निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्न का उत्तर दीजिए :

आज के युग को ICE युग के रूप भी पुन: परिभाषित किया जा सकता है। ICE का विस्तृत रूप है सूचना, संप्रेषण तथा मनोरंजन। उस काल के लोग आपस में मिलकर ही एक-दूसरे से बात कर सकते थे, वर्तमान समय में कोई भी किसी दूसरे व्यक्ति से विश्व के किसी भी कोने से बात कर सकता है तथा उसे देख भी सकता है। पूर्वकाल में सूचना एक सुविधा की तरह थी जो जनसमूह को बीसवीं शताब्दी के पूर्वार्द्ध तक प्राप्त नहीं होती थी। सम्पूर्ण विश्व एक वैश्विक ग्राम के रूप में संकुचित हो चुका है। वर्तमान में, जहाँ तक सूचान प्रसार के लिए चैनलों की उपलब्धि का संबंध है, जन संचार के माध्यमों के प्रसार ने एक बड़ी सीमा तक उनके विषय में शिकायतों के कारण को दूर किया है। किंतु सूचनाओं की गुणवत्ता तथा क्षमता के लिए प्रश्न शेष रह जाता है। इसमें कोई शंका नहीं कि संचार के माध्यमों तथा उनकी सूचनाओं के सर्जन बहुत सी विधियों द्वारा साझा करने के महत्वपूर्ण राजनैतिक व मानवीय आयाम हैं।

सूचना प्रौद्योगिकी ने आमूल परिवर्तन किए हैं। इंटरनेट ने व्यक्ति को डाटा पोस्ट करने तथा सूचना ग्रहण करने के लिए सशक्त बनाया है। एक ही सूचना प्राप्त करने के लिए यह विभिन्न स्रोत प्रदान करती है। केवल सूचना के क्षेत्र में ही नहीं, आमूल परिवर्तनों को सूचना के प्रचार-प्रसार में भी देखा जा सकता है। अभूतपूर्व रूप से वैश्विक लोगों के बीच सूचना को जारी करना, स्थानीय, राष्ट्रीय तथा वैश्विक स्तर पर विचारों को उत्पन्न करने की तीव्रता का प्रत्यक्षीकरण किया जा सकता है। नये सूचना क्रम के सामाजिक-राजनैतिक तात्पर्य ने व्यापक वाद-विवाद के लिए सार्वजनिक रूप से स्थान प्रदान करके प्रजातंत्र को सशक्त बनाया है।

सूचना क्रांति के संदर्भ में क्या सही **नहीं** है ?

(1) चैनलों की सुलभता

(2) सूचना की सुगम्यता

(3) सूचना को साझा करने की क्षमता

(4) विशेष सुविधा प्राप्त लोगों तक सुलभ न होना

Options :

485584158657. 1
485584158658. 2
485584158659. 3
485584158660. 4

Mathematics

Group Number :	18
Group Id :	485584899
Group Maximum Duration :	60
Group Minimum Duration :	60
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	200
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Common

Section Id :	4855841041
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	15

Number of Questions to be attempted :	15
Section Marks :	75
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	4855842949
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 836 Question Id : 48558439281 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

If $A=\begin{bmatrix}1 & 2 & x\\ 0 & 1 & 0\\ 0 & 0 & 1\end{bmatrix}$, $B=\begin{bmatrix}1 & -2 & y\\ 0 & 1 & 0\\ 0 & 0 & 1\end{bmatrix}$ and $AB = I_3$, where I_3 is the unit matrix of order 3×3, then $x + y$ is equal to:

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

Options :
485584157121. 1

485584157122. 2
485584157123. 3
485584157124. 4

Question Number : 836 Question Id : 48558439281 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

यदि $A=\begin{bmatrix}1 & 2 & x\\ 0 & 1 & 0\\ 0 & 0 & 1\end{bmatrix}$, $B=\begin{bmatrix}1 & -2 & y\\ 0 & 1 & 0\\ 0 & 0 & 1\end{bmatrix}$ तथा $AB = I_3$, जहाँ I_3, 3×3 कोटि का इकाई आव्यूह है तो $x + y$ बराबर है:

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

Options :
485584157121. 1

485584157122. 2
485584157123. 3
485584157124. 4

Question Number : 837 Question Id : 48558439282 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value

Comprehension	MCQ1

If $A=\begin{bmatrix} x & 1 \\ 1 & 0 \end{bmatrix}$ and $A=A^{-1}$, then the value of x is :

1. 0

2. 1

3. 2

4. 3

Options :

485584157125. 1
485584157126. 2
485584157127. 3
485584157128. 4

Question Number : 837 Question Id : 48558439282 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

