Unfortunately, the strife, the stress and the tension of modern life have made people immune to beauties of nature. Their life is so full of care that they have no time to stand and stare. They cannot enjoy the beauty of flowing rivers, swinging trees, flying birds and majestic mountains and hills. There is however, a cry to go back to village from the concrete and artificial jungle of cities. Hence the town planners of today pay special attention to provide enough number of natural scenic spots in town planning. To develop a balanced personality, one needs to have a healthy attitude which can make us appreciate and enjoy the beauty of nature.

There is other balm to soothe our tired soul and listless mind than the infinite nature all around us. We should enjoy it fully to lead a balanced and harmonious life, full of peace and tranquillity.

Based on the above data, answer the given subquestions

Sub questions

Question Number : 18 Question Id : 640653385984 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 of the following words has the SAME meaning as the word '*'care'* as used in the passage?

Options :

6406531283946. ✘ Pleasure

6406531283947. ✘ Needs

6406531283948. ✘ Want

6406531283949. ✓ Grief

Question Number : 19 Question Id : 640653385985 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 of the following statements is not made in the passage about Nature?

Options :

6406531283950. ✓ The early man was scared of Nature.

6406531283951. ✘ Nature is a great teacher.

6406531283952. ✘ Everything in nature is splendid and divine.

6406531283953. ✘ Nature is an infinite source of beauty.

Question Number : 20 Question Id : 640653385986 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

Why do people not enjoy the beauty of Nature?

Options :

6406531283954. ✘ They are afraid of nature.

6406531283955. ✓ Their life is full of worries and tensions.

6406531283956. ✘ They do not consider nature as balm to soothe their fired minds.

6406531283957. ✘ They are running after material pleasures.

Question Number : 21 Question Id : 640653385987 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 are the town planners doing today?

Options :

6406531283958. ❌ Making efforts to inculcate healthy attitude among people.

6406531283959. ❌ Supporting the cry to go back to villages.

6406531283960. ❌ Establishing balance between concrete and artificial jungle of cities.

6406531283961. ✓ Providing facilities for enjoying nature.

Question Number : 22 Question Id : 640653385988 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

According to the author of the passage, Nature:

Options :

6406531283962. ✓ Is abundantly glorious and divine.

6406531283963. ❌ Brings uniformity in all seasons.

6406531283964. ❌ Is the creator of this universe.

6406531283965. ❌ Is the ultimate salvation of man.

Question Id : 640653385989 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (23 to 27)

Question Label : Comprehension

Listen to the audio sample and answer the subquestions.



885_640653_0_1984128_hs1001fdqz1e1s1q6.mp3

Sub questions

Question Number : 23 Question Id : 640653385990 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

Who designed the first Macintosh computer?

Options :

6406531283966. ✘ Mark Zuckerberg

6406531283967. ✓ Steve Jobs

6406531283968. ✘ Jeff Bezos

6406531283969. ✘ Elon Musk

Question Number : 24 Question Id : 640653385991 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 'Typography' ?

Options :

6406531283970. ✘ The art of making maps.

6406531283971. ✓ The art of arranging typed words.

6406531283972. ✘ The art of writing a dictionary.

6406531283973. ✘ The art of writing in shorthand.

Question Number : 25 Question Id : 640653385992 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 the phrase '*connect the dots*' ?

Options :

6406531283974. ✘ To do something pointless.

6406531283975. ✘ To make a bad situation worse.

6406531283976. ✘ Better to show than tell.

6406531283977. ✓ Bring together information from different places.

Question Number : 26 Question Id : 640653385993 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

After leaving Apple, which company did Steve Jobs start?

Options :

6406531283978. ✘ IBM

6406531283979. ✘ Intel

6406531283980. ✓ NeXT

6406531283981. ✘ Samsung

Question Number : 27 Question Id : 640653385994 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 is the world's first computer animated feature film?

Options :

6406531283982. ✓ Toy Story

6406531283983. ✘ Soul

6406531283984. ✘ Finding Nemo

6406531283985. ✘ Luca

Sub-Section Number : 3

Sub-Section Id : 64065355131

Question Shuffling Allowed : No

**Question Id : 640653385995 Question Type : COMPREHENSION Sub Question Shuffling
Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A
Think Time : N.A Minimum Instruction Time : 0**

Question Numbers : (28 to 32)

Question Label : Comprehension

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

John: Good morning. Is this Abe publishers?

Mary: Yes, this is Abe publishers. (i)_____

John: I am John and I ordered a book last week.

Mary: (ii)_____

John: My order was for 'The Oldman and the Sea.'

Mary: (iii)_____, we have exhausted its stock here.

John: Then, could you send me 'The Tale of Two Cities' instead?

Mary: Sure sir. (iv)_____

John: (v) _____. It is 2B, Red Heights, London.

Mary: Thank you sir. We will dispatch it soon.

Based on the above data, answer the given subquestions

Sub questions

**Question Number : 28 Question Id : 640653385996 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

Complete blank (i) with an appropriate response.

Options :

6406531283986. ❀ Welcome sir

6406531283987. ✓ May I know who is speaking

6406531283988. ❀ What do you want

Question Number : 29 Question Id : 640653385997 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

Complete blank (ii) with an appropriate response.

Options :

6406531283990. ✩ Could you please tell me about your order

6406531283991. ✩ What did you order

6406531283992. ✩ Where did you order

6406531283993. ✓ Could you please tell me what did you order

Question Number : 30 Question Id : 640653385998 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

Complete blank (iii) with an appropriate response

Options :

6406531283994. ✓ Sorry sir

6406531283995. ✩ Good

6406531283996. ✩ Thanks sir

6406531283997. ✩ We are disappointed

Question Number : 31 Question Id : 640653385999 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

Complete blank (iv) with an appropriate response

Options :

6406531283998. ✓ Could you please share your address again

6406531283999. ✗ We don't have it

6406531284000. ✗ When do you want it

6406531284001. ✗ Share your name please

Question Number : 32 Question Id : 640653386000 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

Complete blank (v) with an appropriate response

Options :

6406531284002. ✗ Definitely

6406531284003. ✗ Sure

6406531284004. ✓ Sure, please note it down

6406531284005. ✗ Okay

Sub-Section Number : 4

Sub-Section Id : 64065355132

Question Shuffling Allowed : No

Question Id : 640653386003 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (33 to 35)

Question Label : Comprehension

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

A	B
1. Proud	a) In
2. Belief	b) At
3. Surprised	c) To

Based on the above data, answer the given subquestions

Sub questions

Question Number : 33 Question Id : 640653386004 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

Proud _____

Options :

6406531284010. ✗ In

6406531284011. ✗ At

6406531284012. ✓ To

Question Number : 34 Question Id : 640653386005 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

Belief _____

Options :

6406531284013. ✓ In

6406531284014. ✗ At

6406531284015. ✗ To

Question Number : 35 Question Id : 640653386006 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

Surprised _____

Options :

6406531284016. ❌ In

6406531284017. ✓ At

6406531284018. ❌ To

Sub-Section Number : 5

Sub-Section Id : 64065355133

Question Shuffling Allowed : Yes

Question Number : 36 Question Id : 640653386001 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

'I love hunting/ good wine/ and good food//' has the same meaning as *'I love hunting good wine and good food//'*.

Options :

6406531284006. ❌ TRUE

6406531284007. ✓ FALSE

Question Number : 37 Question Id : 640653386002 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

Pause is like a punctuation mark to spoken language.

Options :

6406531284008. ✓ TRUE

6406531284009. ✗ FALSE

Question Number : 38 Question Id : 640653386007 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

What is the meaning of the phrasal verb '*black out*'?

Options :

6406531284019. ✗ To explode

6406531284020. ✓ To become unconscious

6406531284021. ✗ To telephone

6406531284022. ✗ To continue

Question Number : 39 Question Id : 640653386008 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.

To join this sports academy, students _____ be 17 years old.

Options :

6406531284023. ✗ Has to

6406531284024. ✓ Must

Question Number : 40 Question Id : 640653386009 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 messenger is from a foreign land. Choose an appropriate word to replace 'foreign'.

Options :

6406531284025. ✓ Alien

6406531284026. ✗ Abroad

6406531284027. ✗ Outside

6406531284028. ✗ Distant

Question Number : 41 Question Id : 640653386010 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 odd one out from the following.

Different, contrast, contract, distinct

Options :

6406531284029. ✗ Different

6406531284030. ✗ Contrast

6406531284031. ✓ Contract

6406531284032. ✗ Distinct

Question Number : 42 Question Id : 640653386011 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 appropriate option.

The customer complained that the vegetables are __ cooked.

Options :

6406531284033. ✘ Over

6406531284034. ✘ Under

6406531284035. ✓ Both Over and Under

6406531284036. ✘ Enough

Question Number : 43 Question Id : 640653386012 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 appropriate option.

Can you give me __ money?

Options :

6406531284037. ✘ Few

6406531284038. ✓ Some

6406531284039. ✘ Little

6406531284040. ✘ All of these

Question Number : 44 Question Id : 640653386013 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

Identify the conjunction in the following sentence.

The weather was alright; furthermore, the sun was shining.

Options :

6406531284041. ✘ Weather

6406531284042. ✘ Alright

6406531284043. ✓ Furthermore

6406531284044. ✘ Shining

Question Number : 45 Question Id : 640653386014 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 appropriate option.

_____ dish you cooked tasted good.

Options :

6406531284045. ✘ A

6406531284046. ✘ An

6406531284047. ✓ The

6406531284048. ✘ No article

Question Number : 46 Question Id : 640653386015 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

Identify the preposition in the following sentence:

The children were gossiping during the lecture.

Options :

6406531284049. ✘ Gossiping

6406531284050. ✘ Children

6406531284051. ✘ Lecture

6406531284052. ✓ During

Question Number : 47 Question Id : 640653386016 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 one of the following words is an adverb?

Options :

6406531284053. ✘ Enthralling

6406531284054. ✘ Ideal

6406531284055. ✘ Classy

6406531284056. ✓ Beautifully

Question Number : 48 Question Id : 640653386017 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 word '*cheerfully*' is an adjective.

Options :

6406531284057. ✘ TRUE

6406531284058. ✓ FALSE

Question Number : 49 Question Id : 640653386018 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 answer.

Neither the man nor his son _____ convinced of the idea.

Options :

6406531284059. ✘ Has

6406531284060. ✓ Was

6406531284061. ✘ Have

6406531284062. ✘ Were

Question Number : 50 Question Id : 640653386019 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

Identify the part of speech of the underlined word.

I lost my wallet yesterday.

Options :

6406531284063. ✓ Pronoun

6406531284064. ✗ Noun

6406531284065. ✗ Preposition

6406531284066. ✗ Verb

Question Number : 51 Question Id : 640653386020 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 blanks with an appropriate article:

Hamida knows how to play ____ Guitar.

Options :

6406531284067. ✗ A

6406531284068. ✗ An

6406531284069. ✓ The

6406531284070. ✗ None of these

Question Number : 52 Question Id : 640653386021 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 blanks with an appropriate article:

He has got _____ job.

Options :

6406531284071. ✓ A

6406531284072. ✗ An

6406531284073. ✗ The

6406531284074. ✗ None of these

Question Number : 53 Question Id : 640653386022 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 words has a diphthong?

Options :

6406531284075. ✗ Tear

6406531284076. ✗ Share

6406531284077. ✗ Liter

6406531284078. ✓ Both Tear and Share

Question Number : 54 Question Id : 640653386023 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 has /ei/ sound.

