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National Testing Agency

Question Paper Name :	Statistics Eng 11th June 2023 Shift 3
Subject Name :	Statistics Eng
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Duration :	120
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Statistics

Group Number :	1
Group Id :	686340142
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	400
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Part A

Section Id :	686340283
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	21
Number of Questions to be attempted :	21
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	686340474
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 68634014282 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (1 to 5)

Question Label : Comprehension

Kochi: Abhilash Tomy may be a solo circumnavigator of the world, braving the elements and his own demons, but at heart, he remains his mama's little boy. The greater the risk he takes, the more important it becomes to him to get his mother Valsamma's "Permission". Around Saturday noon, in their Kochi home, Abhilash's parents Lt Cdr VC Tomy (retd) and Valsamma were understandably elated. While watching the live-streaming video of their son sailling into Les Sables d'Olonne Marina, France, after 236 days on the high seas, Tomy said that his son's achievement will motivate more Indians will motivate more Indians to love sailing. When asked if Abhilash will sail for the next edition of the Golden Globe Race (GGR) aiming for pole position, Tomy said he would not be surprised if he does but then quickly glances at valsamma for confirmation,

Often in the past, Abhilassh had to seek 'external high-profile' help to convince his mother to grant permission for his sailing adventures. In 2012, for instance, Vice Admiral (retired) Manohar Prahlad Awati, known as the father of the Indian Navy's circumnavigation adventures and Abhilash's primary mentor and guru, came to Tomy's house in Kochi to convince Valsamma to let Abhilash sail in the 151-day circumnavigation Sagar Parikrama on Mhadei. "It is not that I would oppose his dreams. But he feels happy and confident to get my approval and blessing," Valsamma told TOI at her house at Kandanad in Kochi. Valsamma still remembers how upset Abhilash was after failing in the GGR in 2018. She painfully recalls how Abhilash survived three days in Thuriya until the rescue team found him. He could not move from the boat's bunk to fetch water or food and he survived on a few packets of ice tea.

"He fought death with nearly-functionless legs until he was rescued 70 hours later. I witnessed his excruciating pain. In the hospital bed, he reminded me of him as a baby as he was literally crawling on the bed. He eventually made his baby steps and he learnt to walk again. In hospital, I used to tell him 'learn to work, we have to sail again'; but I never thought he would take it seriously and reattempt the gruelling 30,000-mile race four years later. He convinced me he would be safe and we prayed for his safe return," his mom Valsamma said.

"As always it is his life and choices. I have not opposed any of his decisions and I will not. Sailing has been his sole passion since he mastered swimming. When he was 14, he took me for a short sail in a small boat in the backwaters and the way he controlled the boat amazed me,"Tomy said.

Sub questions

Question Number : 1 Question Id : 68634014283 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

According to this paragraph who is known as the father of the Indian Navy's

Circumnavigation adventures?

1. VC Tomy
2. Monahar Prahlad Awati
3. Valsamma
4. Abhilash Tomy

Options :
68634056401. 1
68634056402. 2
68634056403. 3
68634056404. 4

Question Number : 2 Question Id : 68634014284 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Synonym of the term used in this passage 'Elate' is :

1. Proud
2. Sad
3. Elemi
4. Surprised

Options :
68634056405. 1
68634056406. 2
68634056407. 3
68634056408. 4

Question Number : 3 Question Id : 68634014285 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Who is Abhilash's primary mentor and guru?

1. Manohar Parekh
2. Retired vice Adlmiral M.P Awati
3. Lt Cdr VC Tomy
4. Kirsten Neushafer

Options :
68634056409. 1
68634056410. 2
68634056411. 3
68634056412. 4

Question Number : 4 Question Id : 68634014286 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

GGR stands for:

1. Gold Globe race
2. Global golden race
3. Golden globe race
4. Golden global racist

Options :

68634056413. 1

68634056414. 2

68634056415. 3

68634056416. 4

Question Number : 5 Question Id : 68634014287 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

One word for sail all the way round is:

1. Circlenavilate
2. Circumshipet
3. Circlenavigate
4. Circumnavigate

Options :

68634056417. 1

68634056418. 2

68634056419. 3

68634056420. 4

Question Id : 68634014282 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (1 to 5)

Question Label : Comprehension

Kochi: Abhilash Tomy may be a solo circumnavigator of the world, braving the elements and his own demons, but at heart, he remains his mama's little boy. The greater the risk he takes, the more important it becomes to him to get his mother Valsamma's "Permission". Around Saturday noon, in their Kochi home, Abhilash's parents Lt Cdr VC Tomy (retd) and Valsamma were understandably elated. While watching the live-streaming video of their son sailling into Les Sables d'Olonne Marina, France, after 236 days on the high seas, Tomy said that his son's achievement will motivate more Indians will motivate more Indians to love sailing. When asked if Abhilash will sail for the next edition of the Golden Globe Race (GGR) aiming for pole position, Tomy said he would not be surprised if he does but then quickly glances at valsamma for confirmation,

Often in the past, Abhilassh had to seek 'external high-profile' help to convince his mother to grant permission for his sailing adventures. In 2012, for instance, Vice Admiral (retired) Manohar Prahlad Awati, known as the father of the Indian Navy's circumnavigation adventures and Abhilash's primary mentor and guru, came to Tomy's house in Kochi to convince Valsamma to let Abhilash sail in the 151-day circumnavigation Sagar Parikrama on Mhadei. "It is not that I would oppose his dreams. But he feels happy and confident to get my approval and blessing," Valsamma told TOI at her house at Kandanad in Kochi. Valsamma still remembers how upset Abhilash was after failing in the GGR in 2018. She painfully recalls how Abhilash survived three days in Thuriya until the rescue team found him. He could not move from the boat's bunk to fetch water or food and he survived on a few packets of ice tea.

"He fought death with nearly-functionless legs until he was rescued 70 hours later. I witnessed his excruciating pain. In the hospital bed, he reminded me of him as a baby as he was literally crawling on the bed. He eventually made his baby steps and he learnt to walk again. In hospital, I used to tell him 'learn to work, we have to sail again'; but I never thought he would take it seriously and reattempt the gruelling 30,000-mile race four years later. He convinced me he would be safe and we prayed for his safe return," his mom Valsamma said.

"As always it is his life and choices. I have not opposed any of his decisions and I will not. Sailing has been his sole passion since he mastered swimming. When he was 14, he took me for a short sail in a small boat in the backwaters and the way he controlled the boat amazed me,"Tomy said.

Sub questions

Question Number : 1 Question Id : 68634014283 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

According to this paragraph who is known as the father of the Indian Navy's

Circumnavigation adventures?

1. VC Tomy
2. Monahar Prahlad Awati
3. Valsamma
4. Abhilash Tomy

Options :
68634056401. 1
68634056402. 2
68634056403. 3
68634056404. 4

Question Number : 2 Question Id : 68634014284 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Synonym of the term used in this passage 'Elate' is :

1. Proud
2. Sad
3. Elemi
4. Surprised

Options :
68634056405. 1
68634056406. 2
68634056407. 3
68634056408. 4

Question Number : 3 Question Id : 68634014285 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Who is Abhilash's primary mentor and guru?

1. Manohar Parekh
2. Retired vice Adlmiral M.P Awati
3. Lt Cdr VC Tomy
4. Kirsten Neushafer

Options :
68634056409. 1
68634056410. 2
68634056411. 3
68634056412. 4

Question Number : 4 Question Id : 68634014286 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

GGR stands for:

1. Gold Globe race
2. Global golden race
3. Golden globe race
4. Golden global racist

Options :
68634056413. 1
68634056414. 2
68634056415. 3
68634056416. 4

Question Number : 5 Question Id : 68634014287 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

One word for sail all the way round is:

1. Circlenavilate
2. Circumshipet
3. Circlenavigate
4. Circumnavigate

Options :
68634056417. 1
68634056418. 2
68634056419. 3
68634056420. 4

Sub-Section Number :	2
Sub-Section Id :	686340475
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 6 Question Id : 68634014288 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Choose the correctly spelt word from the options below:

1. TRIGONUMETRY
2. TRIGOONOMITRY
3. TRIGONOMETRY
4. TRIGUNOMITRY

Options :
68634056421. 1
68634056422. 2
68634056423. 3
68634056424. 4

Question Number : 6 Question Id : 68634014288 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Choose the correctly spelt word from the options below:

1. TRIGONUMETRY

2. TRIGOONOMITRY

3. TRIGONOMETRY

4. TRIGUNOMITRY

Options :
68634056421. 1
68634056422. 2
68634056423. 3
68634056424. 4

Question Number : 7 Question Id : 68634014289 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Fill in the blank with suitable word from the options given below:

My very thoughts were like the _____ rustle of dead leaves

1. welcome

2. lively

3. ghostly

4. funny

Options :
68634056425. 1
68634056426. 2
68634056427. 3
68634056428. 4

Question Number : 7 Question Id : 68634014289 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Fill in the blank with suitable word from the options given below:

My very thoughts were like the _____ rustle of dead leaves

1. welcome
2. lively
3. ghostly
4. funny

Options :
68634056425. 1
68634056426. 2
68634056427. 3
68634056428. 4

Question Number : 8 Question Id : 68634014290 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The most suitable antonym of the given word 'REPREHENSIBLE' is.

1. Culpable
2. commendable
3. Fearful
4. Ignorant

Options :
68634056429. 1
68634056430. 2
68634056431. 3
68634056432. 4

Question Number : 8 Question Id : 68634014290 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The most suitable antonym of the given word 'REPREHENSIBLE' is.

1. Culpable
2. commendable
3. Fearful
4. Ignorant

Options :

68634056429. 1
68634056430. 2
68634056431. 3
68634056432. 4

Question Number : 9 Question Id : 68634014291 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Select the suitable synonym for the given word:

Father

1. Fluctuate
2. Flirt
3. Stable
4. Overflow

Options :
68634056433. 1
68634056434. 2
68634056435. 3
68634056436. 4

Question Number : 9 Question Id : 68634014291 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Select the suitable synonym for the given word:

Father

1. Fluctuate
2. Flirt
3. Stable
4. Overflow

Options :
68634056433. 1
68634056434. 2
68634056435. 3
68634056436. 4

Question Number : 10 Question Id : 68634014292 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Fill in the blanks with appropriate prepositions from the options given below

A firefighter was injured while trying _____ douse a blaze _____ northeast Delhi's Shastri park area _____ Saturday

1. to, at, on

2. for, in, at

3. to, in, on

4. out, at, in

Options :
68634056437. 1
68634056438. 2
68634056439. 3
68634056440. 4

Question Number : 10 Question Id : 68634014292 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Fill in the blanks with appropriate prepositions from the options given below

A firefighter was injured while trying _____ douse a blaze _____ northeast Delhi's Shastri park area _____ Saturday

1. to, at, on

2. for, in, at

3. to, in, on

4. out, at, in

Options :
68634056437. 1
68634056438. 2
68634056439. 3
68634056440. 4

Question Number : 11 Question Id : 68634014293 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The value of $\sqrt{\frac{0.289}{0.00121}}$ is:

1. $\frac{170}{11}$
2. $\frac{17}{11}$
3. $\frac{170}{12}$
4. $\frac{170}{21}$

Options :

68634056441. 1
68634056442. 2
68634056443. 3
68634056444. 4

Question Number : 11 Question Id : 68634014293 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The value of $\sqrt{\frac{0.289}{0.00121}}$ is:

1. $\frac{170}{11}$
2. $\frac{17}{11}$
3. $\frac{170}{12}$
4. $\frac{170}{21}$

Options :

68634056441. 1
68634056442. 2
68634056443. 3
68634056444. 4

Question Number : 12 Question Id : 68634014294 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The value of a machine depreciates by 15% annually. If the present value of machine is ₹1,50,000 then what will be its value after 2 years?

1. ₹1,00,000

2. ₹1,08,375

3. ₹1,58,000

4. ₹72250

Options :
68634056445. 1
68634056446. 2
68634056447. 3
68634056448. 4

Question Number : 12 Question Id : 68634014294 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The value of a machine depreciates by 15% annually. If the present value of machine is ₹1,50,000 then what will be its value after 2 years?

1. ₹1,00,000

2. ₹1,08,375

3. ₹1,58,000

4. ₹72250

Options :
68634056445. 1
68634056446. 2
68634056447. 3
68634056448. 4

Question Number : 13 Question Id : 68634014295 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If the cost price of an item is 88% of its selling price, then the profit percentage will be: (correct to two places of decimal)

1. 18.20%

2. 12.26%

3. 15.28%

4. 13.64%

Options :

68634056449. 1
68634056450. 2
68634056451. 3
68634056452. 4

Question Number : 13 Question Id : 68634014295 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If the cost price of an item is 88% of its selling price, then the profit percentage will be: (correct to two places of decimal)

1. 18.20%
2. 12.26%
3. 15.28%
4. 13.64%

Options :
68634056449. 1
68634056450. 2
68634056451. 3
68634056452. 4

Question Number : 14 Question Id : 68634014296 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

A bus runs at a speed of 30 km/h for the first 12 minutes and at a speed of 45km/h for the next 8 minutes. The average speed of the bus for the entire journey (in km/h) is.

1. 30
2. 35
3. 36
4. 40

Options :
68634056453. 1
68634056454. 2
68634056455. 3
68634056456. 4

Question Number : 14 Question Id : 68634014296 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

A bus runs at a speed of 30 km/h for the first 12 minutes and at a speed of 45km/h for the next 8 minutes. The average speed of the bus for the entire journey (in km/h) is.