यदि $A=\begin{bmatrix} x & 1 \\ 1 & 0 \end{bmatrix}$ तथा $A=A^{-1}$, तो x का मान होगा:

1. 0

2. 1

3. 2

4. 3

Options :
485584157125. 1

485584157126. 2
485584157127. 3
485584157128. 4

Question Number : 838 Question Id : 48558439283 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

If x, y, z are different and $A=\begin{vmatrix} x & x^2 & 1+x^3 \\ y & y^2 & 1+y^3 \\ z & z^2 & 1+z^3 \end{vmatrix}=0$, then the value of xyz is:

1. 1

2. 0

3. -1

4. 2

Options :

485584157129. 1
485584157130. 2
485584157131. 3
485584157132. 4

Question Number : 838 Question Id : 48558439283 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

यदि x, y, z अलग-अलग हो तथा $\Delta = \begin{vmatrix} x & x^2 & 1+x^3 \\ y & y^2 & 1+y^3 \\ z & z^2 & 1+z^3 \end{vmatrix} = 0$, तो xyz का मान है:

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

Options :
485584157129. 1
485584157130. 2
485584157131. 3
485584157132. 4

Question Number : 839 Question Id : 48558439284 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

If the points, $(2, -3)$, $(\lambda, -1)$ and $(0, 4)$ are collinear, then the value of λ is:

1. $\frac{1}{3}$
2. 3
3. $\frac{7}{10}$
4. $\frac{10}{7}$

Options :
485584157133. 1

485584157134. 2
485584157135. 3
485584157136. 4

Question Number : 839 Question Id : 48558439284 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

यदि बिन्दु $(2, -3)$, $(\lambda, -1)$ तथा $(0, 4)$ संरेख हों तो λ का मान है:

1. $\frac{1}{3}$
2. 3
3. $\frac{7}{10}$
4. $\frac{10}{7}$

Options :
485584157133. 1
485584157134. 2
485584157135. 3
485584157136. 4

Question Number : 840 Question Id : 48558439285 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

If $y = 10^{10^{10^x}}$, then $\frac{dy}{dx}$ is :

1. $10^{10^{10^x}}(\log 10)$
2. $10^{10^{10^x}}(\log 10)^2$
3. $10^{10^{10^x}}10^x(\log 10)^2$
4. $10^{10^{10^x}}10^x(\log 10)$

Options :

485584157137. 1
485584157138. 2
485584157139. 3
485584157140. 4

Question Number : 840 Question Id : 48558439285 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

यदि $y = 10^{10^{10^x}}$, तो $\frac{dy}{dx}$ है :

1. $10^{10^{10^x}}(\log 10)$

2. $10^{10^{10^x}}(\log 10)^2$

3. $10^{10^{10^x}} 10^x (\log 10)^2$

4. $10^{10^{10^x}} 10^x (\log 10)$

Options :

485584157137. 1
485584157138. 2
485584157139. 3
485584157140. 4

Question Number : 841 Question Id : 48558439286 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

The tangent to the parabola, $x^2 = 2y$ at the point $\left(1, \frac{1}{2}\right)$ makes with the x-axis an angle of :

1. $0°$

2. $45°$

3. $30°$

4. $60°$

Options :

485584157141. 1
485584157142. 2
485584157143. 3
485584157144. 4

Question Number : 841 Question Id : 48558439286 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

परवलय $x^2 = 2y$ के बिंदु $\left(1, \frac{1}{2}\right)$ पर खींची गयी स्पर्श रेखा x-अक्ष के साथ कितने अंश का कोण बनाती है :

1. $0°$

2. $45°$

3. $30°$

4. $60°$

Options :

485584157141. 1

485584157142. 2
485584157143. 3
485584157144. 4

Question Number : 842 Question Id : 48558439287 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

The function $f(x) = x^3, x \in R$ has :

1. Maximum value at $x = 0$
2. Minimum value at $x = 0$
3. Neither maximum nor minimum value at $x = 0$
4. Maximum value and minimum value at $x = 0$

Options :
485584157145. 1
485584157146. 2
485584157147. 3

485584157148. 4

Question Number : 842 Question Id : 48558439287 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

फलन $f(x) = x^3, x \in R$ का

1. $x = 0$ पर अधिकतम मान है
2. $x = 0$ पर निम्नतम मान है
3. $x = 0$ पर ना तो महत्तम ना ही न्यूनतम है
4. $x = 0$ पर महत्तम व न्यूनतम मान है

Options :
485584157145. 1
485584157146. 2

485584157147. 3
485584157148. 4

Question Number : 843 Question Id : 48558439288 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