Options :

6406531284079. ✗ Kate

6406531284080. ✗ Cat

6406531284081. ✗ Weight

6406531284082. ✓ Both Kate and Weight

Question Number : 55 Question Id : 640653386024 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 word with /u/ sound from the following

Options :

6406531284083. ✓ Hook

6406531284084. ✗ Soon

6406531284085. ✗ Boon

6406531284086. ✗ Both Soon and Boon

Question Number : 56 Question Id : 640653386025 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

Vowels are produced due to the free flow of air. This statement is :

Options :

6406531284087. ✗ TRUE

6406531284088. ✓ FALSE

Question Number : 57 Question Id : 640653386026 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

Answer whether true or false.

/w/ and /y/ are monophthongs

Options :

6406531284089. ✘ TRUE

6406531284090. ✓ FALSE

Sem1 Maths1

Section Id :	64065323868
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
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065355134
Question Shuffling Allowed :	No

Question Number : 58 Question Id : 640653386027 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

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 :

6406531284091. ✓ Yes

6406531284092. ✗ No

Question Number : 59 Question Id : 640653386028 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:
 - \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 :

6406531284093. ✓ Useful Data has been mentioned above.

6406531284094. ✗ This data attachment is just for a reference & not for an evaluation.

Sub-Section Number : 2

Sub-Section Id : 64065355135

Question Shuffling Allowed : No

**Question Id : 640653386029 Question Type : COMPREHENSION Sub Question Shuffling
Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A
Think Time : N.A Minimum Instruction Time : 0**

Question Numbers : (60 to 62)

Question Label : Comprehension

Consider two quadratic functions, $p(x)$ and $q(x)$, whose x -intercepts are shown in Figure 1. The leading coefficients of both $p(x)$ and $q(x)$ are 1 and the y -intercepts are -27 . The axis of symmetry of $q(x)$ is $x = 3$, which also passes through one of the zeroes of $p(x)$. The line $y = d$ passes through the vertices of $p(x)$ and $q(x)$.

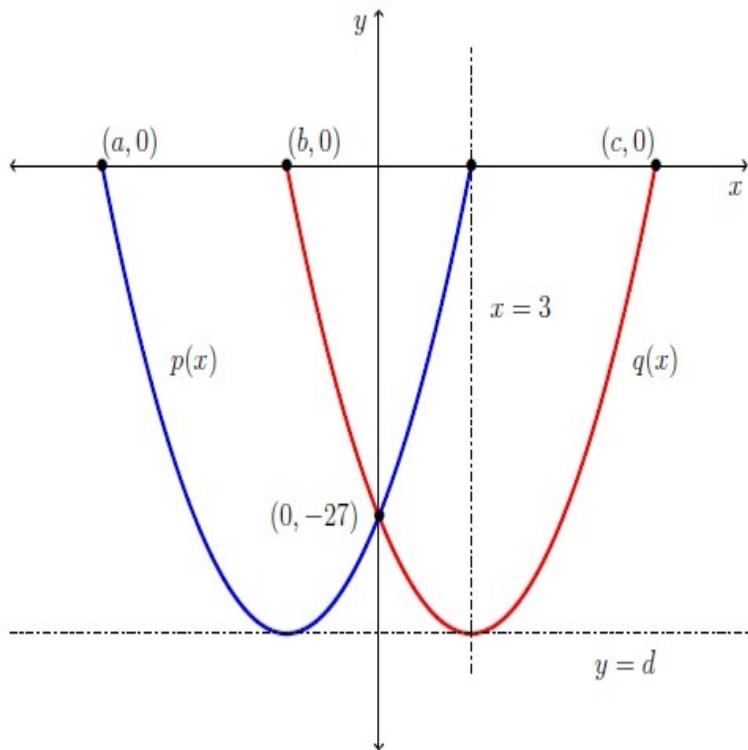


Figure 1

Based on this information, answer the given sub-questions

Sub questions

**Question Number : 60 Question Id : 640653386030 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

Enter the value of $b + c + d$?

NOTE: Enter your answer to the nearest integer.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

-30

Question Number : 61 **Question Id :** 640653386031 **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

Enter the value of a ?

NOTE: Enter your answer to the nearest integer.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

-9

Question Number : 62 **Question Id :** 640653386032 **Question Type :** MSQ Is Question

Mandatory : No **Calculator :** None **Response Time :** N.A **Think Time :** N.A **Minimum Instruction Time :** 0

Correct Marks : 3

Question Label : Multiple Select Question

Choose the set of correct option(s)

Options :

6406531284097. ✓ The axis of symmetry of $p(x)$ is $x = -3$.

6406531284098. ✗ The slopes of both $p(x)$ and $q(x)$ are same at $(0, -27)$.

6406531284099. ✓ The slope of $p(x)$ is 6 but the slope $q(x)$ is -6 at $(0, -27)$.

6406531284100. ✓ The discriminant of both the quadratic equations $p(x) = 0$ and $q(x) = 0$ are same

Sub-Section Number : 3

Sub-Section Id : 64065355136

Question Shuffling Allowed : No

Question Id : 640653386033 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (63 to 64)

Question Label : Comprehension

Ritwik wrote 12 mock tests. His score in each mock test $M(n)$ is represented as $M(n) = -\left(\frac{n^2}{1000}\right)(n^3 - 15n^2 + 50n) + 40$, where n represents the mock test number i.e., $n \in \{1, 2, \dots, 11, 12\}$. He should score 40 or above to pass the assignment.

Based on this information, answer the given sub-questions

Sub questions

Question Number : 63 Question Id : 640653386034 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

How many times did Ritwik score exactly 40?

NOTE: Enter your answer to the nearest integer.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

2

Question Number : 64 Question Id : 640653386035 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

In total, how many mock tests did Ritwik pass?

NOTE: Enter your answer to the nearest integer.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

6

Sub-Section Number : 4

Sub-Section Id : 64065355137

Question Shuffling Allowed : No

Question Id : 640653386036 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (65 to 68)

Question Label : Comprehension

Consider a relation $R \subseteq A \times A$, where $A = \{1, 2, 3\}$. Given below is Table 1, in which Column A shows the relation and Column B shows the type of relation.

Relation (R) (Column A)	Type of Relation (Column B)
$R_1 = \{(1, 1)\}$	Symmetric relation
$R_2 = \{(1, 1), (2, 2), (3, 3)\}$	Anti-symmetric relation
$R_3 = \{(1, 1), (1, 2)\}$	Identity relation
$R_4 = \{(1, 3)\}$	Transitive relation
$R_5 = \{(1, 1), (2, 2), (3, 3), (1, 2)\}$	Reflexive relation
$R_6 = \{(1, 1), (1, 2), (2, 1), (2, 3)\}$	Equivalence relation

Table 1

Based on this information, answer the given sub-questions

Sub questions

Question Number : 65 Question Id : 640653386037 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

State 'True' or 'False' : R_6 does not match with any type of relations given in Column B.

Options :

6406531284103. ✓ TRUE

6406531284104. ✗ FALSE

Question Number : 66 Question Id : 640653386038 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

State 'True' or 'False' : R_1 matches with all type of relations except anti-symmetric relation given in Column B.

Options :

6406531284105. ✗ TRUE

6406531284106. ✓ FALSE

Question Number : 67 Question Id : 640653386039 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

In total, how many relations given in Column A matches with transitive relation?

NOTE: Enter your answer to the nearest integer.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

5

Question Number : 68 Question Id : 640653386040 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

In total, how many relations given in Column A matches with reflexive relation?

NOTE: Enter your answer to the nearest integer.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

2

Sub-Section Number :	5
Sub-Section Id :	64065355138
Question Shuffling Allowed :	Yes

Question Number : 69 Question Id : 640653386041 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Select Question

Consider the following relations defined on the set of integers

- $R_1 = \{(x, y) \mid x, y \in \mathbb{Z}, \text{ and } y = x^2 - 1\}$
- $R_2 = \{(x, y) \mid x, y \in \mathbb{Z}, \text{ and } |x| + |y| = 1\}$

Choose the correct option(s)?

Options :

6406531284109. ✘ $R_1 \cap R_2$ represents an injective function.

6406531284110. ✓ R_2 represents a relation but not a function.

6406531284111. ✓ R_1 represents a function.

6406531284112. ✘ R_2 represents a function

Question Number : 70 Question Id : 640653386047 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Select Question

Figure 2 shows the graph of a polynomial $p(x)$. Choose the set of correct option(s).

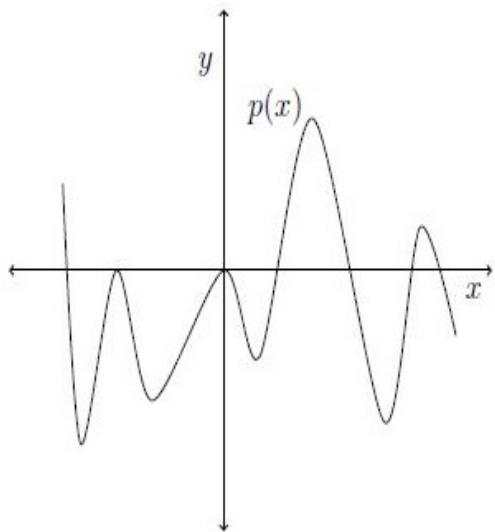


Figure 2

Options :

6406531284132. ✓ The degree of $p(x)$ is at least 9.

6406531284133. ✓ $p(x)$ represent an odd degree polynomial.

6406531284134. ✗ Total number of turning point of $p(x)$ are 9.

6406531284135. ✓ Multiplicities of zero and one of the negative root could be the same.

Sub-Section Number : 6

Sub-Section Id : 64065355139

Question Shuffling Allowed : Yes

Question Number : 71 Question Id : 640653386042 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

Let A be the set of all points on the curve defined by the function $f_1(x) = -x^2 + x + 30$ and let B be the set of all points on the curve f_2 defined by the reflection of the curve f_1 with respect to X - axis. If C is the set of all points on the axes(i.e., x and y axis), then find the cardinality of set D where $D = (A \cap B) \cup (A \cap C) \cup (B \cap C)$.