1. 30

2. 35

3. 36

4. 40

Options :
68634056453. 1
68634056454. 2
68634056455. 3
68634056456. 4

Question Number : 15 Question Id : 68634014297 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The sum of length, breath and height of a cuboid is 19cm. If the length of its longest diagonal is 11cm, then what is its surface area?

1. 162 cm^2

2. 180 cm^2

3. 216 cm^2

4. 240 cm^2

Options :
68634056457. 1
68634056458. 2
68634056459. 3
68634056460. 4

Question Number : 15 Question Id : 68634014297 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The sum of length, breath and height of a cuboid is 19cm. If the length of its longest diagonal is 11cm, then what is its surface area?

1. 162 cm^2

2. 180 cm^2

3. 216 cm^2

4. 240 cm^2

Options :
68634056457. 1
68634056458. 2
68634056459. 3
68634056460. 4

Question Number : 16 Question Id : 68634014298 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

A letter from these matrices can be represented first by its row and then the column number.

	0	1	2	3	4
0	F	0	M	S	R
1	S	R	F	O	M
2	O	M	S	R	F
3	R	F	O	M	S
4	M	S	R	F	O

	5	6	7	8	9
5	A	T	D	I	P
6	I	P	A	T	D
7	T	D	I	P	A
8	P	A	T	D	I
9	D	I	P	A	T

Identify the correct set for the word "SOAP"

1. 01, 03,79, 85

2. 22, 13, 59, 86,

3. 22, 20, 97, 98

4. 22, 20, 86, 85

Options :
68634056461. 1
68634056462. 2
68634056463. 3
68634056464. 4

Question Number : 16 Question Id : 68634014298 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

A letter from these matrices can be represented first by its row and then the column number.

	0	1	2	3	4
0	F	0	M	S	R
1	S	R	F	O	M
2	O	M	S	R	F
3	R	F	O	M	S
4	M	S	R	F	O

	5	6	7	8	9
5	A	T	D	I	P
6	I	P	A	T	D
7	T	D	I	P	A
8	P	A	T	D	I
9	D	I	P	A	T

Identify the correct set for the word "SOAP"

1. 01, 03,79, 85

2. 22, 13, 59, 86,

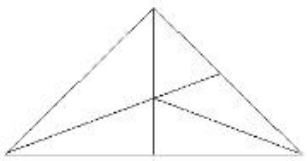
3. 22, 20, 97, 98

4. 22, 20, 86, 85

Options :
68634056461. 1
68634056462. 2
68634056463. 3
68634056464. 4

Question Number : 17 Question Id : 68634014299 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

How many triangles are there in the following figure?



1. 10

2. 12

3. 14

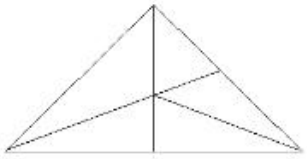
4. 6

Options :
68634056465. 1
68634056466. 2
68634056467. 3
68634056468. 4

Question Number : 17 Question Id : 68634014299 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

How many triangles are there in the following figure?



1. 10

2. 12

3. 14

4. 6

Options :

68634056465. 1

68634056466. 2

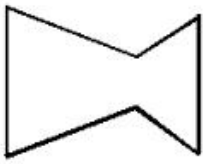
68634056467. 3

68634056468. 4

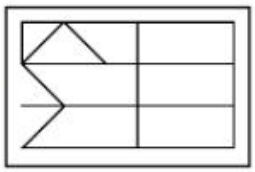
Question Number : 18 Question Id : 68634014300 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

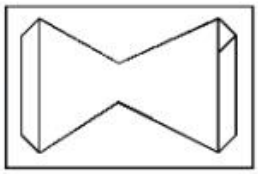
Correct Marks : 4 Wrong Marks : 1

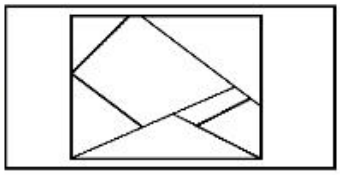
Fig(x) is embedded in which of the following alternatives?

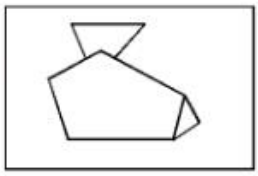


Fig(X)

1. 

2. 

3. 

4. 

Options :

68634056469. 1

68634056470. 2

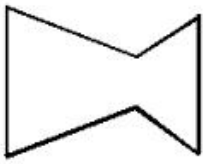
68634056471. 3

68634056472. 4

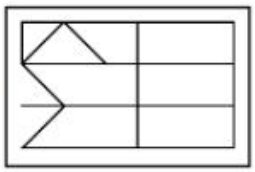
Question Number : 18 Question Id : 68634014300 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

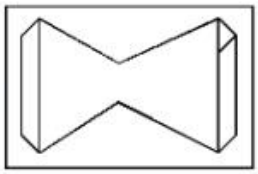
Correct Marks : 4 Wrong Marks : 1

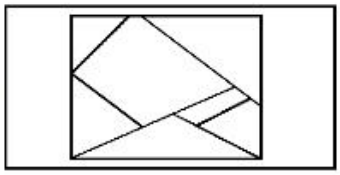
Fig(x) is embedded in which of the following alternatives?

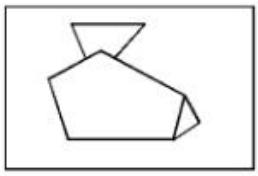


Fig(X)

1. 

2. 

3. 

4. 

Options :

68634056469. 1

68634056470. 2

68634056471. 3

68634056472. 4

Question Number : 19 Question Id : 68634014301 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A group of four inter-related words is given. Choose another group with similar relationship, from the following alternatives.

Tehsil: District: State: Country

1. Metropolitan: Megalopolis: Town: City

2. Block: Colony : Zone: city

3. Province: District: State: Country

4. Madhya Pradesh: Maharashtra: Mumbai : Victoria Terminus

Options :
68634056473. 1
68634056474. 2
68634056475. 3
68634056476. 4

Question Number : 19 Question Id : 68634014301 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

A group of four inter-related words is given. Choose another group with similar relationship, from the following alternatives.

Tehsil: District: State: Country

1. Metropolitan: Megalopolis: Town: City

2. Block: Colony : Zone: city

3. Province: District: State: Country

4. Madhya Pradesh: Maharashtra: Mumbai : Victoria Terminus

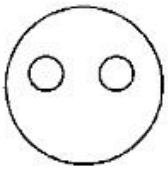
Options :
68634056473. 1
68634056474. 2
68634056475. 3
68634056476. 4

Question Number : 20 Question Id : 68634014302 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which of the following can be best represented by the figure below:

A. Judge, Thief, criminal
B. Vegetable, Potato, Cabbage
C. Furniture, Table, Chair
D. Family, Husband, Wife
E. Year, Week, Day

Choose the correct answer from the options given below:



1. A, B, C only

2. B, C, D only

3. C, D, E only

4. B, D, E only

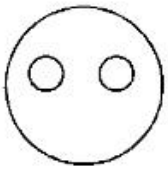
Options :
68634056477. 1
68634056478. 2
68634056479. 3
68634056480. 4

Question Number : 20 Question Id : 68634014302 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which of the following can be best represented by the figure below:

A. Judge, Thief, criminal
B. Vegetable, Potato, Cabbage
C. Furniture, Table, Chair
D. Family, Husband, Wife
E. Year, Week, Day

Choose the correct answer from the options given below:



1. A, B, C only

2. B, C, D only

3. C, D, E only

4. B, D, E only

Options :
68634056477. 1
68634056478. 2
68634056479. 3
68634056480. 4

Question Number : 21 Question Id : 68634014303 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Name of the short-range ballistic missile which was recently test-launched by India.

1. Prithvi-II

2. Agni-V

3. Vikas-II

4. Bhim-I

Options :
68634056481. 1
68634056482. 2
68634056483. 3
68634056484. 4

Question Number : 21 Question Id : 68634014303 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Name of the short-range ballistic missile which was recently test-launched by India.

1. Prithvi-II

2. Agni-V

3. Vikas-II

4. Bhim-I

Options :
68634056481. 1
68634056482. 2
68634056483. 3
68634056484. 4

Question Number : 22 Question Id : 68634014304 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which of the following states is also known as " Land of Red river and Blue hills"?

1. Assam

2. Sikkim

3. Manipur

4. Arunachal Pradesh

Options :
68634056485. 1
68634056486. 2
68634056487. 3
68634056488. 4

Question Number : 22 Question Id : 68634014304 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which of the following states is also known as " Land of Red river and Blue hills"?

1. Assam

2. Sikkim

3. Manipur

4. Arunachal Pradesh

Options :
68634056485. 1
68634056486. 2

68634056487. 3
68634056488. 4

Question Number : 23 Question Id : 68634014305 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Who was the deputy prime minister who subsequently became the Prime Minister of India?

1. V. P. Singh
2. Moraji Desai
3. Deve Gouda
4. Lal Bahadur Shastri

Options :
68634056489. 1
68634056490. 2
68634056491. 3
68634056492. 4

Question Number : 23 Question Id : 68634014305 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Who was the deputy prime minister who subsequently became the Prime Minister of India?

1. V. P. Singh
2. Moraji Desai
3. Deve Gouda
4. Lal Bahadur Shastri

Options :
68634056489. 1
68634056490. 2
68634056491. 3
68634056492. 4

Question Number : 24 Question Id : 68634014306 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which of the following is a Water Harvesting Technique practiced in the state of Rajasthan?

1. Kattas

2. Khadims

3. Tals

4. Ahars

Options :
68634056493. 1
68634056494. 2
68634056495. 3
68634056496. 4

Question Number : 24 Question Id : 68634014306 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Which of the following is a Water Harvesting Technique practiced in the state of Rajasthan?

1. Kattas

2. Khadims

3. Tals

4. Ahars

Options :
68634056493. 1
68634056494. 2
68634056495. 3
68634056496. 4

Question Number : 25 Question Id : 68634014307 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Khelo India Youth Games:

A. They were formerly called Khelo India School Games and are played under two categories under-17 years for school students and under-21 for college students
B. Headquarter of Khelo India Youth Games is in Mumbai and Maharashtra won Khelo India Youth Games 2023
C. Haryana was the first state to win Khelo India Youth Games
D. Khelo India Youth Games 2023 were held in Bhopal

Choose the correct answer from the options given below:

1. B, C and D only

2. A, C and D only

3. A, B and D only

4. A, B and C only

Options :
68634056497. 1
68634056498. 2
68634056499. 3
68634056500. 4

Question Number : 25 Question Id : 68634014307 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Khelo India Youth Games:

A. They were formerly called Khelo India School Games and are played under two categories under-17 years for school students and under-21 for college students
B. Headquarter of Khelo India Youth Games is in Mumbai and Maharashtra won Khelo India Youth Games 2023
C. Haryana was the first state to win Khelo India Youth Games
D. Khelo India Youth Games 2023 were held in Bhopal

Choose the correct answer from the options given below:

1. B, C and D only

2. A, C and D only

3. A, B and D only

4. A, B and C only

Options :
68634056497. 1
68634056498. 2
68634056499. 3
68634056500. 4

Part B: Statistics

Section Id :	686340284
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	75
Number of Questions to be attempted :	75
Section Marks :	300
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	686340476
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 26 Question Id : 68634014308 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The positive term sequence $< a_n >$ is such that $a_{n+1} = \frac{a}{1+a_n}, a > 0$, then

1. $< a_n >$ is divergent
2. $< a_n >$ is convergent and converges to $a + \frac{1}{2}$
3. $< a_n >$ is convergent and converges to $\frac{\sqrt{4a+1}-1}{2}$
4. $< a_n >$ is convergent and converges to $\frac{\sqrt{4a-1}+1}{2}$

Options :
68634056501. 1
68634056502. 2
68634056503. 3
68634056504. 4

Question Number : 26 Question Id : 68634014308 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

धनात्मक पदों की अनुक्रम $< a_n >$ इस प्रकार है कि $a_{n+1} = \frac{a}{1+a_n}, a > 0$, तब

1. $< a_n >$ अपसारी है

2. $< a_n >$ अभिसारी है तथा $a + \frac{1}{2}$ पर अभिसरित होती है

3. $< a_n >$ अभिसारी है तथा $\frac{\sqrt{4a+1}-1}{2}$ पर अभिसरित होती है

4. $< a_n >$ अभिसारी है तथा $\frac{\sqrt{4a-1}+1}{2}$ पर अभिसरित होती है

Options :
68634056501. 1
68634056502. 2
68634056503. 3
68634056504. 4

Question Number : 27 Question Id : 68634014309 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$$\lim_{n \to \infty} \frac{2\left(\frac{1}{\sqrt{1}} + \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{3}} + ... + \frac{1}{\sqrt{n}}\right)}{n} =$$

1. 0

2. $\frac{1}{2}$

3. 1

4. 2

Options :
68634056505. 1
68634056506. 2
68634056507. 3
68634056508. 4

Question Number : 27 Question Id : 68634014309 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$$\lim_{n\to\infty}\frac{2\left(\frac{1}{\sqrt{1}}+\frac{1}{\sqrt{2}}+\frac{1}{\sqrt{3}}+....+\frac{1}{\sqrt{n}}\right)}{n}=$$

1. 0
2. $\frac{1}{2}$
3. 1
4. 2

Options :
68634056505. 1
68634056506. 2
68634056507. 3
68634056508. 4

Question Number : 28 Question Id : 68634014310 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The infinite series whose n^{th} term is $\sqrt{\frac{n-1}{n^3+1}}\,x^n, x>0$, is convergent , if