If $f(x)=\begin{cases}2x+8, & 1\le x\le 2\\ 6x, & 2<x<4\end{cases}$, then $\int_1^4 f(x)$ is:

1. 43

2. 45

3. 47

4. 46

Options :
485584157149. 1
485584157150. 2
485584157151. 3
485584157152. 4

Question Number : 843 Question Id : 48558439288 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ1

यदि $f(x)=\begin{cases}2x+8, & 1\le x\le 2\\ 6x, & 2<x<4\end{cases}$, तो $\int_1^4 f(x)=$

1. 43

2. 45

3. 47

4. 46

Options :
485584157149. 1
485584157150. 2
485584157151. 3
485584157152. 4

Question Number : 844 Question Id : 48558439289 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

The area of the region bounded by the line $2y = 5x + 7$, x-axis and the lines $x = 1$ and $x = 3$ is :

1. 15

2. 17

3. 16

4. 19

Options :

485584157153. 1
485584157154. 2
485584157155. 3
485584157156. 4

Question Number : 844 Question Id : 48558439289 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

रेखा $2y = 5x + 7$, x-अक्ष एवं रेखाओं $x = 1$ एवं $x = 3$ से घिरे क्षेत्र का क्षेत्रफल है :

1. 15
2. 17
3. 16
4. 19

Options :
485584157153. 1
485584157154. 2
485584157155. 3
485584157156. 4

Question Number : 845 Question Id : 48558439290 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

The integrating factor of the differential equation $(1 + y^2)dx - (\tan^{-1}y - x)dy = 0$, is :

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

Options :
485584157157. 1
485584157158. 2
485584157159. 3
485584157160. 4

Question Number : 845 Question Id : 48558439290 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

अवकल समीकरण $(1+y^2)dx-(\tan^{-1}y-x)dy=0$ का समाकलन गुणक है -

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

Options :
485584157157. 1
485584157158. 2
485584157159. 3
485584157160. 4

Question Number : 846 Question Id : 48558439291 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

The order and the degree of the differential equation

$$\frac{d^2y}{dx^2}=\left(1+\frac{dy}{dx}\right)^{\frac{1}{2}}$$

respectively are:

1. order = 2, degree = 1
2. order = 2, degree = 2
3. order = 1, degree = 2
4. order = 1, degree = 1

Options :
485584157161. 1
485584157162. 2
485584157163. 3
485584157164. 4

Question Number : 846 Question Id : 48558439291 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

अवकल समीकरण

$$\frac{d^2y}{dx^2}=\left(1+\frac{dy}{dx}\right)^{\frac{1}{2}}$$

की कोटि व घात क्रमशः हैं :

1. कोटि = 2, घात = 1
2. कोटि = 2, घात = 2
3. कोटि = 1, घात = 2
4. कोटि = 1, घात = 1

Options :

485584157161. 1
485584157162. 2
485584157163. 3
485584157164. 4

Question Number : 847 Question Id : 48558439292 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

Which of the following is correct?

1. Every LPP admits an optimal solution.
2. Every LPP admits a unique solution.
3. The optimal value does not occur at a corner print of the feasible region only.
4. If a LPP admits optimal solution at two points, then it has optimal solution at infinite number of points.

Options :
485584157165. 1
485584157166. 2
485584157167. 3
485584157168. 4

Question Number : 847 Question Id : 48558439292 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

निम्न में से कौन सा सही है?

1. प्रत्येक LPP एक इष्टतम हल प्राप्त करता है।
2. प्रत्येक LPP का एक अद्वितीय हल होता है।
3. इष्टतम मान सुसंगत क्षेत्र के कोनीय बिंदु पर नहीं होता है।
4. यदि किसी LPP का इष्टतम हल दो बिन्दुओं पर हो, तो इसका अनगिनत बिंदुओं पर इष्टतम हल होगा।

Options :
485584157165. 1
485584157166. 2

485584157167. 3
485584157168. 4

Question Number : 848 Question Id : 48558439293 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

The corner points of feasible region determined by the system of linear constraints are (0, 3), (1, 1) and (3, 0). Let $Z = px + qy$ where $p, q > 0$. The conditions on p and q so that, minimum of Z occurs at (3, 0) and (1, 1) is :

1. $p = 2q$
2. $p = \frac{q}{2}$
3. $p = 3q$
4. $p = q$

Options :
485584157169. 1

485584157170. 2
485584157171. 3
485584157172. 4

Question Number : 848 Question Id : 48558439293 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