NOTE: Enter your answer to the nearest integer.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

4

Sub-Section Number : 7

Sub-Section Id : 64065355140

Question Shuffling Allowed : Yes

Question Number : 72 Question Id : 640653386043 Question Type : MSQ Is Question

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

Time : 0

Correct Marks : 4

Question Label : Multiple Select Question

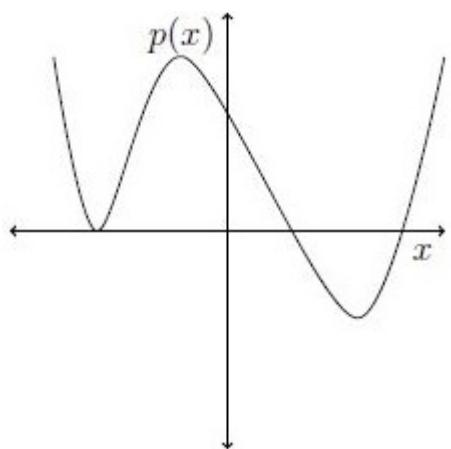
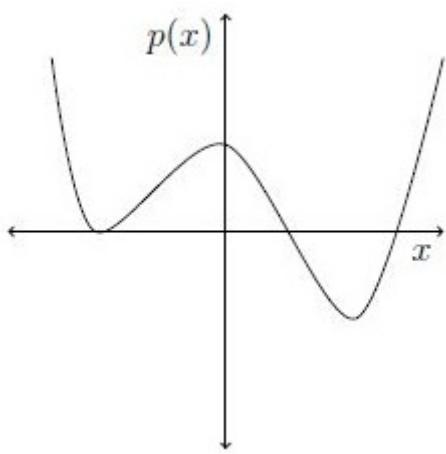
The polynomial $p(x) = a_n x^n + a_{n-1} x^{n-1} + \dots + a_0$ has the following properties:

- $p(x)$ is an even degree polynomial.
- $p(x)$ has at least one positive real root and at least one negative real root.
- $(x + 4)^2$ is a factor of $p(x)$.
- $p(0) \neq 0$

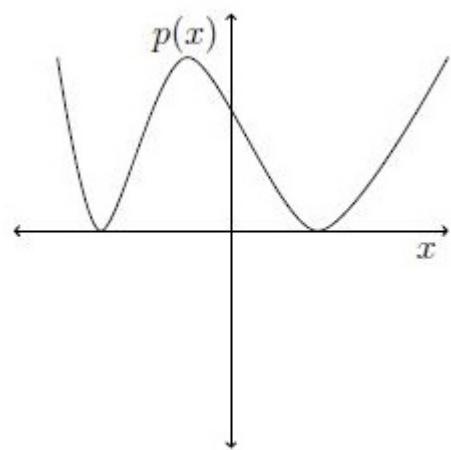
From the options given, choose the possible representations of $p(x)$.

Options :

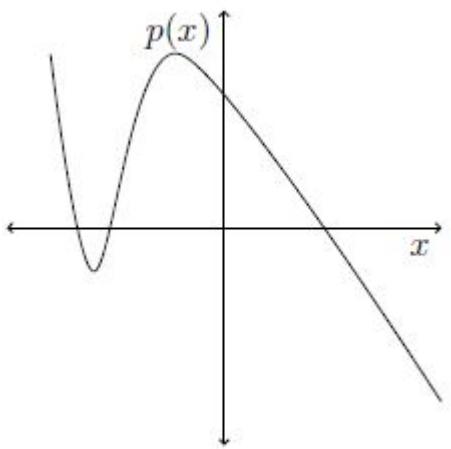
6406531284114. ✓



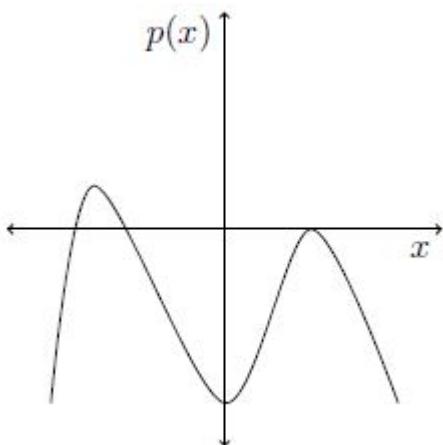
6406531284115. ✓



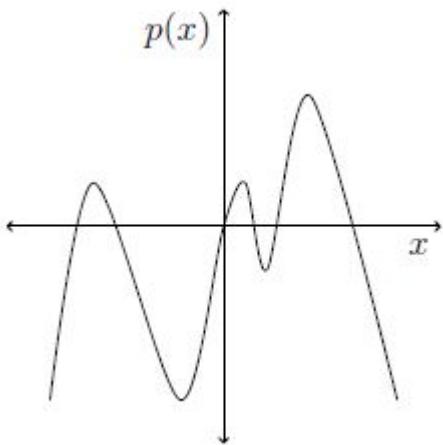
6406531284116. ✓



6406531284117. ✘



6406531284118. *



6406531284119. *

Question Number : 73 Question Id : 640653386045 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Select Question

Which of the following statements is (are) correct?

Options :

6406531284124. ✓ $y - 6 = 3(x - 10)^2$ is an equation of a parabola whose vertex is at $(10, 6)$.

6406531284125. ✓ $p(x) = ax^5 + bx^4 + 2x + 8$ where $a = 0$ and $b \neq 0$, is a polynomial of degree 4.

6406531284126. * $-5x + 4y - 1 = 0$ and $\frac{x}{4} - \frac{y}{5} = 1$ are perpendicular to each other.

6406531284127. ✓ 2x + 7y + 9 = 0 and 6x + 21y + 9 = 0 are parallel to each other.

Sub-Section Number : 8

Sub-Section Id : 64065355141

Question Shuffling Allowed : Yes

Question Number : 74 Question Id : 640653386044 Question Type : MSQ Is Question

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

Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

You are climbing a ladder which is slanted at an angle of 45 degrees (measured in the anticlockwise direction) with respect to the ground. The ladder, leaning against a wall, is at a vertical distance of 2 metres from the ground. If you are at a location which cuts the ladder in the ratio 2 : 1 from the top to bottom, what are the coordinates of your location? Assume origin (0,0) to be at the intersection of the ladder and the ground.

Options :

6406531284120. ✗ (1/2, 1/2)

6406531284121. ✗ (1/3, 1/3)

6406531284122. ✓ (2/3, 2/3)

6406531284123. ✗ (1/3, 2/3)

Question Number : 75 Question Id : 640653386046 Question Type : MSQ Is Question

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

Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

Sushmita was calculating SSE (sum squared error) and she found that SSE is a function of a as follows: $\text{SSE} = f(a) = a^2 - 6a + 18$. What will be the best fit value.

Options :

6406531284128. ✓ 9

6406531284129. ✗ 2

6406531284130. ✘ 0

6406531284131. ✘ -2

Sem1 Statistics1

Section Id :	64065323869
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
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065355142
Question Shuffling Allowed :	No

Question Number : 76 Question Id : 640653386048 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL:SEMESTER 1/DIRECT ENTRY DIPLOMA : STATISTICS FOR DATA SCIENCE 1"

**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 :

6406531284136. ✓ Yes

6406531284137. ✗ No

Sub-Section Number :

2

Sub-Section Id :

64065355143

Question Shuffling Allowed :

Yes

Question Number : 77 Question Id : 640653386049 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

Which of the following statements is/are correct?

Options :

6406531284138. ✗ Grouping students by favourite subjects in a class is a numerical variable

6406531284139. ✗ Amount of calories consumed by a person in a day is a categorical variable.

6406531284140. ✓ The amount of time to complete a quiz is a numerical and continuous variable.

6406531284141. ✓ The number of attempts to clear an exam is a numerical and discrete variable.

Question Number : 78 Question Id : 640653386050 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

Choose the correct statement/s ?

Options :

6406531284142. ✓ A nominal scale has the property of labelling the categories and it does not involve the ranking of data.

6406531284143. ✓ An ordinal scale has all the properties of nominal scale and it involves the ranking of data.

6406531284144. ✗ An Interval scale has all the properties of ordinal scale and it satisfies the

absolute zero property.

6406531284145. ✘ A ratio scale has all the properties of interval scale and it does not satisfy the absolute zero property.

Question Number : 79 Question Id : 640653386051 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

If we have a dataset 45, 42, 28, 95, 23 and 194, then choose the correct option/s?

Options :

6406531284146. ✘ Range of the dataset is 149.

6406531284147. ✓ Median of the dataset is 43.5

6406531284148. ✓ 25^{th} percentile of the dataset is 28.

6406531284149. ✘ IQR (Inter-quartile range) of the dataset is 72.

Question Number : 80 Question Id : 640653386052 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

Figure Q.1. represents the data of number of t-shirts sold of different sizes in a shop of clothes.

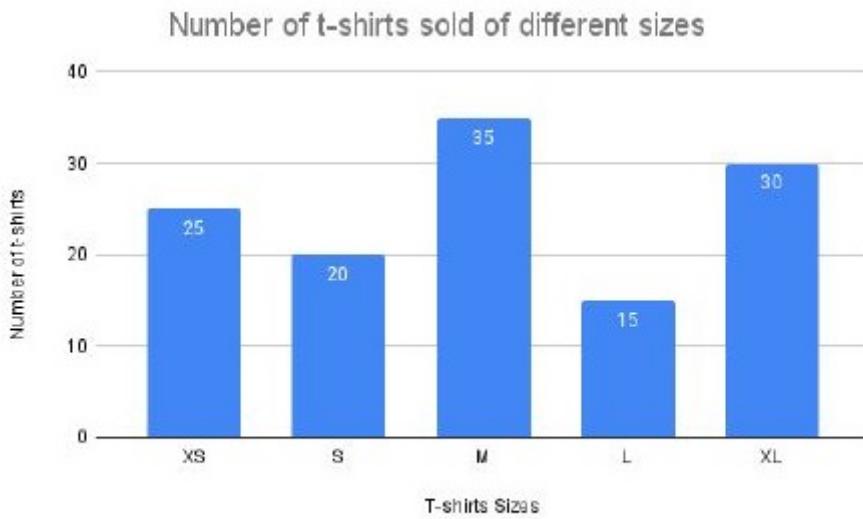


Figure Q.1: Sales distribution of t-shirts of different sizes

Choose the correct statement/s:

Options :

6406531284150. ✓ Mode of the dataset is size 'M'.

6406531284151. ✗ Mean of the dataset is 25.

6406531284152. ✗ Population variance of the dataset is 50.

6406531284153. ✗ Median of the dataset is 20.

Question Number : 81 Question Id : 640653386053 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

The five number summary of a dataset is 5, 10, 15, 20 and 25. Later it is noted that one observation 6 is wrongly noted as 5, then choose the correct option(s):

Options :

6406531284154. ✓ The five number summary may remain the same.

6406531284155. ✗ The five number summary will definitely change.

6406531284156. ✗ The minimum value of the dataset will definitely change.

6406531284157. ✗ The five number summary will always change whenever an observation is wrongly noted.

Question Number : 82 Question Id : 640653386054 Question Type : MSQ Is Question

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

Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

Choose the correct option/s:

Options :

6406531284158. ❌ If the large values of variable X tend to be associated with small values of variable Y , then the correlation between X and Y will be positive.

6406531284159. ❌ If the correlation coefficient between two variables is zero, then the variables are independent.

6406531284160. ✓ Correlation coefficient is a unitless measure of association.

6406531284161. ❌ Correlation coefficient always lies between 0 and 1.

Question Number : 83 Question Id : 640653386055 Question Type : MSQ Is Question

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

Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

An analyst did a survey to know the willingness of graduate and post graduate students of India to go abroad for higher studies. He collected the data from a college for the survey and the results are given in Table 1.1.Q.

Education	Willingness to go	
	Yes	No
Graduate	14	6
Post-graduate	18	12

Table 1.1.Q

Choose the correct option/s?

Options :

6406531284162. ✘ Of all the graduate students, there are 28.57% who does not want to go for higher studies.

6406531284163. ✓ Of all the post-graduate students, there are 60% who wants to go for higher studies.

6406531284164. ✓ If all row relative frequencies are similar within each column then, it implies that all column relative frequencies will also be similar within each row.

6406531284165. ✘ If all column relative frequencies are similar within each row then, it does not imply that all row relative frequencies will also be similar within each column.

6406531284166. ✘ There is no association between Education and Willingness to go for higher studies.

6406531284167. ✓ There is an association between Education and Willingness to go for higher studies.

Sub-Section Number : 3

Sub-Section Id : 64065355144

Question Shuffling Allowed : Yes

Question Number : 84 Question Id : 640653386056 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

Figure Q.2 represents the distribution of runs scored by Suresh in matches of a cricket tournament.