1. $1<x<3$
2. $\frac{1}{2}<x<5$
3. $2<x<8$
4. $0<x<1$

Options :
68634056509. 1
68634056510. 2
68634056511. 3
68634056512. 4

Question Number : 28 Question Id : 68634014310 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

अनंत श्रेणी जिसका nवाँ पद $\sqrt{\frac{n-1}{n^3+1}}\,x^n, x>0$ है, अभिसारी है, यदि

1. $1<x<3$

2. $\frac{1}{2}<x<5$

3. $2<x<8$

4. $0<x<1$

Options :
68634056509. 1
68634056510. 2
68634056511. 3
68634056512. 4

Question Number : 29 Question Id : 68634014311 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The sequence $<a_n>$ is such that $a_n>0 \not\forall\, n\geq 1$ and $a_n\to 2$ as $n\to\infty$. If $\frac{a_n}{b_n}=2$ then $\lim_{n\to\infty}(b_1\cdot b_2\cdot\ldots b_n)^{\frac{1}{n}}$ is equal to

1. $\frac{1}{2}$

2. 1

3. $\frac{1}{3}$

4. $\frac{1}{4}$

Options :
68634056513. 1
68634056514. 2
68634056515. 3
68634056516. 4

Question Number : 29 Question Id : 68634014311 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

अनुक्रम $< a_n >$ इस प्रकार है कि $a_n > 0 \forall n \geq 1$ तथा $a_n \to 2$ जब $n \to \infty$. यदि $\frac{a_n}{b_n} = 2$ तब $\lim_{n\to\infty}(b_1 \cdot b_2 \cdot \ldots b_n)^{\frac{1}{n}}$ बराबर है -

1. $\frac{1}{2}$
2. 1
3. $\frac{1}{3}$
4. $\frac{1}{4}$

Options :
68634056513. 1
68634056514. 2
68634056515. 3
68634056516. 4

Question Number : 30 Question Id : 68634014312 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The positive term series $\sum u_n$ and $\sum v_n$ are such that $\frac{u_n}{v_n} \to \frac{1}{2}$ then

1. $\sum u_n$ convergent implies that $\sum v_n$ is divergent
2. $\sum u_n$ and $\sum v_n$ are always convergent
3. $\sum u_n$ and $\sum v_n$ always converge or diverge together
4. $\sum v_n$ convergent implies that $\sum u_n$ is divergent

Options :
68634056517. 1
68634056518. 2
68634056519. 3
68634056520. 4

Question Number : 30 Question Id : 68634014312 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

धनात्मक पदों की श्रेणी $\sum u_n$ तथा $\sum v_n$ इस प्रकार है कि $\frac{u_n}{v_n} \to \frac{1}{2}$, तब

1. $\sum u_n$ अभिसारी उपलक्षित करता है कि $\sum v_n$ अपसारी है।
2. $\sum u_n$ तथा $\sum v_n$ सदैव अभिसारी हैं।
3. $\sum u_n$ तथा $\sum v_n$ सदैव साथ-साथ अभिसारी या अपसारी हैं।
4. $\sum v_n$ अभिसारी है उपलक्षित करता है कि $\sum u_n$ अपसारी है।

Options :
68634056517. 1
68634056518. 2
68634056519. 3
68634056520. 4

Question Number : 31 Question Id : 68634014313 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$\lim_{x\to\infty}\left(\frac{x+1}{x+6}\right)^{x+4} =$

1. e^5
2. $\frac{1}{2}e^5$
3. $2e^{-5}$
4. e^{-5}

Options :
68634056521. 1
68634056522. 2
68634056523. 3
68634056524. 4

Question Number : 31 Question Id : 68634014313 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$\lim_{x\to\infty}\left(\frac{x+1}{x+6}\right)^{x+4}=$

1. e^5
2. $\frac{1}{2}e^5$
3. $2e^{-5}$
4. e^{-5}

Options :
68634056521. 1
68634056522. 2
68634056523. 3
68634056524. 4

Question Number : 32 Question Id : 68634014314 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$\lim_{n\to 0}\frac{1-2\cos x+\cos 2x}{x^2}=$

1. -1
2. 0
3. +1
4. 2

Options :
68634056525. 1
68634056526. 2
68634056527. 3
68634056528. 4

Question Number : 32 Question Id : 68634014314 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$$\lim_{n\to 0}\frac{1-2\cos x+\cos 2x}{x^2}=$$

1. -1

2. 0

3. +1

4. 2

Options :
68634056525. 1
68634056526. 2
68634056527. 3
68634056528. 4

Question Number : 33 Question Id : 68634014315 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$$\lim_{x\to 0}\left(\tan\left(\frac{\pi}{4}+x\right)\right)^{\frac{1}{x}}=$$

1. $\frac{1}{2}e^2$

2. $\frac{1}{2}e^5$

3. e^2

4. -1

Options :
68634056529. 1
68634056530. 2
68634056531. 3
68634056532. 4

Question Number : 33 Question Id : 68634014315 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$\lim_{x\to 0}\left(\tan\left(\frac{\pi}{4}+x\right)\right)^{\frac{1}{x}} =$

1. $\frac{1}{2}e^2$
2. $\frac{1}{2}e^5$
3. e^2
4. -1

Options :
68634056529. 1
68634056530. 2
68634056531. 3
68634056532. 4

Question Number : 34 Question Id : 68634014316 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If $f: R^2 \to R$ is defined by $f(x,y)=\begin{cases}\dfrac{x^2+4y^2}{\sqrt{2x^2+8y^2+81}-9}, & (x,y)\neq(0,0)\\ \lambda & (x,y)=(0,0)\end{cases}$ Then the value of λ so that f is continuous at (0, 0) is

1. 0
2. 1
3. 9
4. 18

Options :
68634056533. 1
68634056534. 2
68634056535. 3
68634056536. 4

Question Number : 34 Question Id : 68634014316 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि $f: R^2 \to R$ इस प्रकार परिभाषित है कि $f(x,y) = \begin{cases} \dfrac{x^2+4y^2}{\sqrt{2x^2+8y^2+81}-9}, & (x,y) \neq (0,0) \\ \lambda & (x,y) = (0,0) \end{cases}$ तब λ के किस मान के लिए f, $(0, 0)$ पर सतत है

1. 0

2. 1

3. 9

4. 18

Options :
68634056533. 1
68634056534. 2
68634056535. 3
68634056536. 4

Question Number : 35 Question Id : 68634014317 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The number of roots of the equation $f(x) = x^4 - 4x + 1 = 0$ that lie between 0 and 1 is

1. 0

2. 1

3. 2

4. 3

Options :
68634056537. 1
68634056538. 2
68634056539. 3
68634056540. 4

Question Number : 35 Question Id : 68634014317 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

समीकरण $f(x) = x^4 - 4x + 1 = 0$ के मूलों की संख्या जो 0 तथा 1 के बीच विद्यमान है, हैं -

1. 0

2. 1

3. 2

4. 3

Options :
68634056537. 1
68634056538. 2
68634056539. 3
68634056540. 4

Question Number : 36 Question Id : 68634014318 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Volume generated by revolving ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ about y-axis is:

1. $\frac{1}{3}\pi a^2 b$

2. $\frac{2}{3}\pi ab^2$

3. $\frac{4}{3}\pi ab^2$

4. $\frac{4}{3}\pi a^2 b$

Options :
68634056541. 1
68634056542. 2
68634056543. 3
68634056544. 4

Question Number : 36 Question Id : 68634014318 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

y-अक्ष के चारो तरफ दीर्घवृत $\frac{x^2}{a^2}+\frac{y^2}{b^2}=1$ के परिक्रमण द्वारा जनित आयतन है -

1. $\frac{1}{3}\pi a^2 b$
2. $\frac{2}{3}\pi ab^2$
3. $\frac{4}{3}\pi ab^2$
4. $\frac{4}{3}\pi a^2 b$

Options :
68634056541. 1
68634056542. 2
68634056543. 3
68634056544. 4

Question Number : 37 Question Id : 68634014319 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Let $A=\{(x,y,z), x>0, y>0, z>0 \text{ and } x+y+z\le 1\}$. Then value of $\iiint_A (5x+8y+11z)\,dxdydz$ is equal to:

1. $\frac{1}{8}$
2. $\frac{1}{12}$
3. $\frac{1}{24}$
4. 1

Options :
68634056545. 1
68634056546. 2
68634056547. 3
68634056548. 4

Question Number : 37 Question Id : 68634014319 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

माना $A = \{(x, y, z), x > 0, y > 0, \ z > 0$ तथा $x + y + z \leq 1\}$. तब $\iiint_A (5x + 8y + 11z)\, dxdydz$ का मान बराबर है

1. $\frac{1}{8}$
2. $\frac{1}{12}$
3. $\frac{1}{24}$
4. 1

Options :
68634056545. 1
68634056546. 2
68634056547. 3
68634056548. 4

Question Number : 38 Question Id : 68634014320 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$\int_0^1 \int_0^1 \max(x, y)\, dxdy =$

1. $\frac{1}{2}$
2. 1
3. $\frac{2}{3}$
4. $\frac{4}{3}$

Options :
68634056549. 1
68634056550. 2
68634056551. 3
68634056552. 4

Question Number : 38 Question Id : 68634014320 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$$\int_0^1 \int_0^1 \max(x, y)\, dxdy =$$

1. $\frac{1}{2}$
2. 1
3. $\frac{2}{3}$
4. $\frac{4}{3}$

Options :
68634056549. 1
68634056550. 2
68634056551. 3
68634056552. 4

Question Number : 39 Question Id : 68634014321 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The length of the loop of a curve $x = t^2, y = t - \frac{t^3}{3}$ is:

1. $\sqrt{3}$
2. $2\sqrt{3}$
3. $3\sqrt{3}$
4. $4\sqrt{3}$

Options :
68634056553. 1
68634056554. 2
68634056555. 3
68634056556. 4

Question Number : 39 Question Id : 68634014321 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

वक्र $x = t^2, y = t - \frac{t^3}{3}$ के लूप की लम्बाई है -

1. $\sqrt{3}$
2. $2\sqrt{3}$
3. $3\sqrt{3}$
4. $4\sqrt{3}$

Options :
68634056553. 1
68634056554. 2
68634056555. 3
68634056556. 4

Question Number : 40 Question Id : 68634014322 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$$\int_0^1 \int_0^1 \min(x, y)\, dx dy =$$

1. $\frac{1}{3}$
2. $\frac{2}{3}$
3. $\frac{4}{3}$
4. $\frac{5}{3}$

Options :
68634056557. 1
68634056558. 2
68634056559. 3
68634056560. 4

Question Number : 40 Question Id : 68634014322 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

$$\int_0^1 \int_0^1 \min(x, y)\,dx\,dy =$$

1. $\frac{1}{3}$
2. $\frac{2}{3}$
3. $\frac{4}{3}$
4. $\frac{5}{3}$

Options :
68634056557. 1
68634056558. 2
68634056559. 3
68634056560. 4

Question Number : 41 Question Id : 68634014323 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Rank of matrix $\begin{bmatrix} 1 & 2 & 3 & 4 \\ 2 & 5 & 6 & 7 \\ 3 & 6 & 8 & 9 \\ 4 & 7 & 9 & 10 \end{bmatrix}$ is:

1. 1
2. 2
3. 3
4. 4

Options :
68634056561. 1
68634056562. 2
68634056563. 3
68634056564. 4

Question Number : 41 Question Id : 68634014323 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

आव्यूह $\begin{bmatrix} 1 & 2 & 3 & 4 \\ 2 & 5 & 6 & 7 \\ 3 & 6 & 8 & 9 \\ 4 & 7 & 9 & 10 \end{bmatrix}$ की जाति है -

1. 1

2. 2

3. 3

4. 4

Options :

68634056561. 1

68634056562. 2

68634056563. 3

68634056564. 4

Question Number : 42 Question Id : 68634014324 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $\begin{bmatrix} 2 & 1 & b \\ c & 0 & e \\ d & 2 & -3 \end{bmatrix}$ is symmetric matrix, then minimum value of $(b+c)^2 + (d+e)^2$ is

1. $\frac{1}{2}$

2. 4

3. $\frac{-3}{2}$

4. 8

Options :

68634056565. 1

68634056566. 2

68634056567. 3

68634056568. 4

Question Number : 42 Question Id : 68634014324 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $\begin{bmatrix} 2 & 1 & b \\ c & 0 & e \\ d & 2 & -3 \end{bmatrix}$ सममित आव्यूह है, तब $(b+c)^2+(d+e)^2$ का न्यूनतम मान है -

1. $\frac{1}{2}$

2. 4

3. $\frac{-3}{2}$

4. 8

Options :
68634056565. 1
68634056566. 2
68634056567. 3
68634056568. 4

Question Number : 43 Question Id : 68634014325 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If $A=\begin{bmatrix} 1 & -1 & 2 \\ 2 & 3 & 4 \\ 1 & -2 & 0 \end{bmatrix}$ and $A^3=\alpha A^2+\beta A+\gamma I$, then value of $\alpha-2\beta-3\gamma$, is

1. 56

2. 52

3. 44

4. 17

Options :
68634056569. 1
68634056570. 2
68634056571. 3
68634056572. 4

Question Number : 43 Question Id : 68634014325 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि $A=\begin{bmatrix}1 & -1 & 2\\ 2 & 3 & 4\\ 1 & -2 & 0\end{bmatrix}$ तथा $A^3=\alpha A^2+\beta A+\gamma I$, तब $\alpha-2\beta-3\gamma$ का मान है