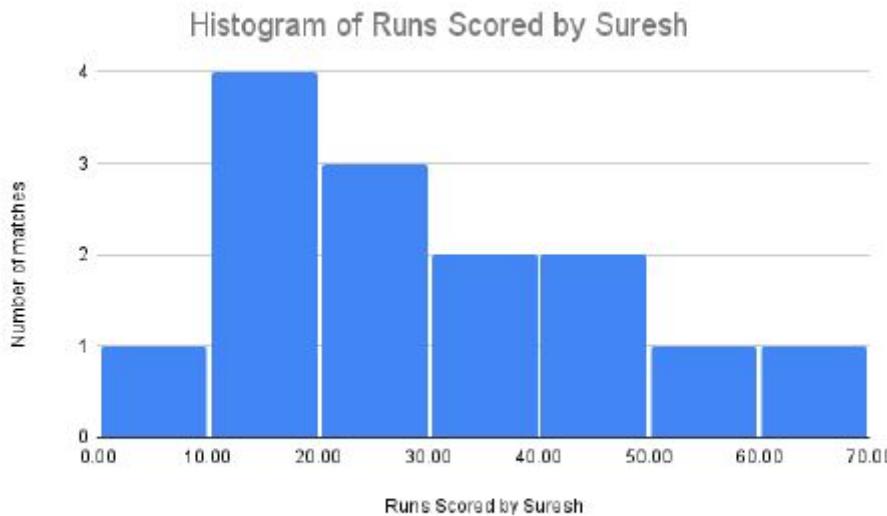


Figure Q.2: Runs scored by Suresh in a cricket tournament

What is the average runs scored by Suresh?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

29.5 to 30.5

Question Number : 85 **Question Id :** 640653386058 **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

The dataset consists of three distinct observations, say a , b and c , and the sum of their frequencies is 100 and relative frequencies corresponding to a and c are 35% and 45% respectively. Find the cumulative frequency of b and c .

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

65

Sub-Section Number : 4

Sub-Section Id : 64065355145

Question Shuffling Allowed : Yes

Question Number : 86 Question Id : 640653386057 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

If the sample variance of a dataset of 6 observations is 60, then what is the population variance if each observation in the dataset is increased by 5?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

50

Sub-Section Number : 5

Sub-Section Id : 64065355146

Question Shuffling Allowed : Yes

Question Number : 87 Question Id : 640653386059 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

The data of the weight (in kg) and age (in years) is recorded of 5 different persons in a hospital and tabulated in Table 1.2.Q.

Weight (in kg)	80	75	85	70	65
Age (in years)	85	70	80	95	70

Table 1.2.Q

What is the correlation coefficient between the weight and age of persons ?(Enter the answer correct to 3 decimal accuracy)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.144 to 0.154

Sub-Section Number : 6

Sub-Section Id : 64065355147

Question Shuffling Allowed : No

Question Id : 640653386060 **Question Type :** COMPREHENSION **Sub Question Shuffling Allowed :** No **Group Comprehension Questions :** No **Calculator :** None **Response Time :** N.A

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

Question Numbers : (88 to 89)

Question Label : Comprehension

An inspection officer wants to test the tensile strength of threaded rods produced by a factory.

Based on the information, answer the given subquestions .

Sub questions

Question Number : 88 **Question Id :** 640653386061 **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

If he selects 40 threaded rods at random from those that produced in the month of August 2022 at the factory. Identify the sample and population.

Options :

6406531284172. ❌ The population is all threaded rods ever produced at the factory and the sample is all the threaded rods produced in the month of August 2022.

6406531284173. ✓ The population is all threaded rods ever produced at the factory and the sample is the 40 selected threaded rods.

6406531284174. ❌ The population is all threaded rods produced in the year 2022 and the sample is the threaded rods produced in the month of August 2022.

6406531284175. ❌ None of these.

Question Number : 89 Question Id : 640653386062 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

If the inspection officer is interested to test the tensile strength of threaded rods produced by the factory in different months of year 2022 and collected the data for the same, then choose the correct option:

Options :

6406531284176. ✓ It is time-series data.

6406531284177. ❌ It is cross-sectional data.

Question Id : 640653386063 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (90 to 91)

Question Label : Comprehension

Figure Q.3 represents the distribution of sales of 4 different items in a mobile shop last month. Based on this information, answer the given subquestions .

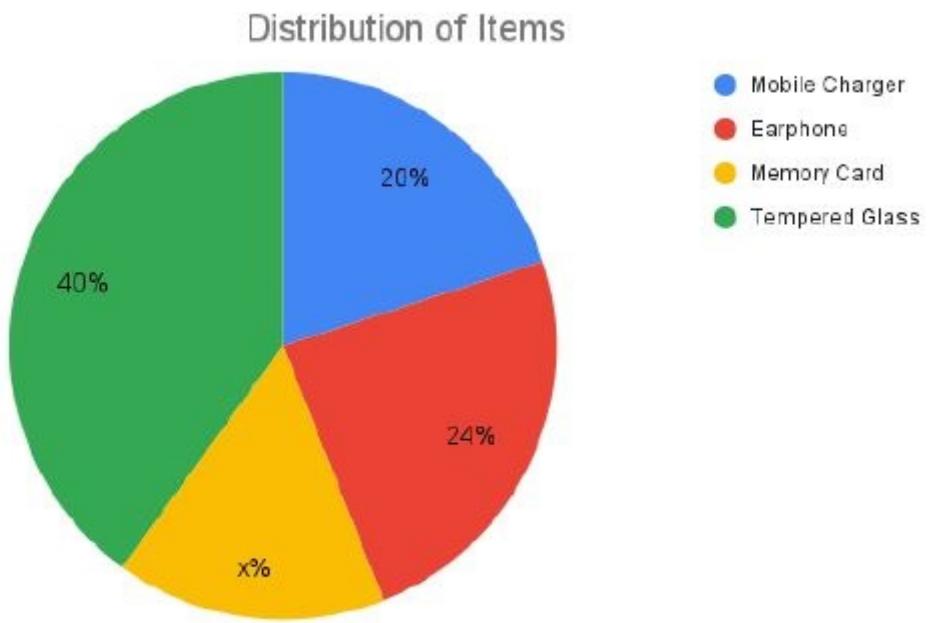


Figure Q.3: Sales distribution of 4 different items

Sub questions

Question Number : 90 Question Id : 640653386064 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 value of x ?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

16

Question Number : 91 Question Id : 640653386065 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

If the total number of items sold in last month is 500, then find the number of earphones sold in the last month?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

120

Sem2 Intro to Python

Section Id : 64065323870

Section Number : 5

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

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 : 64065355148

Question Shuffling Allowed : No

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 2/DIRECT ENTRY DIPLOMA : INTRODUCTION TO PYTHON"

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 :

6406531284180. ✓ YES

6406531284181. ✗ NO

Sub-Section Number : 2

Sub-Section Id : 64065355149

Question Shuffling Allowed : Yes

Question Number : 93 Question Id : 640653386067 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

E1 and E2 are Boolean expressions. Consider the following expression:

```
1 | not(E1 and E2) != (not E1 or not E2)
```

What can you say about the value of the expression given above?

Options :

6406531284182. ✗ It is **True** if and only if E1 and E2 have different values

6406531284183. ✗ It is **False** if and only if E1 and E2 have the same value

6406531284184. ✗ It is always **True**

6406531284185. ✓ It is always **False**

Question Number : 94 Question Id : 640653386068 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following code snippet:

```
1 | a, b, c, d = input()  
2 | d = 3  
3 | print((a + b + c) * d)
```

What will be the output of the code given above for the following input ?

Input

```
1 | 1234
```

Options :

6406531284186. ✓

```
1 | 123123123
```

6406531284187. ✗

```
1 | 18
```

6406531284188. ✗

```
1 | 24
```

6406531284189. ✗

```
1 | 492
```

6406531284190. ✗

```
1 | 123412341234
```

Question Number : 95 Question Id : 640653386070 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

If n is a positive integer, then what will be the value of **count** at the end of execution of the code given below?

```
1 n = int(input())
2 count = 0
3 for x in range(1, n + 1):
4     for y in range(x + 1, n + 1):
5         count = count + 1
```

Options :

6406531284195. ✘ n^2

6406531284196. ✘ $n(n+1)$

6406531284197. ✘ $n(n+1)/2$

6406531284198. ✓ $n(n-1)/2$

Sub-Section Number : 3

Sub-Section Id : 64065355150

Question Shuffling Allowed : Yes

Question Number : 96 Question Id : 640653386071 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

What will be the output of the code snippet given below?

```
1 | L = [-1, 1]
2 | for i in range(8):
3 |     size = len(L)
4 |     value = L[size - 2] + L[size - 1]
5 |     L.append(value)
6 | print(L)
```

Options :

6406531284199. ✓

```
1 | [-1, 1, 0, 1, 1, 2, 3, 5, 8, 13]
```

6406531284200. ✘

```
1 | [0, 1, 1, 2, 3, 5, 8, 13, 21, 34]
```

6406531284201. ✘

```
1 | [1, 1, 2, 3, 5, 8, 13, 21, 34, 55]
```

6406531284202. ✘

```
1 | [-1, -1, -2, -3, -5, -8, -13, -21, -34, -55]
```

Question Number : 97 Question Id : 640653386073 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

If n is a positive integer, what is the output of the following code? Assume that natural numbers start from 1, that is, 0 is not a natural number.

```
1 | a = 0
2 | for i in range(1, n + 1):
3 |     b = 1
4 |     for j in range(1, i + 1):
5 |         b = b * j
6 |     a = a + b
7 | print(a)
```

Options :6406531284207. ✘ Sum of the first **n** natural numbers6406531284208. ✘ Product of the first **n** natural numbers6406531284209. ✓ Sum of the factorial of the first **n** natural numbers6406531284210. ✘ Factorial of the sum of the first **n** natural numbers**Question Number : 98 Question Id : 640653386074 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

L is a non-empty list of positive integers that is already defined. Consider the following snippet of code:

```
1 flag1, flag2 = True, True
2 for i in range(1, len(L)):
3     if L[i] > L[i - 1]:
4         flag2 = False
5     elif L[i] < L[i - 1]:
6         flag1 = False
7     if flag1:
8         print('one')
9     elif flag2:
10        print('two')
11    else:
12        print('three')
```

What is the output of the code if L = [394, 289, 120, 79, 50, 27, 15] ?

Options : 1 | one

6406531284211. ✘

 1 | two

6406531284212. ✓

 1 | three

6406531284213. ✘

Sub-Section Number : 4

Sub-Section Id : 64065355151

Question Shuffling Allowed : Yes

Question Number : 99 Question Id : 640653386069 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Select Question

T is a positive integer that represents the temperature in degree Celsius. Consider the following snippet of code:

```

1 if 0 < T <= 15:
2     print('freezing')
3 elif 15 < T <= 25:
4     print('cold')
5 elif 25 < T <= 30:
6     print('warm')
7 else:
8     print('hot')
```

Two snippets of code are equivalent if they produce the same output for any given input. Select all snippets of code that are equivalent to the code given above.

Options :

```

1 if 0 < T <= 15:
2     print('freezing')
3 if 15 < T <= 25:
4     print('cold')
5 if 25 < T <= 30:
6     print('warm')
7 if T > 30:
8     print('hot')
```

6406531284191. ✓

6406531284192. *

```
1 if 0 < T <= 15:  
2     print('freezing')  
3 if 15 < T <= 25:  
4     print('cold')  
5 if 25 < T <= 30:  
6     print('warm')  
7 else:  
8     print('hot')
```

```
1 if 0 < T <= 15:  
2     print('freezing')  
3 elif 15 < T <= 25:  
4     print('cold')  
5 elif 25 < T <= 30:  
6     print('warm')  
7 elif T > 30:  
8     print('hot')
```

6406531284193. ✓

```
1 if 0 < T <= 15:  
2     print('freezing')  
3 if 15 < T <= 25:  
4     print('cold')  
5 if 25 < T <= 30:  
6     print('warm')  
7 else T > 30:  
8     print('hot')
```

6406531284194. ✘

Sub-Section Number :

5

Sub-Section Id :

64065355152

Question Shuffling Allowed :

Yes

Question Number : 100 Question Id : 640653386072 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Select Question

Which of the following options print "Welcome to Python Quiz!" on n separate lines? Here, n is a positive integer that has already been defined. Your answer should be applicable for any positive integer.

Sample output for $n = 5$

```
1 Welcome to Python Quiz!
2 Welcome to Python Quiz!
3 Welcome to Python Quiz!
4 Welcome to Python Quiz!
5 Welcome to Python Quiz!
```

Options :

```
1 print('welcome to Python Quiz!')
2 print('welcome to Python Quiz!')
3 print('welcome to Python Quiz!')
4 print('welcome to Python Quiz!')
5 print('welcome to Python Quiz!')
```

6406531284203. ❌

```
1 for i in range(n, 2 * n):
2     print('Welcome to Python Quiz!')
```

6406531284204. ✓

```
1 for i in range(1, n):
2     print('Welcome to Python Quiz!')
```

6406531284205. ❌

```
1 for i in range(n):
2     print('Welcome to Python Quiz!')
```

6406531284206. ✓

Question Number : 101 Question Id : 640653386076 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Select Question

Reverse a sentence based on words. The i^{th} word from the left in the input sentence is the i^{th} word from the end in the output sentence.

Consider following example:

```
1 sentence = "i know how to code in python"
2 modified_sentence = "python in code to how know i"
```

Choose all the options that accepts a sentence as input and prints the modified sentence.

Options :

```
1 sentence = input()
2 words = sentence.split(' ')
3 n = len(words)
4 for i in range(n - 1, 0, -1):
5     print(words[i] + ' ', end = '')
6 print(words[0])
```

6406531284216. ✓

```
1 sentence = input()
2 words = sentence.split(' ')
3 n = len(words)
4 for i in range(n - 1, -2, -1):
5     print(words[i] + ' ', end = '')
```

6406531284217. ✗

```
1 sentence = input()
2 words = sentence.split(' ')
3 n = len(words)
4 for i in range(n - 1, -1, -1):
5     print(words[i] + ' ', end = '')
6 print(words[0])
```

6406531284218. ✗

```
1 words = sentence.split(' ')
2 n = len(words)
3 for i in range(n - 1):
4     print(words[n - i - 1], end = ' ')
5 print(words[0])
```

6406531284219. ✓

Question Number : 102 Question Id : 640653386077 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Select Question

Select all matrices M for which the following code prints **True** to the console.

```
1 n = len(M)
2 flag = True
3 for i in range(n):
4     for j in range(n):
5         if (i != j) and (M[i][j] != M[j][i]):
6             flag = False
7 print(flag)
```

Options :

1 | [[1, 2, 3], [2, 5, 4], [3, 4, 6]]

6406531284220. ✓

1 | [[1, 5, 3, 4], [5, 1, 4, 6], [3, 4, 2, 8], [4, 6, 8, 3]]

6406531284221. ✓

1 | [[1, 2, 3], [0, 5, 4], [3, 4, 6]]

6406531284222. ✘

1 | [[1, 5, 3, 6], [5, 1, 4, 6], [3, 4, 2, 8], [4, 6, 8, 3]]

6406531284223. ✘

Sub-Section Number :

6

Sub-Section Id :

64065355153

Question Shuffling Allowed :

Yes

Question Number : 103 Question Id : 640653386078 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Select Question

For what values of **a**, **b** and **c** does the code given below print a sequence which has **0** as one of the elements?

```
1 | for i in range(a, b, c):  
2 |     print(i)
```

Options :

6406531284224. ✓

```
1 | a = 10, b = -1, c = -1
```

6406531284225. ✓

```
1 | a = -10, b = 1, c = 1
```

6406531284226. ✗

```
1 | a = 10, b = -2, c = 0
```

6406531284227. ✗

```
1 | a = 10, b = -2, c = 1
```

Question Number : 104 Question Id : 640653386079 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Select Question

Select all snippets of code that print the following sequence of n lines, where n is a positive integer that is already defined. The i^{th} line in the output corresponds to the first i Fibonacci numbers, for $1 \leq i \leq n$. Assume that 0 and 1 are the first two Fibonacci numbers. There should be a single space after every number. Specifically, there should be a single space after the last number in any given line.

Sample output for $n = 7$

```
1 | 0
2 | 0 1
3 | 0 1 1
4 | 0 1 1 2
5 | 0 1 1 2 3
6 | 0 1 1 2 3 5
7 | 0 1 1 2 3 5 8
```

Options :

```
1 | L = [0, 1]
2 | for i in range(n - 2):
3 |     L.append(L[-1] + L[-2])
4 | for i in range(1, n + 1):
5 |     for j in range(i):
6 |         print(L[j], end = ' ')
7 |     print()
```

6406531284228. ✓

```
1 | i = 0
2 | L = []
3 | while i < n:
4 |     if i == 0:
5 |         L.append(0)
6 |     elif i == 1:
7 |         L.append(1)
8 |     else:
9 |         L.append(L[-1] + L[-2])
10 |    i += 1
11 |    for j in range(i):
12 |        print(L[j], end = ' ')
13 |    print()
```

6406531284229. ✓

6406531284230. ✘

```
1 i = 0
2 L = []
3 while i <= n:
4     if i == 0:
5         L.append(0)
6     elif i == 1:
7         L.append(1)
8     else:
9         L.append(L[-1] + L[-2])
10    i += 1
11    for j in range(i):
12        print(L[j], end = ' ')
13    print()
```

```
1 L = [0, 1]
2 for i in range(n):
3     L.append(L[-1] + L[-2])
4 for i in range(1, n + 1):
5     for j in range(i):
6         print(L[j], end = ' ')
7     print()
```

6406531284231. ✓

Sub-Section Number :

7

Sub-Section Id :

64065355154

Question Shuffling Allowed :

Yes

Question Number : 105 Question Id : 640653386075 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

R is a zero-matrix (all entries are zeros) of size 3×3 and

$$P = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}, Q = \begin{bmatrix} 1 & -1 & 1 \\ 1 & -1 & 1 \\ 1 & -1 & 1 \end{bmatrix}$$

What is the output of the following snippet of code?

```
1 val = 0
2 for i in range(3):
3     for j in range(3):
4         R[i][j] = P[i][j] * Q[i][j]
5         val = val + R[i][j]
6 print(val)
```

NOTE: Enter your answer to the nearest integer.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

15

Sem2 English2

Section Id :	64065323871
Section Number :	6
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	33
Number of Questions to be attempted :	33
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 :

64065355155

Question Shuffling Allowed :

No

Question Number : 106 Question Id : 640653386080 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 2: ENGLISH 2"

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 :

6406531284232. ✓ YES

6406531284233. ✘ NO

Sub-Section Number :

2

Sub-Section Id :

64065355156

Question Shuffling Allowed :

Yes

Question Number : 107 Question Id : 640653386093 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

For the following sentence, choose whether the type of sentence is simple, compound or complex.

The child is hungry, therefore it is crying.

Options :

6406531284272. ✘ Simple

6406531284273. ✓ Compound

6406531284274. ✘ Complex

Question Number : 108 Question Id : 640653386094 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

For the following sentence, choose whether the type of sentence is simple, compound or complex.

The earth moves round the sun.

Options :

6406531284275. ✓ Simple

6406531284276. ✘ Compound

6406531284277. ✘ Complex

Question Number : 109 Question Id : 640653386095 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 independent clauses are there in the sentence given below:

She slammed the door angrily

Options :

6406531284278. ✓ 1

6406531284279. ✘ 2

6406531284280. ✘ No independent clause

Question Number : 110 Question Id : 640653386096 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 following sentence, identify the complement(s) of the verbs that are underlined.

My grandfather left my sister all his money.

Options :

6406531284281. ✘ Grandfather, money

6406531284282. ✘ All his money, my grandfather

6406531284283. ✓ My sister, all his money

6406531284284. ✘ My grandfather, my sister

Question Number : 111 Question Id : 640653386097 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

'Hina walked the dog *in the park*.' Here, the adjunct is _____

Options :

6406531284285. ✘ Hina walked

6406531284286. ✘ Hina walked the dog

6406531284287. ✓ In the park

6406531284288. ✘ The dog in the park

Question Number : 112 Question Id : 640653386098 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

Rahul brought a new cycle which was imported from America. Here the subordinate clause functions as ____.

Options :

6406531284289. ✓ Adjective

6406531284290. ✗ Adverb

6406531284291. ✗ Noun

6406531284292. ✗ No subordinate clause

Question Number : 113 Question Id : 640653386099 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

I attempted a mock test which was very tough. Here the relative pronoun is ____.

Options :

6406531284293. ✗ I

6406531284294. ✓ Which

6406531284295. ✗ Very

6406531284296. ✗ Was

Question Number : 114 Question Id : 640653386100 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 class was handled by Augustya, who did his PhD from IIT Madras. Here the subordinate clause functions as ____.

Options :

6406531284297. ✗ Adverb

6406531284298. ✓ Adjective

6406531284299. ✗ Noun

6406531284300. ✗ Preposition

Question Number : 115 Question Id : 640653386101 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

Identify the independent clause in the following sentence.

This road leads to the next town, which is famous for its furniture.

Options :

6406531284301. ✓ This road leads to the next town

6406531284302. ✗ Which is famous for its furniture

6406531284303. ✗ Famous for its furniture

6406531284304. ✗ To the next town

Question Number : 116 Question Id : 640653386102 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

Hari and Rohan ___ leading the team.

Options :

6406531284305. ✗ Is

6406531284306. ✗ Was

6406531284307. ✓ Were

6406531284308. ✗ Both Is and Was

Question Number : 117 Question Id : 640653386103 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 there are two objects for a verb, the first is called the _____ object and the second is called the _____ object.

Options :

6406531284309. ✓ Direct, indirect

6406531284310. ✗ Marked, unmarked

Question Number : 118 Question Id : 640653386104 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

Identify the adverb in the following sentence.

My sister is listening patiently.

Options :

6406531284311. ✗ Listening

6406531284312. ✗ My

6406531284313. ✓ Patiently

6406531284314. ✗ Is listening patiently

Question Number : 119 Question Id : 640653386105 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

'-s' and '-ies' in 'bags' and 'trophies' are _____.

Options :

6406531284315. ✘ Plural markers

6406531284316. ✘ Morphemes

6406531284317. ✓ Both Plural markers and Morphemes

Question Number : 120 Question Id : 640653386106 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

Adding '-en' to 'dark' changes it from _____.

Options :

6406531284318. ✘ Verb to adjective

6406531284319. ✓ Adjective to verb

6406531284320. ✘ Noun to Verb

6406531284321. ✘ Verb to noun

Question Number : 121 Question Id : 640653386107 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

Identify the number of suffixes in the following sentence.