1. 56

2. 52

3. 44

4. 17

Options :
68634056569. 1
68634056570. 2
68634056571. 3
68634056572. 4

Question Number : 44 Question Id : 68634014326 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Rank of the matrix $\begin{bmatrix}-1 & 0 & 1 & 2\\ 0 & 1 & 4 & 5\\ 0 & 0 & -1 & 7\\ 2 & 0 & -2 & 8\end{bmatrix}$ is;

1. 4

2. 3

3. 2

4. 1

Options :
68634056573. 1
68634056574. 2
68634056575. 3
68634056576. 4

Question Number : 44 Question Id : 68634014326 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

आव्यूह $\begin{bmatrix} -1 & 0 & 1 & 2 \\ 0 & 1 & 4 & 5 \\ 0 & 0 & -1 & 7 \\ 2 & 0 & -2 & 8 \end{bmatrix}$ की जाति है -

1. 4

2. 3

3. 2

4. 1

Options :
68634056573. 1
68634056574. 2
68634056575. 3
68634056576. 4

Question Number : 45 Question Id : 68634014327 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If A is square matrix of order 4 and $|A|=1$, and $|3Adj(3Adj(3A)| = 3^{\alpha}$, then value of α is;

1. 12

2. 52

3. 102

4. 201

Options :
68634056577. 1
68634056578. 2
68634056579. 3
68634056580. 4

Question Number : 45 Question Id : 68634014327 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि A कोटि 4 की वर्ग आव्यूह है तथा $|A|=1$, तथा $|3Adj(3Adj(3A)| = 3^{\alpha}$, तब α का मान है-

1. 12

2. 52

3. 102

4. 201

Options :
68634056577. 1
68634056578. 2
68634056579. 3
68634056580. 4

Question Number : 46 Question Id : 68634014328 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The value of α, so that the differential equation $(x^3 + y^3)dx + \alpha xy^2\, dy = 0$, will become exact, is:

1. -1

2. 1

3. 2

4. 3

Options :
68634056581. 1
68634056582. 2
68634056583. 3
68634056584. 4

Question Number : 46 Question Id : 68634014328 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

α के किस मान के लिए, अवकल समीकरण $(x^3 + y^3)dx + \alpha xy^2\, dy = 0$ यथातथ बन जाएगी

1. -1

2. 1

3. 2

4. 3

Options :
68634056581. 1
68634056582. 2

68634056583. 3
68634056584. 4

Question Number : 47 Question Id : 68634014329 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The particular integral of the differential equation $\frac{d^2y}{dx^2}+3\frac{dy}{dx}+9y=\sin x$ is

1. $(8\sin x-3\cos x)$
2. $\frac{1}{73}(8\sin x-3\cos x)$
3. $\frac{1}{73}(5\sin x-3\cos x)$
4. $\frac{1}{73}(8\sin x-5\cos x)$

Options :
68634056585. 1
68634056586. 2
68634056587. 3
68634056588. 4

Question Number : 47 Question Id : 68634014329 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

अवकल समीकरण $\frac{d^2y}{dx^2}+3\frac{dy}{dx}+9y=\sin x$ का विशेष समाकल है -

1. $(8\sin x-3\cos x)$
2. $\frac{1}{73}(8\sin x-3\cos x)$
3. $\frac{1}{73}(5\sin x-3\cos x)$
4. $\frac{1}{73}(8\sin x-5\cos x)$

Options :
68634056585. 1
68634056586. 2
68634056587. 3
68634056588. 4

Question Number : 48 Question Id : 68634014330 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The complimentary function of a differential equation $\frac{d^2y}{dx^2}+3\frac{dy}{dx}+9y=4\cos x$ is

1. $e^{-\frac{3x}{2}}\left(C_1\cos\frac{3\sqrt{3}}{2}x+C_2\sin\frac{3\sqrt{3}}{2}x\right)$
2. $e^{-\frac{3x}{2}}\left(C_1\cos\frac{\sqrt{3}}{2}x+C_2\sin\frac{3\sqrt{3}}{2}x\right)$
3. $e^{-\frac{3x}{2}}\left(C_1\cos\frac{3\sqrt{3}}{2}x+C_2\sin\frac{\sqrt{3}}{2}x\right)$
4. $e^{-\frac{x}{2}}\left(C_1\cos\frac{3\sqrt{3}}{2}x+C_2\sin\frac{3\sqrt{3}}{2}x\right)$

Options :
68634056589. 1
68634056590. 2
68634056591. 3
68634056592. 4

Question Number : 48 Question Id : 68634014330 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

अवकल समीकरण $\frac{d^2y}{dx^2}+3\frac{dy}{dx}+9y=4\cos x$ का पूरक फलन है-

1. $e^{-\frac{3x}{2}}\left(C_1\cos\frac{3\sqrt{3}}{2}x+C_2\sin\frac{3\sqrt{3}}{2}x\right)$
2. $e^{-\frac{3x}{2}}\left(C_1\cos\frac{\sqrt{3}}{2}x+C_2\sin\frac{3\sqrt{3}}{2}x\right)$
3. $e^{-\frac{3x}{2}}\left(C_1\cos\frac{3\sqrt{3}}{2}x+C_2\sin\frac{\sqrt{3}}{2}x\right)$
4. $e^{-\frac{x}{2}}\left(C_1\cos\frac{3\sqrt{3}}{2}x+C_2\sin\frac{3\sqrt{3}}{2}x\right)$

Options :
68634056589. 1

68634056590. 2
68634056591. 3
68634056592. 4

Question Number : 49 Question Id : 68634014331 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The complete solution of differential equation $\frac{d^2y}{dx^2}+2\frac{dy}{dx}+y=6xe^{-x}$ is

1. $\left(C_1x^3+C_2x+C_3\right)e^{-x}$
2. $\left(C_1x^3+C_2x^2+C_3\right)e^{-x}$
3. $\left(x^3+C_1x+C_2\right)e^{-x}$
4. $\left(C_1x+C_2\right)e^{-x}$

Options :
68634056593. 1
68634056594. 2
68634056595. 3
68634056596. 4

Question Number : 49 Question Id : 68634014331 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

अवकल समीकरण $\frac{d^2y}{dx^2}+2\frac{dy}{dx}+y=6xe^{-x}$ का सम्पूर्ण हल है -

1. $\left(C_1x^3+C_2x+C_3\right)e^{-x}$
2. $\left(C_1x^3+C_2x^2+C_3\right)e^{-x}$
3. $\left(x^3+C_1x+C_2\right)e^{-x}$
4. $\left(C_1x+C_2\right)e^{-x}$

Options :
68634056593. 1
68634056594. 2
68634056595. 3
68634056596. 4

Question Number : 50 Question Id : 68634014332 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If $D=\frac{d}{dx}$, the value of $\frac{1}{D+1}\left(\frac{1}{(1+x)^2}-\frac{2}{(1+x)^3}\right)$, is

1. $\frac{1}{(1+x)^3}+e^{-x}C$
2. $\frac{1}{(1+x)^2}+e^{x}C$
3. $\frac{1}{(1+x)^2}+e^{-x}C$
4. $\frac{3}{(1+x)^2}+e^{-x}C$

Options :
68634056597. 1
68634056598. 2
68634056599. 3
68634056600. 4

Question Number : 50 Question Id : 68634014332 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि $D=\frac{d}{dx}$, तब $\frac{1}{D+1}\left(\frac{1}{(1+x)^2}-\frac{2}{(1+x)^3}\right)$ का मान है -

1. $\frac{1}{(1+x)^3}+e^{-x}C$
2. $\frac{1}{(1+x)^2}+e^{x}C$
3. $\frac{1}{(1+x)^2}+e^{-x}C$
4. $\frac{3}{(1+x)^2}+e^{-x}C$

Options :
68634056597. 1

68634056598. 2
68634056599. 3
68634056600. 4

Question Number : 51 Question Id : 68634014333 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

For a distribution, if values of the three quartiles are 4, 6 and 14, then Bowley's coefficient of skewness is:

1. 0.2
2. 0.6
3. 0.8
4. 0.9

Options :
68634056601. 1
68634056602. 2
68634056603. 3
68634056604. 4

Question Number : 51 Question Id : 68634014333 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

बंटन के लिए, यदि तीन चतुर्थकों का मान 4, 6 तथा 14 है, तब वैषम्य का बाउले गुणांक है:

1. 0.2
2. 0.6
3. 0.8
4. 0.9

Options :
68634056601. 1
68634056602. 2
68634056603. 3
68634056604. 4

Question Number : 52 Question Id : 68634014334 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The value of x for which the expression $\left(|x-12|+|x-9|+|x-14|+|x-6|+|x-10|+|x-100|\right)$ attains its minimum value is

1. 11
2. 29
3. 50
4. 62

Options :
68634056605. 1
68634056606. 2
68634056607. 3
68634056608. 4

Question Number : 52 Question Id : 68634014334 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

x के किस मान के लिए व्यंजक $\left(|x-12|+|x-9|+|x-14|+|x-6|+|x-10|+|x-100|\right)$ अपने न्यूनतम मान तक पहुँचता है -

1. 11
2. 29
3. 50
4. 62

Options :
68634056605. 1
68634056606. 2
68634056607. 3
68634056608. 4

Question Number : 53 Question Id : 68634014335 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

A cyclist pedals from his house to his college at a speed of 20 kmph and returns from his college to his house at a speed of 30 kmph. His average speed (in kmph) is

1. 25

2. 24

3. 23

4. 22

Options :
68634056609. 1
68634056610. 2
68634056611. 3
68634056612. 4

Question Number : 53 Question Id : 68634014335 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

एक साईकिल सवार पैडल लगाते हुए अपने घर से अपने कॉलेज तक 20 किमी/घंटा की चाल से जाता है तथा वापस अपने कॉलेज से अपने घर तक 30 किमी/घंटा से जाता है। उसकी औसत चाल (किमी/घंटा) है -

1. 25

2. 24

3. 23

4. 22

Options :
68634056609. 1
68634056610. 2
68634056611. 3
68634056612. 4

Question Number : 54 Question Id : 68634014336 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If 4 letters are to be placed randomly in 4 correspondingly addressed envelopes, then the probability that none of them goes to the right envelope is:

1. $\frac{3}{8}$
2. $\frac{1}{8}$
3. $\frac{5}{8}$
4. $\frac{7}{8}$

Options :
68634056613. 1
68634056614. 2
68634056615. 3
68634056616. 4

Question Number : 54 Question Id : 68634014336 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि 4 पत्रों को 4 संगत पते वाले लिफाफों में यादृच्छिक रख जाता है, तब उनमें से किसी के भी सही लिफाफे में नहीं जाने की प्रायिकता है-

1. $\frac{3}{8}$
2. $\frac{1}{8}$
3. $\frac{5}{8}$
4. $\frac{7}{8}$

Options :
68634056613. 1
68634056614. 2
68634056615. 3
68634056616. 4

Question Number : 55 Question Id : 68634014337 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Two numbers are selected at random from the numbers 1,2,3,....., 24 with replacement. If A and B represent the events that the numbers drawn are multiples of 4 and 5 respectively, then $P(\overline{A} \mid B) + P(\overline{B} \mid A)$ is equal to

1. $\frac{19}{12}$
2. $\frac{12}{19}$
3. $\frac{5}{12}$
4. $\frac{5}{6}$

Options :

68634056617. 1
68634056618. 2
68634056619. 3
68634056620. 4

Question Number : 55 Question Id : 68634014337 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

दो संख्याएँ यादृच्छक रूप से संख्याओं 1,2,3,....., 24 से प्रतिस्थापन के साथ चुनी जाती हैं। यदि A तथा B घटनाओं को इस प्रकार दर्शाती है कि निकाली गई संख्याएँ क्रमशः 4 तथा 5 के गुणक हैं, तब $P(\overline{A} \mid B) + P(\overline{B} \mid A)$ बराबर हैं -

1. $\frac{19}{12}$
2. $\frac{12}{19}$
3. $\frac{5}{12}$
4. $\frac{5}{6}$

Options :

68634056617. 1
68634056618. 2
68634056619. 3
68634056620. 4

Question Number : 56 Question Id : 68634014338 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

For a distribution, if values of the Pearson's coefficients are $\beta_1 = 0.09$, $\beta_2 = 4$, then the moment based coefficient of skewness is;

1. $\frac{1}{13}$
2. $\frac{1}{9}$
3. $\frac{2}{9}$
4. $\frac{3}{10}$

Options :
68634056621. 1
68634056622. 2
68634056623. 3
68634056624. 4

Question Number : 56 Question Id : 68634014338 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

बंटन के लिए, यदि पियरसन गुणांकों का मान $\beta_1 = 0.09$, $\beta_2 = 4$ है, तब वैषम्य का आघूर्ण आधारित गुणांक है:

1. $\frac{1}{13}$
2. $\frac{1}{9}$
3. $\frac{2}{9}$
4. $\frac{3}{10}$

Options :
68634056621. 1
68634056622. 2
68634056623. 3
68634056624. 4

Question Number : 57 Question Id : 68634014339 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If for some data β_1=3, β_2=9 and $\sigma^2 = 5$ then the value of $\frac{\mu_3^2}{\mu_4}$,is:

1. $\frac{5}{3}$
2. $\frac{4}{3}$
3. 1
4. $\frac{1}{3}$

Options :
68634056625. 1
68634056626. 2
68634056627. 3
68634056628. 4

Question Number : 57 Question Id : 68634014339 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि कुछ आँकड़ो के लिए β_1=3, β_2=9 तथा $\sigma^2 = 5$, तब $\frac{\mu_3^2}{\mu_4}$ का मान है -

1. $\frac{5}{3}$
2. $\frac{4}{3}$
3. 1
4. $\frac{1}{3}$

Options :
68634056625. 1
68634056626. 2
68634056627. 3
68634056628. 4

Question Number : 58 Question Id : 68634014340 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

A five-digit number with distinct digits is to be formed by using digits 0, 1, 2, 3, 4 and 5. The probability that the number so formed is divisible by 3, is:

1. $\frac{1}{2}$
2. $\frac{5}{12}$
3. $\frac{9}{25}$
4. $\frac{3}{25}$

Options :

68634056629. 1
68634056630. 2
68634056631. 3
68634056632. 4

Question Number : 58 Question Id : 68634014340 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

अंकों 0, 1, 2, 3, 4 तथा 5 के प्रयोग द्वारा पाँच अंकों की संख्या बनाई जाती है। इस प्रकार बनी संख्या के 3 से विभाजित होने की प्रायिकता हैं -

1. $\frac{1}{2}$
2. $\frac{5}{12}$
3. $\frac{9}{25}$
4. $\frac{3}{25}$

Options :

68634056629. 1
68634056630. 2
68634056631. 3
68634056632. 4

Question Number : 59 Question Id : 68634014341 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

In a sequence of independent Bernoulli $\left(\frac{1}{4}\right)$ trails, the probability of getting three successes in 4 successive trials is

1. $\frac{1}{16}$
2. $\frac{3}{64}$
3. $\frac{5}{64}$
4. $\frac{31}{64}$

Options :
68634056633. 1
68634056634. 2
68634056635. 3
68634056636. 4

Question Number : 59 Question Id : 68634014341 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

स्वतन्त्र बर्नूली $\left(\frac{1}{4}\right)$ परीक्षण के अनुक्रम में, 4 क्रमिक परीक्षणों में तीन सफलताओं के प्राप्त होने की प्रायिकता है -

1. $\frac{1}{16}$
2. $\frac{3}{64}$
3. $\frac{5}{64}$
4. $\frac{31}{64}$

Options :
68634056633. 1
68634056634. 2
68634056635. 3
68634056636. 4

Question Number : 60 Question Id : 68634014342 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

In a sequence of tossing three coins simultaneously, the probability of getting all heads or all tails for the second time on fifth toss is:

1. $\frac{27}{2^9}$
2. $\frac{27}{2^8}$
3. $\frac{27}{2^7}$
4. $\frac{9}{2^6}$

Options :

68634056637. 1
68634056638. 2
68634056639. 3
68634056640. 4

Question Number : 60 Question Id : 68634014342 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

तीन सिक्कों को साथ-साथ उछालने के अनुक्रम में, 5वीं उछाल पर द्वितीय बार सभी चित या सभी पट प्राप्त करने की प्रायिकता है -

1. $\frac{27}{2^9}$
2. $\frac{27}{2^8}$
3. $\frac{27}{2^7}$
4. $\frac{9}{2^6}$

Options :

68634056637. 1
68634056638. 2
68634056639. 3
68634056640. 4

Question Number : 61 Question Id : 68634014343 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If the sequence of i.i.d random variables $X_1, X_2, \ldots$ assume values -1 and $+1$ with equal probabilities then Var (X) of $X = \sum_{i=1}^{n} X_i$ is

1. $\frac{1}{2}$
2. 1
3. $n-1$
4. n

Options :
68634056641. 1
68634056642. 2
68634056643. 3
68634056644. 4

Question Number : 61 Question Id : 68634014343 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि i.i.d यादृच्छिक चरों $X_1, X_2, \ldots$ का अनुक्रम -1 तथा $+1$ मान समान प्रायिकता के साथ लेता है, तब $X = \sum_{i=1}^{n} X_i$ का Var (X) है-

1. $\frac{1}{2}$
2. 1
3. $n-1$
4. n

Options :
68634056641. 1
68634056642. 2
68634056643. 3
68634056644. 4

Question Number : 62 Question Id : 68634014344 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

A symmetric die is thrown 600 times. Using Chebychev's inequality, the lower bound of probability for getting 80 to 120 four's, is

1. $\frac{19}{24}$
2. $\frac{1}{2}$
3. $\frac{1}{3}$
4. $\frac{1}{4}$

Options :

68634056645. 1
68634056646. 2
68634056647. 3
68634056648. 4

Question Number : 62 Question Id : 68634014344 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

कोई सममित पासा 600 बार फेंका जाता है। चेबिचेव असमता के प्रयोग द्वारा, 80 से 120 बार चार प्राप्त करने के लिए प्रायिकता का निम्न परिबन्ध है -

1. $\frac{19}{24}$
2. $\frac{1}{2}$
3. $\frac{1}{3}$
4. $\frac{1}{4}$

Options :

68634056645. 1
68634056646. 2
68634056647. 3
68634056648. 4

Question Number : 63 Question Id : 68634014345 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The moment generating function of random variable X is given by $M_x(t) = \frac{1}{\left(9-8e^t\right)^{17}}, -\infty < t < \infty$ then $P(X \geq 1)$ is:

1. $1-\frac{1}{9^{17}}$
2. $\left(\frac{8}{9}\right)^{17}$
3. $\frac{1}{8^{17}}$
4. $1-\frac{1}{17^9}$

Options :
68634056649. 1
68634056650. 2
68634056651. 3
68634056652. 4

Question Number : 63 Question Id : 68634014345 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यादृच्छिक चर X का आघूर्णजनक फलन दिया गया है: $M_x(t) = \frac{1}{\left(9-8e^t\right)^{17}}, -\infty < t < \infty$ तब $P(X \geq 1)$ है -

1. $1-\frac{1}{9^{17}}$
2. $\left(\frac{8}{9}\right)^{17}$
3. $\frac{1}{8^{17}}$
4. $1-\frac{1}{17^9}$

Options :
68634056649. 1
68634056650. 2
68634056651. 3
68634056652. 4

Question Number : 64 Question Id : 68634014346 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The moment generating function of random variable X is given by $M_X(t) = e^{2t+5t^2}, -\infty < t < \infty$ then $E\left((X-2)^4\right)$ is:

1. 125
2. 250
3. 300
4. 450

Options :
68634056653. 1
68634056654. 2
68634056655. 3
68634056656. 4

Question Number : 64 Question Id : 68634014346 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यादृच्छिक चर X का आघूर्णजनक फलन दिया गया है - $M_X(t) = e^{2t+5t^2}, -\infty < t < \infty$ तब $E\left((X-2)^4\right)$ है -

1. 125
2. 250
3. 300
4. 450

Options :
68634056653. 1
68634056654. 2
68634056655. 3
68634056656. 4

Question Number : 65 Question Id : 68634014347 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The mode of Binomial distribution with parameters $n = 21$ and $p = 0.3$, is:

1. 9

2. 8

3. 6

4. 5

Options :
68634056657. 1
68634056658. 2
68634056659. 3
68634056660. 4

Question Number : 65 Question Id : 68634014347 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

द्विपद बंटन, जिसके प्राचल $n = 21$ तथा $p = 0.3$ है, का बहुलक है

1. 9

2. 8

3. 6

4. 5

Options :
68634056657. 1
68634056658. 2
68634056659. 3
68634056660. 4

Question Number : 66 Question Id : 68634014348 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Let the joint probability mass function of the random variables X and Y be given by

$$P(X=x, Y=y)=\begin{cases}\frac{1}{2}\binom{x}{y}\left(\frac{1}{3}\right)^{x}, y=0,1,2,\ldots,x; x=1,2,\ldots. \\ 0 \qquad \text{otherwise}\end{cases}$$

then E(X) is equal to

1. 1
2. 2
3. 3
4. 4

Options :

68634056661. 1
68634056662. 2
68634056663. 3
68634056664. 4

Question Number : 66 Question Id : 68634014348 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

माना यादृच्छिक चरों X तथा Y का संयुक्त प्रायिकता द्रव्यमान फलन दिया गया है

$$P(X=x, Y=y)=\begin{cases}\frac{1}{2}\binom{x}{y}\left(\frac{1}{3}\right)^{x}, y=0,1,2,\ldots,x; x=1,2,\ldots. \\ 0 \qquad \text{अन्यथा}\end{cases}$$

तब E(X) बराबर है -

1. 1
2. 2
3. 3
4. 4

Options :

68634056661. 1
68634056662. 2
68634056663. 3
68634056664. 4

Question Number : 67 Question Id : 68634014349 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The variance of t-distribution with 18 degree of freedom is:

1. 1

2. 1.125

3. 1.5

4. 2

Options :
68634056665. 1
68634056666. 2
68634056667. 3
68634056668. 4

Question Number : 67 Question Id : 68634014349 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

18 स्वतंत्रता की कोटि के t-बंटन का प्रसरण है -

1. 1

2. 1.125

3. 1.5

4. 2

Options :
68634056665. 1
68634056666. 2
68634056667. 3
68634056668. 4

Question Number : 68 Question Id : 68634014350 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If $X_1, X_2, \ldots X_n$ be a random sample from normal population $N\left(0, \sigma^2\right)$ and $W = \dfrac{X_1}{\sqrt{\dfrac{1}{n}\sum_{i=1}^{n} X_i^2}}$ then sampling distribution of $\dfrac{W^2}{n}$ is

1. $B_2\left(\dfrac{1}{2}, \dfrac{n-1}{2}\right)$
2. $B_1\left(\dfrac{1}{2}, \dfrac{n-1}{2}\right)$
3. $t^2_{(n-1)}$
4. $t^2_{(n)}$

Options :

68634056669. 1
68634056670. 2
68634056671. 3
68634056672. 4

Question Number : 68 Question Id : 68634014350 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि $X_1, X_2, \ldots X_n$ प्रसामान्य समष्टि $N\left(0, \sigma^2\right)$ से यादृच्छिक नमूना है तथा $W = \frac{X_1}{\sqrt{\frac{1}{n}\sum_{i=1}^{n} X_i^2}}$, तब $\frac{W^2}{n}$ का प्रतिदर्श (नमूना) बंटन है

1. $B_2\left(\frac{1}{2}, \frac{n-1}{2}\right)$
2. $B_1\left(\frac{1}{2}, \frac{n-1}{2}\right)$
3. $t^2_{(n-1)}$
4. $t^2_{(n)}$

Options :
68634056669. 1
68634056670. 2
68634056671. 3
68634056672. 4

Question Number : 69 Question Id : 68634014351 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If X follows the Binomial distribution with parameters n=100 and p=0.5, then approximate distribution of $\left(\frac{X}{5} - 10\right)^2$ is:

1. $N\left(\mu = 50, \sigma^2 = 25\right)$
2. $N\left(\mu = 50, \sigma^2 = 250\right)$
3. $\chi^2_{(2)}$
4. $\chi^2_{(1)}$

Options :
68634056673. 1
68634056674. 2
68634056675. 3
68634056676. 4

Question Number : 69 Question Id : 68634014351 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि X प्राचलों n=100 तथा p=0.5 के साथ द्विपद बंटन का अनुसरण करता है, तब $\left(\frac{X}{5}-10\right)^2$ का सन्निकट बंटन है -

1. $N\left(\mu=50, \sigma^2=25\right)$
2. $N\left(\mu=50, \sigma^2=250\right)$
3. $\chi^2_{(2)}$
4. $\chi^2_{(1)}$

Options :
68634056673. 1
68634056674. 2
68634056675. 3
68634056676. 4

Question Number : 70 Question Id : 68634014352 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Let $X_1, X_2, \ldots X_m$ be a random sample from the normal population $N\left(\mu_1, \sigma^2\right)$ and let $S_1^2 = \frac{1}{m-1} \sum_{r=1}^{m} \left(X_r - \bar{X}\right)^2$. Let $Y_1, Y_2, \ldots Y_n$ be another independent random sample (independent of X_i's also) from the normal population $N\left(\mu_2, \sigma^2\right)$ and let $S_2^2 = \frac{1}{n_2 - 1} \sum_{r=1}^{n} \left(Y_r - \bar{Y}\right)^2$. Then the distribution of $\frac{(m-1) S_1^2 + (n-1) S_2^2}{\sigma^2}$ is

1. $\chi^2_{(m+n-2)}$
2. $\chi^2_{(m+n-1)}$
3. $t_{(m+n-2)}$
4. $t_{(m+n-1)}$

Options :
68634056677. 1
68634056678. 2
68634056679. 3
68634056680. 4

Question Number : 70 Question Id : 68634014352 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \ldots X_m$ प्रसामान्य समष्टि $N\left(\mu_1, \sigma^2\right)$ से यादृच्छिक नमूना है तथा $S_1^2 = \frac{1}{m-1} \sum_{r=1}^{m} \left(X_r - \bar{X}\right)^2$. माना $Y_1, Y_2, \ldots Y_n$ प्रसामान्य समष्टि $N\left(\mu_2, \sigma^2\right)$ से दूसरा स्वतन्त्र यादृच्छिक नमूना (X_i's से भी स्वतन्त्र) है तथा $S_2^2 = \frac{1}{n_2 - 1} \sum_{r=1}^{n} \left(Y_r - \bar{Y}\right)^2$. तब $\frac{(m-1) S_1^2 + (n-1) S_2^2}{\sigma^2}$ का बंटन है -