It was a warm summer month: the flowers were blooming, the birds were singing, and the days seemed endless.

Options :

6406531284322. ✘ 1

6406531284323. ✘ 3

6406531284324. ✘ 5

6406531284325. ✓ 7

Question Number : 122 Question Id : 640653386108 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

Identify the verb tense and aspect in the following sentence.

Laya is sleeping in peace.

Options :

6406531284326. ❌ Simple present

6406531284327. ✓ Present continuous

6406531284328. ❌ Past continuous

6406531284329. ❌ Present perfect

Question Number : 123 Question Id : 640653386109 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

Identify the (verb) mood in the following sentence.

Had I been unhappy, I would not have agreed to this.

Options :

6406531284330. ✓ Subjunctive

6406531284331. ❌ Indicative

6406531284332. ❌ Interrogative

6406531284333. ❌ Imperative

Question Number : 124 Question Id : 640653386110 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 verb that are in the past perfect tense

He ____ the bet.

Options :

6406531284334. ❌ Have lost

6406531284335. ❌ Lost

6406531284336. ❌ Would have lost

6406531284337. ✓ Had lost

Question Number : 125 Question Id : 640653386111 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 verbs that are in the future perfect tense.

He ____ the bet.

Options :

6406531284338. ❌ Have lost

6406531284339. ❌ Lost

6406531284340. ✓ Will have lost

6406531284341. ❌ Had lost

Question Number : 126 Question Id : 640653386112 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 verbs that are in the present perfect continuous tense.

She ____ this land.

Options :

6406531284342. ✘ Has
6406531284343. ✘ Is ruling
6406531284344. ✓ Has been ruling
6406531284345. ✘ Will rule

Question Number : 127 Question Id : 640653386113 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

Sekhar slept early yesterday. Here the adverb is with ____.

Options :

6406531284346. ✘ Subject
6406531284347. ✓ Predicate
6406531284348. ✘ No adverb
6406531284349. ✘ Both Subject and Predicate

Question Number : 128 Question Id : 640653386114 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

Identify the adverb in the sentence given below.

Nirmal buys new laptops every year.

Options :

6406531284350. ✘ Laptops
6406531284351. ✘ Buys
6406531284352. ✘ New
6406531284353. ✓ Every year

Question Number : 129 Question Id : 640653386115 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 an option that fits well for the following situation.

Inviting a classmate you met during shopping for dinner

Options :

6406531284354. ✘ Can you come with me for dinner

6406531284355. ✘ Will you join me for dinner

6406531284356. ✓ Would you like to join me for dinner

6406531284357. ✘ Could you please come with me for dinner

Question Number : 130 Question Id : 640653386116 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

'Let us do the meeting in the conference room on the fourth floor.' A softened version of this sentence is _____.

Options :

6406531284358. ✘ Can we do the meeting in the fourth floor conference room?

6406531284359. ✘ Could we conduct the meeting in the conference room on the fourth floor , please?

6406531284360. ✘ I was wondering if we could do the meeting in the fourth floor conference room.

6406531284361. ✓ All of these

Question Number : 131 Question Id : 640653386117 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

An imperative is understood as a command or a request based on _____.

Options :

6406531284362. ❌ The use of 'please'

6406531284363. ✓ Context

6406531284364. ❌ Tense

6406531284365. ❌ Aspect

Question Number : 132 Question Id : 640653386118 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 an appropriate connecting word:

He has not spoken to us __ we had the argument.

Options :

6406531284366. ✓ Since

6406531284367. ❌ While

6406531284368. ❌ So

6406531284369. ❌ As

Question Number : 133 Question Id : 640653386119 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 an appropriate connecting word:

He is _____ forgetful _____ he just doesn't bother to complete the work.

Options :

6406531284370. ❌ Neither ... nor

6406531284371. ❌ Both ... and

6406531284372. ✓ Either ... or

6406531284373. ❌ Not only ... but also

Question Number : 134 Question Id : 640653386120 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 an appropriate connecting word:

They didn't read "Gulliver's Travels" _____ did they read "Treasure Island".

Options :

6406531284374. ❌ And

6406531284375. ❌ Or

6406531284376. ❌ Either

6406531284377. ✓ Nor

Question Number : 135 Question Id : 640653386121 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 an appropriate connecting word:

_____, you've got a chance, you might as well make full use of it.

Options :

6406531284378. ❌ As soon as

6406531284379. ✓ Now that

6406531284380. ✗ Although

6406531284381. ✗ After

Question Number : 136 Question Id : 640653386122 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 an appropriate connecting word:

Lina has been married for a long time. She got married _____ she was 23 years old.

Options :

6406531284382. ✓ When

6406531284383. ✗ Until

6406531284384. ✗ So

6406531284385. ✗ As

Sub-Section Number : 3

Sub-Section Id : 64065355157

Question Shuffling Allowed : No

Question Id : 640653386081 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (137 to 141)

Question Label : Comprehension

Listen to the audio and answer the given subquestions



885_640653_0_1984128_hs1002fdqz1e1s1q1mq.mp3

Sub questions

Question Number : 137 Question Id : 640653386082 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 word *afford* is stressed on the _____ syllable

Options :

6406531284234. ❌ First syllable

6406531284235. ✓ Second syllable

6406531284236. ❌ Third syllable

6406531284237. ❌ No syllables receive stress

Question Number : 138 Question Id : 640653386083 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

Identify the number of syllables in the word *motivational*.

Options :

6406531284238. ❌ 2

6406531284239. ❌ 3

6406531284240. ✓ 5

6406531284241. ❌ 6

Question Number : 139 Question Id : 640653386084 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 vowel in the word *share* is _____.

Options :

6406531284242. ❌ Short

6406531284243. ✓ Long

Question Number : 140 Question Id : 640653386085 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 word *disclaimer* is stressed on the _____ syllable.

Options :

6406531284244. ❌ First syllable

6406531284245. ✓ Second syllable

6406531284246. ❌ Third syllable

6406531284247. ❌ Fourth syllable

Question Number : 141 Question Id : 640653386086 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 appropriate pauses for the following passage as you hear in the audio:

Yes I do speak but I feel more like a storyteller because wherever I go I share a story with everyone

Options :

6406531284248. ✓ //Yes/ I do speak/ but I feel more like a storyteller because wherever I go I share a story with everyone//

6406531284249. ❌ //Yes I do speak but I feel more like a storyteller/ because wherever I go I share a story with/ everyone//

6406531284250. ❌ //Yes I do speak but I feel/ more like a storyteller because/ wherever I go I

share a story/ with everyone//

6406531284251. ✶ //Yes I/ do speak but I feel more like/ a storyteller because wherever I/ go I share a/ story with everyone//

Question Id : 640653386087 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (142 to 146)

Question Label : Comprehension

Complete the following mail usig appropriate options given in the subquestions.

To: xyz@gmail.com

Subject: (1)_____

(2)_____,

(3)____ John, who is starting today as our Customer Service Representative. He will be providing technical support and assistance to our users and making sure they enjoy the best experience with our products.

(4)____ John in person and congratulate him on the new role!

(5)____,

Michael

Sub questions

Question Number : 142 Question Id : 640653386088 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

Complete blank (1) with an appropriate option.

Options :

6406531284252. ✶ Meet our new joinee

6406531284253. ✶ Meet John

6406531284254. ✓ Meet our new joinee John

6406531284255. ✶ MEET OUR NEW JOINEE JOHN

Question Number : 143 Question Id : 640653386089 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

Complete blank (2) with an appropriate option.

Options :

6406531284256. ✶ Dear friends

6406531284257. ✶ Hi friends

6406531284258. ✓ Dear colleagues

6406531284259. ✶ Hola colleagues

Question Number : 144 Question Id : 640653386090 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

Complete blank (3) with an appropriate option

Options :

6406531284260. ✶ Meet

6406531284261. ✶ Please meet

6406531284262. ✓ I am pleased to introduce you to

6406531284263. ✶ Here is

Question Number : 145 Question Id : 640653386091 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

Complete blank (4) with an appropriate option.

Options :

6406531284264. ✘ Feel free to greet

6406531284265. ✘ Feel free to meet

6406531284266. ✘ Meet

6406531284267. ✓ Both Feel free to greet and Feel free to meet

Question Number : 146 Question Id : 640653386092 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

Complete blank (5) with an appropriate option.

Options :

6406531284268. ✓ Warm regards

6406531284269. ✘ Thanks

6406531284270. ✘ Yours

6406531284271. ✘ Lovingly yours

Sem2 Maths2

Section Id : 64065323872

Section Number : 7

Section type : Online

Mandatory or Optional : Mandatory

Number of Questions : 8

Number of Questions to be attempted :	8
Section Marks :	25
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065355158
Question Shuffling Allowed :	No

Question Number : 147 Question Id : 640653386123 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 2/DIRECT ENTRY DIPLOMA : MATHEMATICS FOR DATA SCIENCE 2"

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 :

6406531284386. ✓ YES

6406531284387. ✗ NO

Sub-Section Number :	2
Sub-Section Id :	64065355159
Question Shuffling Allowed :	Yes

Question Number : 148 Question Id : 640653386127 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Select Question

Choose the set of correct options.

Options :

If there is a square matrix A such that $A^2 + A = 0$, then $\det(A)$ must be either 0 or -1.
6406531284390. ❌

If u is a solution of the system of linear equations $Ax = c$ and c is a solution of the system of linear equations $Ax = b$, then u is a solution of the system of linear equations $A^2x = b$.
6406531284391. ✓

If B is a diagonal matrix of order 3, then $AB - BA = 0$ for all square matrices A of order 3.
6406531284392. ❌

If there is an invertible real 3×3 matrix A such that $A \text{adj}(A) = 3I$, then $\det(\text{adj}(A))$ must be 9.
6406531284393. ✓

Sub-Section Number : 3

Sub-Section Id : 64065355160

Question Shuffling Allowed : Yes

Question Number : 149 Question Id : 640653386128 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

If addition and scalar multiplication on $V = \mathbb{R}^2$ is defined as follows:

Addition: $(x_1, y_1) + (x_2, y_2) = (0, 0);$

$(x_1, y_1), (x_2, y_2) \in V$

Scalar multiplication: $c(x, y) = (0, 0); (x, y) \in V, c \in \mathbb{R}$

Consider the following statements.

1. There exists an element 0 (called the zero vector of V) in V such that $0 + v = v, \forall v \in V$.
2. For each vector of $v \in V$ and for each pair $a, b \in \mathbb{R}, (a + b)v = av + bv$.
3. For each vector of $a \in \mathbb{R}$ and for each pair $v_1, v_2 \in V, a(v_1 + v_2) = av_1 + av_2$.
4. For each vector of $v \in V$ and for each pair $a, b \in \mathbb{R}, (ab)v = a(bv)$.

Which of the above statements is not true with respect to the addition and scalar multiplication on $V = \mathbb{R}^2$ defined above? (Enter the serial number of the statement which is not true. If statement 2 is incorrect, then enter 2 as your answer.)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

1

Question Number : 150 **Question Id :** 640653386138 **Question Type :** SA **Calculator :** None

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

Correct Marks : 2

Question Label : Short Answer Question

Consider the following two statements:

P: $V = \mathbb{R}^2$, with the operations:

Addition:

$$(x_1, y_1) + (x_2, y_2) = (x_1 x_2, y_1 y_2); (x_1, y_1), (x_2, y_2) \in V$$

and

Scalar multiplication:

$$c(x, y) = (cx, cy); (x, y) \in V, c \in \mathbb{R}$$

is a vector space.

Q: Let V be a vector space. If $u, v, w \in V$ are such that $au + bv + cw = 0$ for some scalars $a, b, c \in \mathbb{R}$ and $ac \neq 0$, then $\text{span}\{u, v\} = \text{span}\{v, w\}$.

Consider the following statements:

- Statement 1: P is true, but Q is false.
- Statement 2: Q is true, but P is false.
- Statement 3: Both P and Q are true.
- Statement 4: Both P and Q are false.

Which one of the above statements is correct? (e.g. if Statement 1 is correct, then enter 1 as your answer).

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

2

Sub-Section Number : 4

Sub-Section Id : 64065355161

Question Shuffling Allowed : No

Question Id : 640653386124 **Question Type :** COMPREHENSION **Sub Question Shuffling Allowed :** No **Group Comprehension Questions :** No **Calculator :** None **Response Time :** N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (151 to 152)

Question Label : Comprehension

Consider the matrix $A = \begin{bmatrix} a & a \\ -a & a \end{bmatrix}$, for some real number a .

Answer the given subquestions:

Sub questions

Question Number : 151 Question Id : 640653386125 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

If $A^4 = \beta a^4 I$, then what is the value of β ?

NOTE: Enter your answer to the nearest integer.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

-4

Question Number : 152 Question Id : 640653386126 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 $a + \lambda$ for which

$\det(A - \lambda I) = 0$, where λ is a real number (treat a as a variable).

NOTE: Enter your answer to the nearest integer.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

0

Question Id : 640653386129 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (153 to 156)

Question Label : Comprehension

Consider the following subsets of \mathbb{R}^3 .

Subset 1) $W = \{(x, y, z) \mid x, y, z \in \mathbb{R}, \text{ and } x^2 + z^2 = 0\}$

Subset 2) $W = \{(x, y, z) \mid x, y, z \in \mathbb{R}, \text{ and } x = z\}$

Subset 3) $W = \{(x, y, z) \mid x, y, z \in \mathbb{R}, x = y + z \text{ and } x + z = y\}$

Subset 4) $W = \{(x, y, z) \mid x, y, z \in \mathbb{R}, (x + 1) - (y + 1) + z = 0$
and $x + z = y\}$

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 153 Question Id : 640653386130 Question Type : SA Calculator : None

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

Correct Marks : 1

Question Label : Short Answer Question

Subset 1 is a subspace of dimension _____. (Enter the numerical value only. Suppose the dimension is 3, then enter 3 as your answer.)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

1

Question Number : 154 Question Id : 640653386131 Question Type : SA Calculator : None

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

Correct Marks : 1

Question Label : Short Answer Question

Subset 2 is a subspace of dimension _____. (Enter the numerical value only. Suppose the dimension is 3, then enter 3 as your answer.)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

2

Question Number : 155 Question Id : 640653386132 Question Type : SA Calculator : None

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

Correct Marks : 1

Question Label : Short Answer Question

Subset 3 is a subspace of dimension _____. (Enter the numerical value only. Suppose the dimension is 3, then enter 3 as your answer.)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

1

Question Number : 156 **Question Id :** 640653386133 **Question Type :** SA **Calculator :** None

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

Correct Marks : 1

Question Label : Short Answer Question

Subset 4 is a subspace of dimension _____. (Enter the numerical value only. Suppose the dimension is 3, then enter 3 as your answer.)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

2

Sub-Section Number : 5

Sub-Section Id : 64065355162

Question Shuffling Allowed : No

Question Id : 640653386134 **Question Type :** COMPREHENSION **Sub Question Shuffling Allowed :** No **Group Comprehension Questions :** No **Calculator :** None **Response Time :** N.A

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

Question Numbers : (157 to 159)

Question Label : Comprehension

Suppose W_1 and W_2 are subspaces of \mathbb{R}^3 defined as follows:

$$W_1 = \{(x, y, x + y) \mid x, y \in \mathbb{R}\}$$

and

$$W_2 = \{(x, y, 0) \mid x, y \in \mathbb{R}\}$$

with usual addition and scalar multiplication, i.e.,

Addition: $(x_1, y_1, z_1) + (x_2, y_2, z_2) = (x_1 + x_2, y_1 + y_2, z_1 + z_2);$
 $(x_1, y_1, z_1), (x_2, y_2, z_2) \in V$

Scalar multiplication: $c(x, y, z) = (cx, cy, cz); (x, y, z) \in V, c \in \mathbb{R}$

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 157 Question Id : 640653386135 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Select Question

Which of the following option(s)

represent $W_1 \cap W_2$? (More than
one options may be correct)

Options :

6406531284399. ✘ $\text{Span}\{(1, 1, 0), (1, -1, 0)\}$

6406531284400. ✓ $\text{Span}\{(-1, 1, 0), (1, -1, 0)\}$

6406531284401. ✓ $\text{Span}\{(1, -1, 0)\}$

6406531284402. ✘ $\text{Span}\{(1, 1, 2), (1, 1, 0)\}$

Question Number : 158 Question Id : 640653386136 Question Type : SA Calculator : None

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

Correct Marks : 1

Question Label : Short Answer Question

What is the dimension of $W_1 \cap W_2$?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

1

Question Number : 159 Question Id : 640653386137 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 of the following options is true?

Options :

$W_1 \cup W_2$ is a vector space of dimension 3

(with usual addition and scalar

6406531284404. ✘ multiplication).

$W_1 \cup W_2$ is a vector space of dimension 2

(with usual addition and scalar

6406531284405. ✘ multiplication).

$W_1 \cup W_2$ is a vector space of dimension 1

(with usual addition and scalar

6406531284406. ✘ multiplication).

$W_1 \cup W_2$ is not a vector space (with
usual addition and scalar
multiplication).

6406531284407. ✓

Sub-Section Number : 6

Sub-Section Id : 64065355163

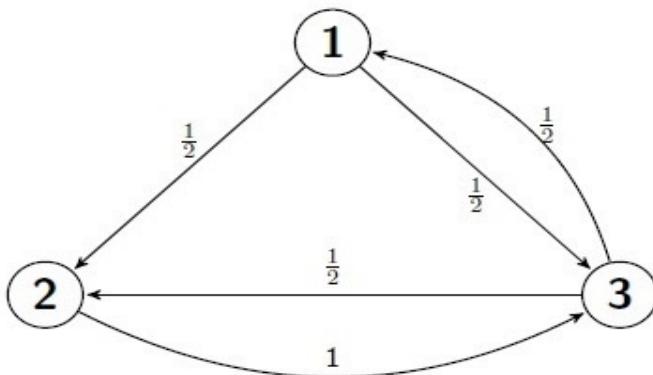
Question Shuffling Allowed : No

Question Id : 640653386139 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (160 to 162)

Question Label : Comprehension

A system can be in one of 3 possible states at a given time. At the next instant, it changes its state as represented pictorially in the diagram below. The number beside an arrow shows the transition probabilities from the beginning state of the arrow to the ending state of the arrow (e.g. in the diagram M2Q1:1, you can see that there is an arrow starting at state 1 and ending at state 2, with the number $\frac{1}{2}$ beside the arrow). It implies that the probability of transition from state 1 to state 2 is $\frac{1}{2}$). No arrow from state 2 to state 1 indicates that direct transition is not possible (equivalently the transition probability is 0). The probability of transition from a state to itself is 0.



M2Q1:1

The information in the diagram is represented by the matrix

$$P = \begin{bmatrix} 0 & \frac{1}{2} & \frac{1}{2} \\ 0 & 0 & 1 \\ \frac{1}{2} & \frac{1}{2} & 0 \end{bmatrix}, \text{ where the } ij\text{-th entry of } P \text{ denotes the probability}$$

of transition from state i to state j . Let the probabilities that the system is in State 1, State 2 or State 3 initially (i.e., at $t = 0$) be X_0^1 , X_0^2 , and X_0^3 , respectively. This is represented by the

initial distribution vector (3×1 matrix) and is denoted by $X_0 = \begin{bmatrix} X_0^1 \\ X_0^2 \\ X_0^3 \end{bmatrix}$.

For any positive integer n , the distribution vector at $t = n$ is denoted by X_n and is given by the equation $P^T X_{n-1} = X_n$.

Answer the given subquestions from the given information.

Sub questions

Question Number : 160 Question Id : 640653386140 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Select Question

Suppose at $t = 2$ the distribution

vector X_2 is $\begin{bmatrix} \frac{1}{3} \\ \frac{1}{2} \\ \frac{2}{3} \end{bmatrix}$. Which of the

following options are true?

Options :

6406531284409. ✓ $X_0 = X_2$.

6406531284410. ✓ $X_0 = X_1$.

6406531284411. ✗ $X_0 \neq X_n$ for some $n \in \mathbb{N}$.

There are infinitely many vectors,

6406531284412. ✗ which are possible candidates for X_0 .

There are infinitely many vectors,

6406531284413. ✗ which are possible candidates for X_1 .

Question Number : 161 Question Id : 640653386141 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

Suppose at $t = 1$ the distribution vector

X_1 is $\begin{bmatrix} \frac{1}{2} \\ \frac{1}{2} \\ 0 \end{bmatrix}$. Which of the following options

is true?

Options :

6406531284414. ✘ The system had positive initial probabilities of being in State 1 or State 2.

6406531284415. ✓ The system was initially in State 3.

6406531284416. ✘ The system was initially in State 1.

6406531284417. ✘ The system had positive initial probabilities of being in State 2 and State 3.

Question Number : 162 Question Id : 640653386142 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 set of correct option(s).

Options :

Both P and P^2 have the same
reduced row echelon form.

6406531284418. ✓

6406531284419. ✘ P is already in reduced row echelon form.

6406531284420. ✘ $P^2 = \lambda P$ for some real number λ .

6406531284421. ✘ P^2 is already in reduced row echelon form.