1. $\chi^2_{(m+n-2)}$
2. $\chi^2_{(m+n-1)}$
3. $t_{(m+n-2)}$
4. $t_{(m+n-1)}$

Options :
68634056677. 1
68634056678. 2
68634056679. 3
68634056680. 4

Question Number : 71 Question Id : 68634014353 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If X and Y are i.i.d.Uniform(0, 1) variates, then the moment generating function of 2X – Y, is:

1. e^t
2. e^{-t}
3. $\frac{e^{2t} - \left(e^t + e^{-t}\right) - 1}{2t^2}$
4. $\frac{e^{2t} - \left(e^t - e^{-t}\right) - 1}{2t^2}$

Options :
68634056681. 1
68634056682. 2
68634056683. 3
68634056684. 4

Question Number : 71 Question Id : 68634014353 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि X तथा Y i.i.d.एकसमान (0, 1) विचर हैं, तब 2X – Y का आघूर्णजनक फलन है:

1. e^{t}
2. e^{-t}
3. $\frac{e^{2t}-\left(e^{t}+e^{-t}\right)-1}{2t^{2}}$
4. $\frac{e^{2t}-\left(e^{t}-e^{-t}\right)-1}{2t^{2}}$

Options :
68634056681. 1
68634056682. 2
68634056683. 3
68634056684. 4

Question Number : 72 Question Id : 68634014354 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If X and Y are independent standard normal variates, then distribution of $\left(\frac{X+Y}{X-Y}\right)^{2}$,is

1. Beta Type-II with parameters $\left(\frac{1}{2},\frac{1}{2}\right)$
2. Beta Type-II with parameters (2, 1)
3. Beta Type-II with parameters (1, 2)
4. Beta Type-I with parameters $\left(\frac{1}{2},\frac{1}{2}\right)$

Options :
68634056685. 1
68634056686. 2
68634056687. 3
68634056688. 4

Question Number : 72 Question Id : 68634014354 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि X तथा Y स्वतन्त्र मानक प्रसामान्य विचर हैं, तब $\left(\frac{X+Y}{X-Y}\right)^2$ का बंटन है-

1. प्राचल $\left(\frac{1}{2},\frac{1}{2}\right)$ के साथ बीटा प्रकार-II
2. प्राचल $(2, 1)$ के साथ बीटा प्रकार-II
3. प्राचल $(1, 2)$ के साथ बीटा प्रकार-II
4. प्राचल $\left(\frac{1}{2},\frac{1}{2}\right)$ के साथ बीटा प्रकार-I

Options :
68634056685. 1
68634056686. 2
68634056687. 3
68634056688. 4

Question Number : 73 Question Id : 68634014355 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Let $X_1, X_2, \ldots\ldots, X_n$ be a random sample from normal population $N\left(\mu, \sigma^2\right)$. Define $S^2 = \frac{1}{n-1}\sum_{r=1}^{n}\left(X_r - \bar{X}\right)^2$ and $T = \frac{(\bar{X}-\mu)\sqrt{n}}{S}$ then $\left(\operatorname{cov}\left(\bar{X}, T\right)\right)$ is :

1. $\sigma\sqrt{\frac{n-1}{2n}}$
2. $\sigma\sqrt{\frac{n-1}{2n}}\cdot\frac{\left|\left(\frac{n-1}{2}\right)\right|}{\left|\left(\frac{n-2}{2}\right)\right|}$
3. $\sigma\sqrt{\frac{2n}{n-1}}\frac{\left|\left(\frac{n-2}{2}\right)\right|}{\left|\left(\frac{n-1}{2}\right)\right|}$
4. $\sigma\sqrt{\frac{n-1}{2n}}\frac{\left|\left(\frac{n-2}{2}\right)\right|}{\left|\left(\frac{n-1}{2}\right)\right|}$

Options :

68634056689. 1
68634056690. 2
68634056691. 3
68634056692. 4

Question Number : 73 Question Id : 68634014355 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \ldots\ldots, X_n$ प्रसामान्य समष्टि $N(\mu, \sigma^2)$ से एक यादृच्छिक प्रतिदर्श है। परिभाषित है - $S^2 = \frac{1}{n-1}\sum_{r=1}^{n}(X_r - \bar{X})^2$ तथा $T = \frac{(\bar{X} - \mu)\sqrt{n}}{S}$, तब $(\mathrm{cov}(\bar{X}, T))$ है -

1. $\sigma\sqrt{\frac{n-1}{2n}}$
2. $\sigma\sqrt{\frac{n-1}{2n}} \cdot \frac{\sqrt{\left(\frac{n-1}{2}\right)}}{\sqrt{\left(\frac{n-2}{2}\right)}}$
3. $\sigma\sqrt{\frac{2n}{n-1}} \frac{\sqrt{\left(\frac{n-2}{2}\right)}}{\sqrt{\left(\frac{n-1}{2}\right)}}$
4. $\sigma\sqrt{\frac{n-1}{2n}} \frac{\sqrt{\left(\frac{n-2}{2}\right)}}{\sqrt{\left(\frac{n-1}{2}\right)}}$

Options :
68634056689. 1
68634056690. 2
68634056691. 3
68634056692. 4

Question Number : 74 Question Id : 68634014356 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Let $X_1, X_2, \ldots X_m$ be a random sample from normal population $N\left(\mu_1, \sigma^2\right)$ and $Y_1, Y_2, \ldots Y_n$ be a independent random sample (independent of Xi's also) from normal population $N\left(\mu_2, \sigma^2\right)$. If

$S_1^2 = \frac{1}{m-1}\sum_{r=1}^{m}\left(X_r - \bar{X}\right)^2$, $S_2^2 = \frac{1}{n-1}\sum_{r=1}^{n}\left(Y_r - \bar{Y}\right)^2$, $S_p^2 = \frac{(m-1)S_1^2 + (n-1)S_2^2}{m+n-2}$ and σ^2 is unknown, then

the distribution of $T = \frac{\bar{X} - \bar{Y}}{\sqrt{S_p^2\left(\frac{1}{m} + \frac{1}{n}\right)}}$ under $H_0 : \mu_1 = \mu_2$, is

1. $B_2\left(\frac{1}{2}, \frac{n-2}{2}\right)$
2. N(0, 1)
3. $t_{(m+n-2)}$
4. $t_{(m+n-1)}$

Options :

68634056693. 1
68634056694. 2
68634056695. 3
68634056696. 4

Question Number : 74 Question Id : 68634014356 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \ldots X_m$ प्रसामान्य समष्टि $N\left(\mu_1, \sigma^2\right)$ से एक यादृच्छिक प्रतिदर्श है तथा $Y_1, Y_2, \ldots Y_n$ प्रसामान्य समष्टि $N\left(\mu_2, \sigma^2\right)$ से एक स्वतंत्र यादृच्छिक प्रतिदर्श (X_i's से भी स्वतंत्र) है। यदि

$S_1^2 = \frac{1}{m-1}\sum_{r=1}^{m}\left(X_r - \bar{X}\right)^2$, $S_2^2 = \frac{1}{n-1}\sum_{r=1}^{n}\left(Y_r - \bar{Y}\right)^2$, $S_p^2 = \frac{(m-1)S_1^2 + (n-1)S_2^2}{m+n-2}$ तथा σ^2 अज्ञात है, तब

$T = \frac{\bar{X} - \bar{Y}}{\sqrt{S_p^2\left(\frac{1}{m} + \frac{1}{n}\right)}}$, $H_0 : \mu_1 = \mu_2$ का बंटन है

1. $B_2\left(\frac{1}{2}, \frac{n-2}{2}\right)$
2. N(0, 1)
3. $t_{(m+n-2)}$
4. $t_{(m+n-1)}$

Options :

68634056693. 1

68634056694. 2

68634056695. 3

68634056696. 4

Question Number : 75 Question Id : 68634014357 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The joint probability density function of two random variables X and Y is given as:

$$f(x,y)=\begin{cases} e^{-(x+y)} & , x>0 \text{ and } y>0 \\ 0 & , \text{ otherwise} \end{cases}$$

Then value of P(2X > 3Y) is :

1. $\frac{5}{7}$
2. $\frac{1}{7}$
3. $\frac{2}{5}$
4. $\frac{19}{20}$

Options :

68634056697. 1
68634056698. 2
68634056699. 3
68634056700. 4

Question Number : 75 Question Id : 68634014357 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

दो यादृच्छिक चरों X तथा Y का संयुक्त प्रायिकता घनत्व फलन इस प्रकार दिया है -

$$f(x,y)=\begin{cases} e^{-(x+y)} & , x>0 \text{ तथा } y>0 \\ 0 & , \text{ अन्यथा} \end{cases}$$

तब P(2X > 3Y) का मान है -

1. $\frac{5}{7}$
2. $\frac{1}{7}$
3. $\frac{2}{5}$
4. $\frac{19}{20}$

Options :

68634056697. 1

68634056698. 2
68634056699. 3
68634056700. 4

Question Number : 76 Question Id : 68634014358 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The joint probability mass function of two random variables X and Y is given as: $\begin{bmatrix} X \mid Y & 1 & 2 & 3 \\ 0 & p & 2p & 3p \\ 1 & 2p & 4p & 5p \\ 2 & 3p & 5p & 7p \end{bmatrix}$, where

$p = \frac{1}{32}$

Then value of $P(X \leq 1 \mid Y = 2) + P(Y \geq 2 \mid X = 1)$ is:

1. $\frac{15}{11}$
2. $\frac{8}{11}$
3. $\frac{1}{2}$
4. $\frac{19}{22}$

Options :
68634056701. 1
68634056702. 2
68634056703. 3
68634056704. 4

Question Number : 76 Question Id : 68634014358 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

दो यादृच्छिक चरों X तथा Y का संयुक्त प्रायिकता द्रव्यमान फलन इस प्रकार दिया है -

$\begin{bmatrix} X \mid Y & 1 & 2 & 3 \\ 0 & p & 2p & 3p \\ 1 & 2p & 4p & 5p \\ 2 & 3p & 5p & 7p \end{bmatrix}$, जहाँ $p = \frac{1}{32}$

तब $P(X \leq 1 \mid Y = 2) + P(Y \geq 2 \mid X = 1)$ का मान है

1. $\frac{15}{11}$
2. $\frac{8}{11}$
3. $\frac{1}{2}$
4. $\frac{19}{22}$

Options :
68634056701. 1
68634056702. 2
68634056703. 3
68634056704. 4

Question Number : 77 Question Id : 68634014359 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If $f(x,y) = \frac{5}{36}xy^2, 0 < x < 3, \frac{2x}{3} < y < 2$ then value of E(X) is :

1. $\frac{5}{3}$
2. $\frac{5}{9}$
3. $\frac{5}{6}$
4. $\frac{1}{6}$

Options :
68634056705. 1
68634056706. 2
68634056707. 3

68634056708. 4

Question Number : 77 Question Id : 68634014359 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि $f(x,y)=\frac{5}{36}xy^2, 0<x<3, \frac{2x}{3}<y<2$ तब E(X) का मान है

1. $\frac{5}{3}$
2. $\frac{5}{9}$
3. $\frac{5}{6}$
4. $\frac{1}{6}$

Options :
68634056705. 1
68634056706. 2
68634056707. 3
68634056708. 4

Question Number : 78 Question Id : 68634014360 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The joint probability density function of two random variables X and Y is given by

$$f(x,y)=\begin{cases}\dfrac{1}{2x^2y}, 1<x<\infty \text{ and } \dfrac{1}{x}<y<x\\ 0 \quad , \text{ otherwise}\end{cases}$$

Then the value of $E\left[\dfrac{1}{X^2}\right]$ is

1. $\dfrac{5}{7}$
2. $\dfrac{1}{7}$
3. $\dfrac{2}{5}$
4. $\dfrac{1}{9}$

Options :

68634056709. 1
68634056710. 2
68634056711. 3
68634056712. 4

Question Number : 78 Question Id : 68634014360 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दो यादृच्छिक चरों X तथा Y का संयुक्त प्रायिकता घनत्व फलन इस प्रकार दिया है -

$$f(x,y)=\begin{cases}\dfrac{1}{2x^2y}, 1<x<\infty \text{ तथा } \dfrac{1}{x}<y<x\\ 0 \quad , \text{ अन्यथा}\end{cases}$$

तब $E\left[\dfrac{1}{X^2}\right]$ का मान है

1. $\dfrac{5}{7}$
2. $\dfrac{1}{7}$
3. $\dfrac{2}{5}$
4. $\dfrac{1}{9}$

Options :

68634056709. 1
68634056710. 2
68634056711. 3
68634056712. 4

Question Number : 79 Question Id : 68634014361 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

For a sequence of random variables X_1, X_2,.....,let

$Var(X_i) = \sigma^2$ and for $i \neq j$

$$Cov(X_i, X_j) = \begin{cases} \sigma & |i-j| = 1, 2 \\ 0 & \text{otherwise} \end{cases}$$

Then this sequence of random variables shall follow the weak law of large numbers for

1. $\sigma > 1$
2. $\sigma > 2$
3. $\sigma > 3$
4. any finite values of σ

Options :
68634056713. 1
68634056714. 2
68634056715. 3
68634056716. 4

Question Number : 79 Question Id : 68634014361 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यादृच्छिक चरों X_1, X_2,..... के अनुक्रम के लिए,

माना $Var(X_i) = \sigma^2$ and for $i \neq j$ के लिए

तथा $Cov(X_i, X_j) = \begin{cases} \sigma, & |i-j| = 1, 2 \\ 0, & \text{अन्यथा} \end{cases}$