Sem2 Statistics2

Section Id :	64065323873
Section Number :	8
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	12
Number of Questions to be attempted :	12
Section Marks :	40
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065355164
Question Shuffling Allowed :	No

Question Number : 163 Question Id : 640653386143 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 2/DIRECT ENTRY DIPLOMA : STATISTICS FOR DATA SCIENCE 2"

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 TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406531284422. ✓ Yes

6406531284423. ✗ No

Question Number : 164 Question Id : 640653386144 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

Discrete random variables:

Distribution	PMF ($f_X(k)$)	CDF ($F_X(x)$)	$E[X]$	$\text{Var}(X)$
Uniform(A) $A = \{a, a+1, \dots, b\}$	$\frac{1}{n}, \quad x = k$ $n = b - a + 1$ $k = a, a+1, \dots, b$	$\begin{cases} 0 & x < 0 \\ \frac{k-a+1}{n} & k \leq x < k+1 \\ 1 & k = a, a+1, \dots, b-1, b \\ 1 & x \geq n \end{cases}$	$\frac{a+b}{2}$	$\frac{n^2-1}{12}$
Bernoulli(p)	$\begin{cases} p & x = 1 \\ 1-p & x = 0 \end{cases}$	$\begin{cases} 0 & x < 0 \\ 1-p & 0 \leq x < 1 \\ 1 & x \geq 1 \end{cases}$	p	$p(1-p)$
Binomial(n, p)	$nC_k p^k (1-p)^{n-k}, \quad k = 0, 1, \dots, n$	$\begin{cases} 0 & x < 0 \\ \sum_{i=0}^k nC_i p^i (1-p)^{n-i} & k \leq x < k+1 \\ & k = 0, 1, \dots, n \\ 1 & x \geq n \end{cases}$	np	$np(1-p)$
Geometric(p)	$(1-p)^{k-1} p, \quad k = 1, \dots, \infty$	$\begin{cases} 0 & x < 0 \\ 1 - (1-p)^k & k \leq x < k+1 \\ & k = 1, \dots, \infty \end{cases}$	$\frac{1}{p}$	$\frac{1-p}{p^2}$
Poisson(λ)	$\frac{e^{-\lambda} \lambda^k}{k!}, \quad k = 0, 1, \dots, \infty$	$\begin{cases} 0 & x < 0 \\ e^{-\lambda} \sum_{i=0}^k \frac{\lambda^i}{i!} & k \leq x < k+1 \\ & k = 0, 1, \dots, \infty \end{cases}$	λ	λ

Continuous random variables:

Distribution	PDF ($f_X(k)$)	CDF ($F_X(x)$)	$E[X]$	$\text{Var}(X)$
Uniform[a, b]	$\frac{1}{b-a}, \quad a \leq x \leq b$	$\begin{cases} 0 & x \leq a \\ \frac{x-a}{b-a} & a < x < b \\ 1 & x \geq b \end{cases}$	$\frac{a+b}{2}$	$\frac{(b-a)^2}{12}$
Exp(λ)	$\lambda e^{-\lambda x}, \quad x > 0$	$\begin{cases} 0 & x \leq 0 \\ 1 - e^{-\lambda x} & x > 0 \end{cases}$	$\frac{1}{\lambda}$	$\frac{1}{\lambda^2}$
Normal(μ, σ^2)	$\frac{1}{\sigma\sqrt{2\pi}} \exp\left(\frac{-(x-\mu)^2}{2\sigma^2}\right), \quad -\infty < x < \infty$	No closed form	μ	σ^2
Gamma(α, β)	$\frac{\beta^\alpha}{\Gamma(\alpha)} x^{\alpha-1} e^{-\beta x}, \quad x > 0$		$\frac{\alpha}{\beta}$	$\frac{\alpha}{\beta^2}$
Beta(α, β)	$\frac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)} x^{\alpha-1} (1-x)^{\beta-1} \quad 0 < x < 1$		$\frac{\alpha}{\alpha+\beta}$	$\frac{\alpha\beta}{(\alpha+\beta)^2(\alpha+\beta+1)}$

1. **Markov's inequality:** Let X be a discrete random variable taking non-negative values with a finite mean μ . Then,

$$P(X \geq c) \leq \frac{\mu}{c}$$

2. **Chebyshev's inequality:** Let X be a discrete random variable with a finite mean μ and a finite variance σ^2 . Then,

$$P(|X - \mu| \geq k\sigma) \leq \frac{1}{k^2}$$

Options :

6406531284424. ✓ Useful Data has been mentioned above.

6406531284425. ✖ This data attachment is just for a reference & not for an evaluation.

Sub-Section Number : 2

Sub-Section Id : 64065355165

Question Shuffling Allowed : Yes

Question Number : 165 Question Id : 640653386148 Question Type : MCQ Is Question

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

Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Let X and Y be two independent Bernoulli($1/4$) random variables. Define another random variable $Z = |Y - X|$. Find the PMF of Z .

Options :

z	0	1
$f(z)$	$1/2$	$1/2$

6406531284432. ✖

z	0	1
$f(z)$	$3/8$	$5/8$

6406531284433. ✖

z	0	1
$f(z)$	$5/8$	$3/8$

6406531284434. ✓

z	-1	0	1
$f(z)$	$3/8$	$1/16$	$9/16$

6406531284435. ✖

Question Number : 166 Question Id : 640653386150 Question Type : MCQ Is Question

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

Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Let X be a Poisson random variable with mean equal to 10. Which of the following bounds can be obtained using Markov's inequality?

Options :

6406531284437. ❌ $P(X > 20) \geq \frac{1}{2}$

6406531284438. ❌ $P(X < 20) \leq \frac{1}{2}$

6406531284439. ❌ $P(X > 25) \geq \frac{10}{25}$

6406531284440. ✓ $P(X > 25) \leq \frac{10}{26}$

Question Number : 167 Question Id : 640653386151 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Which of the following statements are correct?

Options :

6406531284441. ❌ The probability density function (PDF) of a continuous random variable X must be continuous.

6406531284442. ✓ The cumulative distribution function (CDF) of a continuous random variable X must be continuous.

6406531284443. ❌ The sum of two independent binomial random variables must be a binomial random variable.

6406531284444. ❌ For a random variable X , mean and variance cannot be equal.

Sub-Section Number :

3

Sub-Section Id :

64065355166

Question Shuffling Allowed :

Yes

Question Number : 168 Question Id : 640653386149 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 joint PMF of two discrete random variables X and Y is given in the following table:

		X	0	1
		Y		
0	0	$\frac{1}{12}$	$\frac{1}{3}$	
	1	$\frac{1}{4}$	0	
2	0	$\frac{1}{6}$	$\frac{1}{6}$	

Joint PMF of X and Y

Calculate $\text{Cov}(X, Y)$. Enter the answer correct to three decimal places.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

-0.125

Sub-Section Number : 4

Sub-Section Id : 64065355167

Question Shuffling Allowed : No

Question Id : 640653386145 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (169 to 170)

Question Label : Comprehension

The joint PMF of two discrete random variables X and Y is given in the following table:

\backslash	X	0	1	2	$f_Y(y)$
Y					
0	a	$\frac{1}{8}$	c	$\frac{1}{4}$	
1	$\frac{1}{4}$	b	d	$\frac{3}{4}$	
$f_X(x)$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{6}$	1	

Joint PMF of X and Y

Based on the above data, answer the given subquestions

Sub questions

Question Number : 169 Question Id : 640653386146 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

Find the values of c and d .

Options :

6406531284426. ❌ $c = 1/8, d = 1/24.$

6406531284427. ✓ $c = 1/24, d = 1/8.$

6406531284428. ❌ $c = 1/24, d = 1/6.$

6406531284429. ❌ $c = 1/4, d = 1/8.$

Question Number : 170 Question Id : 640653386147 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

Are X and Y independent?

Options :

6406531284430. ✓ Yes

6406531284431. ✗ No

Sub-Section Number : 5

Sub-Section Id : 64065355168

Question Shuffling Allowed : No

Question Id : 640653386152 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (171 to 172)

Question Label : Comprehension

A fair coin is tossed twice. Let X denote the number of heads obtained.

Let Y be defined as

$$Y = \begin{cases} 0, & \text{if no heads are obtained} \\ 1, & \text{if the first head appears on the first toss} \\ 2, & \text{if the first head appears on the second toss} \end{cases}$$

Based on the above data, answer the given subquestions

Sub questions

Question Number : 171 Question Id : 640653386153 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Which among the following can be the joint PMF of X and Y ?

Options :

$X \backslash Y$	0	1	2
0	0	0	0
1	0	$1/4$	$1/4$
2	0	$1/4$	$1/4$

6406531284445. ✘

$X \backslash Y$	0	1	2
0	$1/4$	0	0
1	0	$1/2$	$1/4$
2	0	0	0

6406531284446. ✘

$X \backslash Y$	0	1	2
0	$1/4$	0	0
1	0	$1/4$	$1/4$
2	0	$1/4$	0

6406531284447. ✓

$X \backslash Y$	0	1	2
0	$1/4$	0	0
1	0	$1/4$	0
2	0	$1/4$	$1/4$

6406531284448. ✘

Question Number : 172 Question Id : 640653386154 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 $P(X \geq 1 | Y = 2)$.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

1

Question Id : 640653386155 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (173 to 174)

Question Label : Comprehension

A fair die is thrown three times. Let

X_1 represent the number obtained in the 1st throw,

X_2 represent the number obtained in the 2nd throw,

X_3 represent the number obtained in the 3rd throw.

Suppose all the throws are independent. Let

$$X = \max(X_1, X_2, X_3)$$

Based on the above data, answer the given subquestions

Sub questions

Question Number : 173 Question Id : 640653386156 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

Compute the CDF of X , $F_X(k)$,
where $k \in \{1, 2, \dots, 6\}$.

Options :

6406531284450. ❌ $F_X(k) = \left(\frac{k}{6}\right)$

6406531284451. ❌ $F_X(k) = \left(\frac{1}{6}\right)^3$

6406531284452. ❌ $F_X(k) = \left(\frac{k+1}{6}\right)^3$

6406531284453. ✓ $F_X(k) = \left(\frac{k}{6}\right)^3$

Question Number : 174 Question Id : 640653386157 Question Type : SA Calculator : None

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

Correct Marks : 3

Question Label : Short Answer Question

Find $P(X = 5)$. Enter the answer correct to two decimal places.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.26 to 0.30

Question Id : 640653386158 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (175 to 176)

Question Label : Comprehension

Aman answers a question correctly with a probability of $1/3$ independent of other questions. Suppose he is called for an interview where he can be asked either 1 or 2, or 3 questions with probability $1/3$ each. Let X denote the number of questions he is asked during the interview. Let Y denote the number of questions he answers correctly during the interview.

Based on the above data, answer the given subquestions

Sub questions

Question Number : 175 Question Id : 640653386159 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

If Aman is asked two questions during the interview, what is the probability that he will answer both of them correctly? 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 :

0.10 to 0.12

Question Number : 176 Question Id : 640653386160 Question Type : SA Calculator : None

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

Correct Marks : 3

Question Label : Short Answer Question

Find $P(X = Y)$. 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 :

0.14 to 0.18

Question Id : 640653386161 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (177 to 178)

Question Label : Comprehension

Consider a function $f : \mathbb{R} \rightarrow \mathbb{R}$ such that

$$f(x) = \begin{cases} \frac{1}{b} & -1 \leq x < 0 \\ ax(x+1)(x-1) & 0 \leq x \leq 1 \\ 0 & \text{Otherwise} \end{cases}$$

where a, b are any real constants.

Based on the above data, answer the given subquestions

Sub questions

Question Number : 177 Question Id : 640653386162 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

Among the options below, for what values of a and b , is the function f a valid density function?

Options :

6406531284457. ✘ $a = 3, b = 4$

6406531284458. ✓ $a = -3, b = 4$

6406531284459. ✘ $a = -3, b = 3$

6406531284460. ✘ $a = 4, b = 3$

Question Number : 178 Question Id : 640653386163 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

With the choice of a, b , find

$$P\left(X > -\frac{1}{2} \mid X < 1\right).$$

Enter the answer correct
to three decimal places.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

0.875

Question Id : 640653386164 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Calculator : None Response Time : N.A

Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (179 to 180)

Question Label : Comprehension

Suppose a fair die is rolled. Let X and Y be defined as

$$X = \begin{cases} 1, & \text{if the number is odd} \\ 0, & \text{otherwise} \end{cases}$$

$$Y = \begin{cases} 1, & \text{if the number is prime} \\ 0, & \text{otherwise} \end{cases}$$

Based on the above data, answer the given subquestions

Sub questions

Question Number : 179 Question Id : 640653386165 Question Type : SA Calculator : None

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

Correct Marks : 3

Question Label : Short Answer Question

Find $E[XY]$. 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 :

0.32 to 0.34

Question Number : 180 Question Id : 640653386166 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 $\text{Var}(XY)$. 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 :

0.21 to 0.23