तब यादृच्छिक चरों का यह अनुक्रम बड़ी संख्याओं के कमजोर नियम पर किस मान के लिए लागू होगा -

1. $\sigma > 1$
2. $\sigma > 2$
3. $\sigma > 3$
4. σ के किसी भी सीमित मान पर

Options :
68634056713. 1

68634056714. 2
68634056715. 3
68634056716. 4

Question Number : 80 Question Id : 68634014362 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The joint distribution of two random variables X and Y is

$$f(x, y) = \frac{x}{3} e^{-xy}, 1 < x < 4, \ 0 < y < \infty$$

Then Var (Y) is

1. $\frac{1}{5} - \frac{4(\log_e 2)^2}{9}$
2. $\frac{1}{3} - \frac{4(\log_e 2)^2}{9}$
3. $\frac{1}{2} - \frac{4(\log_e 2)^2}{9}$
4. $1 - \frac{4(\log_e 2)^2}{9}$

Options :
68634056717. 1
68634056718. 2
68634056719. 3
68634056720. 4

Question Number : 80 Question Id : 68634014362 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

दो यादृच्छिक चरों X तथा Y का संयुक्त बंटन $f(x,y)=\frac{x}{3}e^{-xy}, 1<x<4,\ 0<y<\infty$ है, तब Var (Y) है -

1. $\frac{1}{5}-\frac{4(\log_e 2)^2}{9}$
2. $\frac{1}{3}-\frac{4(\log_e 2)^2}{9}$
3. $\frac{1}{2}-\frac{4(\log_e 2)^2}{9}$
4. $1-\frac{4(\log_e 2)^2}{9}$

Options :
68634056717. 1
68634056718. 2
68634056719. 3
68634056720. 4

Question Number : 81 Question Id : 68634014363 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Let WLLN hold good for the uniformly bounded sequence of random variables $X_1, X_2,...$

Then condition $\frac{Var(X_1+X_2+...+X_n)}{n^2}\to\lambda$ is

1. Necessary for $\lambda = 0$
2. Sufficient for $\lambda = 0$
3. Necessary and sufficient for $\lambda = 0$
4. Necessary and sufficient for $\lambda = \infty$

Options :
68634056721. 1
68634056722. 2
68634056723. 3
68634056724. 4

Question Number : 81 Question Id : 68634014363 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

माना यादृच्छिक चरों $X_1, X_2, \ldots$ के एकसमान परिबद्ध अनुक्रम के लिए WLLN मान्य है। तब प्रतिबंध

$\frac{Var(X_1 + X_2 + \ldots + X_n)}{n^2} \to \lambda$ है

1. $\lambda = 0$ के लिए आवश्यक
2. $\lambda = 0$ के लिए पर्याप्त
3. $\lambda = 0$ के लिए आवश्यक तथा पर्याप्त
4. $\lambda = \infty$ के लिए आवश्यक तथा पर्याप्त

Options :
68634056721. 1
68634056722. 2
68634056723. 3
68634056724. 4

Question Number : 82 Question Id : 68634014364 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Suppose two random variables X and Y are such that $X \sim$ Uniform (0, 2) and $Y \mid X = x \sim U\left(0, \frac{x^2}{4}\right)$. Then $E(X^2Y^2)$ is equal to

1. $\left(\frac{4}{7}\right)^3$
2. $\frac{4}{21}$
3. $\frac{3}{11}$
4. $\frac{8}{19}$

Options :
68634056725. 1
68634056726. 2
68634056727. 3
68634056728. 4

Question Number : 82 Question Id : 68634014364 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

मान लो दो यादृच्छिक चरों X तथा Y इस प्रकार है कि X ~ एकसमान (0, 2) तथा $Y \mid X = x \sim U\left(0, \frac{x^2}{4}\right)$ तब $E(X^2Y^2)$ बराबर है

1. $\left(\frac{4}{7}\right)^3$
2. $\frac{4}{21}$
3. $\frac{3}{11}$
4. $\frac{8}{19}$

Options :
68634056725. 1
68634056726. 2
68634056727. 3
68634056728. 4

Question Number : 83 Question Id : 68634014365 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Let $X_1, X_2, \ldots X_n$ be a random sample from population $U\left(\theta - \frac{1}{2}, \theta + \frac{1}{2}\right), \theta > 0$. The maximum likelihood estimate of θ, is:

1. $\frac{X_{(1)} + X_{(n)}}{2}$
2. $\frac{X_{(1)} + X_{(n)}}{2} - 1$
3. $\frac{X_{(n)} - X_{(1)}}{2}$
4. $\frac{X_{(n)} - X_{(1)}}{2} + 1$

Options :
68634056729. 1
68634056730. 2
68634056731. 3

68634056732. 4

Question Number : 83 Question Id : 68634014365 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

माना $X_1,X_2,.....X_n$ समष्टि $U\left(\theta-\frac{1}{2},\theta+\frac{1}{2}\right),\theta>0$ से एक यादृच्छिक प्रतिदर्श है। θ का अधिकतम संभावित आकलन है:

1. $\frac{X_{(1)}+X_{(n)}}{2}$
2. $\frac{X_{(1)}+X_{(n)}}{2}-1$
3. $\frac{X_{(n)}-X_{(1)}}{2}$
4. $\frac{X_{(n)}-X_{(1)}}{2}+1$

Options :
68634056729. 1
68634056730. 2
68634056731. 3
68634056732. 4

Question Number : 84 Question Id : 68634014366 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Let $X_1,X_2,.....X_n$ be a random sample from population with probability density function $f(x)=2e^{-2(x-\theta)}$, $x>\theta$ *and* $\theta>0$. Then estimate of θ by method of moments is:

1. $\bar{X}-\frac{1}{2}$
2. $\bar{X}-1$
3. $2\bar{X}$
4. $3\bar{X}$

Options :
68634056733. 1
68634056734. 2

68634056735. 3
68634056736. 4

Question Number : 84 Question Id : 68634014366 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \ldots\ldots X_n$ समष्टि से एक यादृच्छिक प्रतिदर्श है तथा प्रायिकता घनत्व फलन $f(x)=2e^{-2(x-\theta)}$, $x > \theta$ तथा $\theta > 0$ है। तब आघूर्ण विधि द्वारा θ का आकलन है:

1. $\bar{X}-\frac{1}{2}$
2. $\bar{X}-1$
3. $2\bar{X}$
4. $3\bar{X}$

Options :
68634056733. 1
68634056734. 2
68634056735. 3
68634056736. 4

Question Number : 85 Question Id : 68634014367 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Let $X_1, X_2, \ldots\ldots X_n$ be a random sample from the exponential distribution with mean 2θ. Then $I(\theta)$, the Fisher's maximum information about the unknown parameter θ contained in its unbiased estimator is

1. $\frac{\theta^2}{\sqrt{n}}$
2. $\frac{2}{\sqrt{\theta}}$
3. $\frac{2\theta^2}{n}$
4. $\frac{n}{\theta^2}$

Options :
68634056737. 1
68634056738. 2
68634056739. 3

68634056740. 4

Question Number : 85 Question Id : 68634014367 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \ldots\ldots X_n$ चरघांताकी बंटन से एक यादृच्छिक चर है जिसका माध्य 2θ है। तब अज्ञात प्राचल θ के चारों ओर, जो उसके अनभिनंत आकलक में अंतर्विष्ट है, फिशर की अधिकतम सूचनाएं $I(\theta)$ है

1. $\frac{\theta^2}{\sqrt{n}}$
2. $\frac{2}{\sqrt{\theta}}$
3. $\frac{2\theta^2}{n}$
4. $\frac{n}{\theta^2}$

Options :
68634056737. 1
68634056738. 2
68634056739. 3
68634056740. 4

Question Number : 86 Question Id : 68634014368 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If $X_1, X_2, \ldots X_n$ be a random sample from $N\left(\mu = \theta, \sigma^2\right)$, σ^2 is unknown and $T = \frac{\left(\bar{X} - \theta\right)\sqrt{n}}{S} \sim t_{(n-1)}$ where $S^2 = \frac{1}{n-1}\sum_{i=1}^{n}\left(X_i - \bar{X}\right)^2$ and $P(T > t_{\alpha/2}) = \frac{\alpha}{2}$. Then $100(1-\alpha)\%$ confidence interval for θ, is:

1. $\left(\bar{X} - \frac{S}{\sqrt{n-1}} t_{\alpha/2}, \bar{X} + \frac{S}{\sqrt{n-1}} t_{\alpha/2}\right)$
2. $\left(\bar{X} - \frac{S^2}{\sqrt{n}} t_{\alpha/2}, \bar{X} + \frac{S^2}{\sqrt{n}} t_{\alpha/2}\right)$
3. $\left(\bar{X} - \frac{S}{\sqrt{n}} t_{\alpha}, \bar{X} + \frac{S}{\sqrt{n}} t_{\alpha}\right)$
4. $\left(\bar{X} - \frac{S}{\sqrt{n}} t_{\alpha/2}, \bar{X} + \frac{S}{\sqrt{n}} t_{\alpha/2}\right)$

Options :

68634056741. 1

68634056742. 2

68634056743. 3

68634056744. 4

Question Number : 86 Question Id : 68634014368 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $X_1,X_2,.....X_n$, $N\left(\mu=\theta,\sigma^2\right)$ से यादृच्छिक प्रतिदर्श है, σ^2 अज्ञात है तथा $T=\frac{\left(\bar{X}-\theta\right)\sqrt{n}}{S}\sim t_{(n-1)}$ जहाँ तथा $P(T>t_{\alpha/2})=\frac{\alpha}{2}$. तब θ के लिए $100(1-\alpha)\%$ विश्वास्यता अंतराल है -

1. $\left(\bar{X}-\frac{S}{\sqrt{n-1}}t_{\alpha/2},\bar{X}+\frac{S}{\sqrt{n-1}}t_{\alpha/2}\right)$

2. $\left(\bar{X}-\frac{S^2}{\sqrt{n}}t_{\alpha/2,}\bar{X}+\frac{S^2}{\sqrt{n}}t_{\alpha/2}\right)$

3. $\left(\bar{X}-\frac{S}{\sqrt{n}}t_{\alpha},\bar{X}+\frac{S}{\sqrt{n}}t_{\alpha}\right)$

4. $\left(\bar{X}-\frac{S}{\sqrt{n}}t_{\alpha/2},\bar{X}+\frac{S}{\sqrt{n}}t_{\alpha/2}\right)$

Options :
68634056741. 1
68634056742. 2
68634056743. 3
68634056744. 4

Question Number : 87 Question Id : 68634014369 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Let $X_1,X_2,.....X_n$ be a random sample from the uniform (θ – Ø, θ + Ø)population. If the maximum sample observation is $X_{(n)}$ and the minimum sample observation is $X_{(1)}$, then maximum likelihood estimator of θ,is:

1. $X_{(1)}$

2. $\frac{X_{(1)}+X_{(n)}}{2}$

3. $X_{(n)}$

4. $\frac{X_{(n)}-X_{(1)}}{2}$

Options :
68634056745. 1
68634056746. 2
68634056747. 3
68634056748. 4

Question Number : 87 Question Id : 68634014369 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \ldots X_n$ एकसमान समष्टि $(\theta - \emptyset, \theta + \emptyset)$ से यादृच्छिक प्रतिदर्श है। यदि अधिकतम प्रतिदर्श प्रेक्षण $X_{(n)}$ है तथा न्यूनतम प्रतिदर्श प्रेक्षण $X_{(1)}$ है, तब θ का अधिकतम संभावित आकलन है

1. $X_{(1)}$
2. $\frac{X_{(1)} + X_{(n)}}{2}$
3. $X_{(n)}$
4. $\frac{X_{(n)} - X_{(1)}}{2}$

Options :
68634056745. 1
68634056746. 2
68634056747. 3
68634056748. 4

Question Number : 88 Question Id : 68634014370 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The Cramer Rao lower bound of an unbiased estimator, in case sample of size n is drawn from *Cauchy* $(2\theta, 1)$ *population, is*

1. $\frac{1}{n}$
2. $\frac{1}{\sqrt{n}}$
3. $\frac{1}{2n}$
4. $\frac{2}{\sqrt{n}}$

Options :
68634056749. 1
68634056750. 2
68634056751. 3
68634056752. 4

Question Number : 88 Question Id : 68634014370 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

n आकार का प्रतिदर्श कौशी $(2\theta, 1)$ समष्टि से निकालने की दशा में एक अनभिनत आकलक का क्रामर राव निम्न परिबन्ध है -

1. $\frac{1}{n}$
2. $\frac{1}{\sqrt{n}}$
3. $\frac{1}{2n}$
4. $\frac{2}{\sqrt{n}}$

Options :
68634056749. 1
68634056750. 2
68634056751. 3
68634056752. 4

Question Number : 89 Question Id : 68634014371 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

For a normal distribution, quartile deviation, mean deviation and standard deviation are in the ratio:

1. $\frac{4}{5}:\frac{2}{3}:1$
2. $\frac{2}{3}:\frac{4}{5}:1$
3. $1:\frac{4}{5}:\frac{2}{3}$
4. $\frac{1}{2}:1:\frac{4}{5}$

Options :
68634056753. 1
68634056754. 2
68634056755. 3
68634056756. 4

Question Number : 89 Question Id : 68634014371 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

प्रसामान्य बंटन के लिए चतुर्थांक विचलन, माध्य विचलन और मानक विचलन का अनुपात _____ है

1. $\frac{4}{5}:\frac{2}{3}:1$

2. $\frac{2}{3}:\frac{4}{5}:1$

3. $1:\frac{4}{5}:\frac{2}{3}$

4. $\frac{1}{2}:1:\frac{4}{5}$

Options :
68634056753. 1
68634056754. 2
68634056755. 3
68634056756. 4

Question Number : 90 Question Id : 68634014372 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If T_1 and T_2 are two distinct unbiased estimators of $\gamma(\theta)$ and $T = E\left[T_1^2 \mid T_2\right]$, then:

1. $Var(T) = Var(T_1)$

2. $E(T) \geq \gamma^2(\theta)$

3. $E(T) \geq 2\gamma^2(\theta)$

4. $E(T) \leq \gamma^2(\theta)$

Options :
68634056757. 1
68634056758. 2
68634056759. 3
68634056760. 4

Question Number : 90 Question Id : 68634014372 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि T_1 तथा T_2 , $\gamma(\theta)$ के दो पृथक अनभिनंत आकलक है तथा $T = E\left[T_1^2 \mid T_2\right]$, तब

1. $Var(T) = Var(T_1)$

2. $E(T) \geq \gamma^2(\theta)$

3. $E(T) \geq 2\gamma^2(\theta)$

4. $E(T) \leq \gamma^2(\theta)$

Options :
68634056757. 1
68634056758. 2
68634056759. 3
68634056760. 4

Question Number : 91 Question Id : 68634014373 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

From a normal population with standard deviation = 4, a random sample of size 16 with mean = 27 is selected. For testing $H_0 : \mu = 30$ against $H_1 : \mu \neq 30$, the p-value of the test is

[If X~N (0, 1), then $P[|X| \leq 1]$=0.6826, $P[|X| \leq 2]$ = 0.9544, $P[|X| \leq 3]$ = 0.9973

1. 0.0027

2. 0.0456

3. 0.3174

4. 0.1960

Options :
68634056761. 1
68634056762. 2
68634056763. 3
68634056764. 4

Question Number : 91 Question Id : 68634014373 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

मानक विचलन 4 वाले प्रसामान्य समष्टि से 16 आकार का एक यादृच्छिक प्रतिदर्श जिसका माध्य 27 है, चुना जाता है। $H_0 : \mu = 30$ के विपरीत $H_1 : \mu \neq 30$ के परीक्षण के लिए, परीक्षण का p-मान है -

[यदि $X \sim N(0, 1)$, तब $P[|X| \leq 1] = 0.6826$, $P[|X| \leq 2] = 0.9544$, $P[|X| \leq 3] = 0.9973$

1. 0.0027
2. 0.0456
3. 0.3174
4. 0.1960

Options :
68634056761. 1
68634056762. 2
68634056763. 3
68634056764. 4

Question Number : 92 Question Id : 68634014374 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

A random sample is drawn from the normal population with parameter $(\mu, 100)$. In a test of $H_0 : \mu = \mu_0$ against $H_1 : \mu \neq \mu_0$, a is the value of the test statistic computed from the sample.
If P[Test statistic < a] = δ, then the p-value of the test is

1. $\frac{\delta}{2}$
2. $1 - \delta$
3. $1 - \frac{\delta}{2}$
4. $2(1 - \delta)$

Options :
68634056765. 1
68634056766. 2
68634056767. 3
68634056768. 4

Question Number : 92 Question Id : 68634014374 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

कोई यादृच्छिक प्रतिदर्श प्रसामान्य समष्टि से निकाला जाता है जिसके प्राचल $(\mu, 100)$ हैं। $H_1 : \mu \neq \mu_0$ के विपरीत $H_0 : \mu = \mu_0$ के परीक्षण में, प्रतिदर्श से परीक्षण प्रतिदर्शज अभिकालीत का मान a है। यदि P[प्रतिदर्शज परीक्षण < a] = δ, तब परीक्षण का p-मान है -

1. $\frac{\delta}{2}$
2. $1 - \delta$
3. $1 - \frac{\delta}{2}$
4. $2(1 - \delta)$

Options :
68634056765. 1
68634056766. 2
68634056767. 3
68634056768. 4

Question Number : 93 Question Id : 68634014375 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

A random sample of size 100 is drawn from the normal population with parameter $\left(10, \sigma^2\right)$ for testing $H_0 : \sigma^2 = \sigma_0^2$ against $H_1 : \sigma^2 > \sigma_0^2$. If a is the value of the test statistic computed from the sample and P[Test statistic < a]=1-δ, then the p-value of the test is

1. δ
2. $1 - \delta$
3. $1 - \frac{\delta}{2}$
4. $2(1 - \delta)$

Options :
68634056769. 1
68634056770. 2
68634056771. 3
68634056772. 4

Question Number : 93 Question Id : 68634014375 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

100 आकार का कोई यादच्छिक प्रतिदर्श प्रसामान्य समष्टि के निकाला जाता है। जिसका प्राचल $(10, \sigma^2)$ है। $H_1 : \sigma^2 > \sigma_0^2$ के विपरीत $H_0 : \sigma^2 = \sigma_0^2$ के परीक्षण के लिए। प्रतिदर्श से परीक्षण प्रतिदर्शज अभिकलित का मान a है तथा P[प्रतिदर्शज परीक्षण < a]=1-δ, तब परीक्षण का p-मान है -

1. δ
2. $1 - \delta$
3. $1 - \frac{\delta}{2}$
4. $2(1 - \delta)$

Options :
68634056769. 1
68634056770. 2
68634056771. 3
68634056772. 4

Question Number : 94 Question Id : 68634014376 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

From normal population with standard deviation = 4, a sample of size 16 units has mean = 32 is selected. For testing $H_0 : \mu = 30$ against $H_1 : \mu \neq 30$ the p-value of test is:

[If $X \sim N(0,1)$, then $P(|X| \leq 1) = 0.6826$, $P(|X| \leq 2) = 0.9544$, $P(|X| \leq 3) = 0.9973$]

1. 0.0013
2. 0.0356
3. 0.0456
4. 0.2060

Options :
68634056773. 1
68634056774. 2
68634056775. 3
68634056776. 4

Question Number : 94 Question Id : 68634014376 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

मानक विचलन 4 वाले प्रसामान्य समष्टि से 16 इकाई आकार का एक प्रतिदर्श जिसका माध्य 32 है, चुना जाता है। $H_1 : \mu \neq 30$ के विपरीत $H_0 : \mu = 30$ के परीक्षण के लिए, परीक्षण का p-मान है -

[यदि $X \sim N(0,1)$, तब $P(|X| \leq 1) = 0.6826,\ P(|X| \leq 2) = 0.9544,\ P(|X| \leq 3) = 0.9973$]

1. 0.0013

2. 0.0356

3. 0.0456

4. 0.2060

Options :
68634056773. 1
68634056774. 2
68634056775. 3
68634056776. 4

Question Number : 95 Question Id : 68634014377 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Let $X_i, i = 1, 2, 3, 4$ be a random sample of size 4 from Bernouli distribution with the parameter $\theta (0 < \theta < 1)$. For testing the null hypothesis $H_0 : \theta = \frac{1}{3}$ against the alternative hypothesis $H_1 : \theta > \frac{1}{3}$, the rejection region is $X_1 + X_2 + X_3 + X_4 > 2$. If $\gamma(0)$ is the power of the test, then the value of $2^8 \gamma\left(\frac{1}{4}\right)$, is

1. 1

2. 5

3. 6

4. 13

Options :
68634056777. 1
68634056778. 2
68634056779. 3
68634056780. 4

Question Number : 95 Question Id : 68634014377 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

माना $X_i, i = 1, 2, 3, 4$ बर्नूली बंटन से आकार 4 का एक यादृच्छिक प्रतिदर्श है जिसका प्राचल $\theta(0 < \theta < 1)$ है। वैकल्पिक परिकल्पना $H_1 : \theta > \frac{1}{3}$ के विपरीत निराकरणीय परिकल्पना $H_0 : \theta = \frac{1}{3}$ के परीक्षण के लिए बहिष्कृत क्षेत्र $X_1 + X_2 + X_3 + X_4 > 2$ है। यदि $\gamma(0)$ परीक्षण की शक्ति (पावर) है, तब $2^8\gamma\left(\frac{1}{4}\right)$ का मान है -

1. 1

2. 5

3. 6

4. 13

Options :
68634056777. 1
68634056778. 2
68634056779. 3
68634056780. 4

Question Number : 96 Question Id : 68634014378 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The parameters of a BIBD are (11, 11, 5, 5, 2). The parameter of its compliment design will be:

1. (11, 11, 6, 6, 2)

2. (11, 11, 6, 6, 3)

3. (11,11, 6, 5, 2)

4. (11, 11, 6, 5, 3)

Options :
68634056781. 1
68634056782. 2
68634056783. 3
68634056784. 4

Question Number : 96 Question Id : 68634014378 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

BIBD के प्राचल (11, 11, 5, 5, 2) है। उसके पूरक अभिकल्प के प्राचल होंगे :-

1. (11, 11, 6, 6, 2)

2. (11, 11, 6, 6, 3)

3. (11,11, 6, 5, 2)

4. (11, 11, 6, 5, 3)

Options :
68634056781. 1
68634056782. 2
68634056783. 3
68634056784. 4

Question Number : 97 Question Id : 68634014379 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The error degree of freedom for Randomize Block design with t treatments each replicated r times and having one missing observation is:

1. $(r-1)(t-1)-2$

2. $(r-1)(t-1)-1$

3. $(r-1)(t-1)$

4. $(r-1)(t-1)+1$

Options :
68634056785. 1
68634056786. 2
68634056787. 3
68634056788. 4

Question Number : 97 Question Id : 68634014379 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

रेंडोमाइज ब्लॉक डिजाइन के लिए स्वतंत्रता की कोटि त्रुटि t विवेचनों जिसमें प्रत्येक r बार दोहराया जाता है तथा एक प्रेक्षण लुप्त है, हैं -

1. $(r-1)(t-1)-2$

2. $(r-1)(t-1)-1$

3. $(r-1)(t-1)$

4. $(r-1)(t-1)+1$

Options :
68634056785. 1
68634056786. 2
68634056787. 3
68634056788. 4

Question Number : 98 Question Id : 68634014380 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

To test the significance of variation between the doctors treatment at 5% level of significance, five doctors, Each doctor test five treatments for a certain disease and observe number of days each patient takes to recover. In ANOVA table if sum of squares between doctors is 24 units and Error sum of squares is 32 units then the value of F-Statistic for testing that there is no significant difference between doctors is;

1. 3

2. 3.2

3. 3.6

4. 4.8

Options :
68634056789. 1
68634056790. 2
68634056791. 3
68634056792. 4

Question Number : 98 Question Id : 68634014380 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सार्थकता के 5% स्तर पर डॉक्टरों के इलाज के बीच विचरण की सार्थकता के परीक्षण के लिए, 5 डॉक्टर किसी निश्चित रोग के लिए परीक्षण के 5 इलाज बताते हैं तथा प्रत्येक रोगी के ठीक होने के दिनों की संख्या का अवलोकन करते हैं। ANOVA सारणी में यदि डॉक्टरों के बीच वर्गों का योग 24 इकाई है तथा वर्गों का त्रुटि योग 32 इकाई है तब परीक्षण के लिए F-सांख्यिकी का मान क्या होगा यदि डॉक्टरों के बीच सार्थक अन्तर नहीं हो -

1. 3

2. 3.2

3. 3.6

4. 4.8

Options :
68634056789. 1
68634056790. 2
68634056791. 3
68634056792. 4

Question Number : 99 Question Id : 68634014381 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

To test the significance of variation between the doctors treatment at 1% level of significance, six doctors, Each doctor test five treatments for a certain disease and observe number of days each patient takes to recover. In ANOVA table degree of freedom of variation in error is:

1. 5

2. 8

3. 20

4. 16

Options :
68634056793. 1
68634056794. 2
68634056795. 3
68634056796. 4

Question Number : 99 Question Id : 68634014381 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

सार्थकता के 1% स्तर पर डॉक्टरों के इलाज के बीच विचरण की सार्थकता के परीक्षण के लिए, 6 डॉक्टर किसी निश्चित रोग के लिए परीक्षण के 5 इलाज बताते हैं तथा प्रत्येक रोगी के ठीक होने के दिनों की संख्या का अवलोकन करते हैं। ANOVA सारणी में विचरण में त्रुटि की स्वतंत्रता की कोटि है -

1. 5

2. 8

3. 20

4. 16

Options :
68634056793. 1
68634056794. 2
68634056795. 3
68634056796. 4

Question Number : 100 Question Id : 68634014382 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

If we delete one block from symmetric BIBD and from the remaining blocks delete all those treatments which belong to the deleted block, then the resultant BIBD is:

1. Resolvable BIBD

2. Derived BIBD

3. Residual BIBD

4. Natural BIBD

Options :
68634056797. 1
68634056798. 2
68634056799. 3
68634056800. 4

Question Number : 100 Question Id : 68634014382 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

यदि हम सममित BIBD से एक ब्लॉक को हटाते हैं तथा बचे हुए ब्लॉक से उन ब्लॉक को हटाते हैं जो हटाए गए ब्लॉक से सम्बद्ध हैं, तब परिणामी BIBD है -

1. समाधानकृत BIBD

2. व्युत्पन्न BIBD

3. अवशिष्ट BIBD

4. प्राकृतिक BIBD

Options :
68634056797. 1
68634056798. 2
68634056799. 3
68634056800. 4