किसी सुसंगत क्षेत्र के कोनीय बिंदुओं (0, 3), (1, 1) तथा (3, 0) का निर्धारण व्यवरोधों के निकाय द्वारा होता है। माना $Z = px + qy$ जहाँ $p, q > 0$। p एवं q में वह शर्त जिसके लिए (3, 0) तथा (1, 1) पर न्यूनतम Z हो, है -

1. $p = 2q$
2. $p = \frac{q}{2}$
3. $p = 3q$
4. $p = q$

Options :
485584157169. 1

485584157170. 2
485584157171. 3
485584157172. 4

Question Number : 849 Question Id : 48558439294 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

The mean of the numbers obtained on throwing a die having written 1 on three faces, 2 on two faces and 5 on 1 face is:

1. 1

2. 2

3. 5

4. $\frac{8}{3}$

Options :
485584157173. 1
485584157174. 2

485584157175. 3
485584157176. 4

Question Number : 849 Question Id : 48558439294 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

किसी पासे जिसके तीन पार्श्व पर 1, दो पार्श्व पर 2 तथा 1 पार्श्व पर 5 लिखा है, को फेंकने पर प्राप्त संख्या का माध्य होगा -

1. 1

2. 2

3. 5

4. $\frac{8}{3}$

Options :
485584157173. 1

485584157174. 2
485584157175. 3
485584157176. 4

Question Number : 850 Question Id : 48558439295 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

If $P(A)=\frac{3}{10}, P(B)=\frac{2}{5}$ and $P(A \cup B)=\frac{3}{5}$, then $P\left(\frac{B}{A}\right)+P\left(\frac{A}{B}\right)$ is equal to:

1. $\frac{1}{4}$
2. $\frac{1}{3}$
3. $\frac{5}{12}$
4. $\frac{7}{12}$

Options :
485584157177. 1

485584157178. 2
485584157179. 3
485584157180. 4

Question Number : 850 Question Id : 48558439295 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ1

यदि $P(A)=\frac{3}{10}, P(B)=\frac{2}{5}$ तथा $P(A \cup B)=\frac{3}{5}$, तो $P\left(\frac{B}{A}\right)+P\left(\frac{A}{B}\right)$ बराबर है :

1. $\frac{1}{4}$
2. $\frac{1}{3}$
3. $\frac{5}{12}$
4. $\frac{7}{12}$

Options :
485584157177. 1
485584157178. 2
485584157179. 3
485584157180. 4

Core Mathematics

Section Id :	4855841042
Section Number :	2
Section type :	Online
Mandatory or Optional :	Optional
Number of Questions :	35
Number of Questions to be attempted :	25
Section Marks :	125
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1

Sub-Section Id : 4855842950
Question Shuffling Allowed : Yes
Is Section Default? : null

Question Number : 851 Question Id : 48558439296 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The relation R in the set A = {1, 2, 3, 4} is given by R = {(1, 2), (2, 2),(1, 1), (4, 4), (1, 3), (3, 3), (3, 2)} is:

1. Reflexive and symmetric but not transitive
2. Reflexive and transitive but not symmetric
3. Symmetric and transitive but not reflexive
4. an equivalence relation

Options :
485584157181. 1
485584157182. 2
485584157183. 3
485584157184. 4

Question Number : 851 Question Id : 48558439296 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

समुच्चय A = {1, 2, 3, 4} पर संबंध R = {(1, 2), (2, 2),(1, 1), (4, 4), (1, 3), (3, 3), (3, 2)} द्वारा प्रदत्त है, तो संबंध R है:

1. स्वतुल्य एवं सममित परन्तु संक्रामक नहीं
2. स्वतुल्य एवं संक्रामक परन्तु सममित नहीं
3. सममित एवं संक्रामक परन्तु स्वतुल्य नहीं
4. तुल्यता संबंध

Options :
485584157181. 1
485584157182. 2
485584157183. 3
485584157184. 4

Question Number : 852 Question Id : 48558439297 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

If $f(x) = 27x^3$ and $g(x) = (x)^{\frac{1}{3}}$, then gof(x) is:

1. x

2. $2x$

3. $3x$

4. 0

Options :

485584157185. 1
485584157186. 2
485584157187. 3
485584157188. 4

Question Number : 852 Question Id : 48558439297 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

यदि $f(x) = 27x^3$ तथा $g(x) = (x)^{\frac{1}{3}}$, तो gof(x) है:

1. x

2. $2x$

3. $3x$

4. 0

Options :
485584157185. 1
485584157186. 2
485584157187. 3
485584157188. 4

Question Number : 853 Question Id : 48558439298 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

Principal value of $\tan^{-1}\left(-\sqrt{3}\right)+\tan^{-1}(1)$ is:

1. $\frac{\pi}{12}$
2. $\frac{\pi}{4}$
3. $-\frac{\pi}{12}$
4. $\frac{\pi}{2}$

Options :

485584157189. 1

485584157190. 2

485584157191. 3

485584157192. 4

Question Number : 853 Question Id : 48558439298 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

$\tan^{-1}\left(-\sqrt{3}\right)+\tan^{-1}(1)$ का मुख्य मान है:

1. $\frac{\pi}{12}$
2. $\frac{\pi}{4}$
3. $-\frac{\pi}{12}$
4. $\frac{\pi}{2}$

Options :

485584157189. 1

485584157190. 2

485584157191. 3

485584157192. 4

Question Number : 854 Question Id : 48558439299 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

The principal value of $\sin^{-1}\left(-\frac{1}{2}\right)$ is :

1. $-\frac{\pi}{6}$
2. $\frac{\pi}{6}$
3. $\frac{\pi}{3}$
4. $-\frac{\pi}{3}$

Options :

485584157193. 1
485584157194. 2
485584157195. 3
485584157196. 4

Question Number : 854 Question Id : 48558439299 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

$\sin^{-1}\left(-\frac{1}{2}\right)$ का मुख्य मान है:

1. $-\frac{\pi}{6}$
2. $\frac{\pi}{6}$
3. $\frac{\pi}{3}$
4. $-\frac{\pi}{3}$

Options :
485584157193. 1
485584157194. 2
485584157195. 3
485584157196. 4

Question Number : 855 Question Id : 48558439300 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

If A is an invertible matrix, such that $A^2 - A + I = 0$, then the inverse of A is:

1. A^{-2}

2. I – A, where I is an identity matrix of order 2

3. 0

4. A

Options :
485584157197. 1
485584157198. 2

485584157199. 3
485584157200. 4

Question Number : 855 Question Id : 48558439300 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

यदि A एक व्युत्क्रमणीय आव्यूह इस प्रकार है कि $A^2 - A + 1 = 0$, तो A का व्युत्क्रम है:

1. A^{-2}

2. I – A, जहाँ I कोटि 2 का तत्समक आव्यूह है

3. 0

4. A

Options :
485584157197. 1

485584157198. 2
485584157199. 3
485584157200. 4

Question Number : 856 Question Id : 48558439301 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The determinant $\begin{vmatrix} x & \sin\theta & \cos\theta \\ -\sin\theta & -x & 1 \\ \cos\theta & 1 & x \end{vmatrix}$ is:

1. independent of θ only

2. independent of x only

3. independent of both θ and x

4. independent of x but not of θ

Options :
485584157201. 1
485584157202. 2

485584157203. 3

485584157204. 4

Question Number : 856 Question Id : 48558439301 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

सारणिक $\begin{vmatrix} x & \sin\theta & \cos\theta \\ \sin\theta & x & 1 \\ \cos\theta & 1 & x \end{vmatrix}$ होगा:

1. केवल θ से स्वतंत्र
2. केवल x से स्वतंत्र
3. θ एवं x दोनों से स्वतंत्र
4. x से स्वतंत्र किन्तु θ से नहीं

Options :
485584157201. 1
485584157202. 2
485584157203. 3
485584157204. 4

Question Number : 857 Question Id : 48558439302 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The value of k for which the matrix $\begin{bmatrix} 0 & 2 & k \\ 2 & 0 & 5 \\ -3 & 5 & 0 \end{bmatrix}$ is a symmetric matrix is given by:

1. 3
2. –3
3. 0
4. 1

Options :
485584157205. 1

485584157206. 2
485584157207. 3
485584157208. 4

Question Number : 857 Question Id : 48558439302 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

k के किस मान के लिए आव्यूह $\begin{pmatrix} 0 & 2 & k \\ 2 & 0 & 5 \\ -3 & 5 & 0 \end{pmatrix}$ एक सममित आव्यूह होगा:

1. 3

2. –3

3. 0

4. 1

Options :
485584157205. 1

485584157206. 2
485584157207. 3
485584157208. 4

Question Number : 858 Question Id : 48558439303 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The value of λ for which the matrix $\begin{pmatrix} 1 & 0 & \lambda \\ 0 & 1 & 0 \\ 1 & 0 & 1 \end{pmatrix}$ is a singular matrix is:

1. 0

2. –1

3. 1

4. 2

Options :
485584157209. 1

485584157210. 2
485584157211. 3
485584157212. 4

Question Number : 858 Question Id : 48558439303 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

λ के किस मान के लिए आव्यूह $\begin{pmatrix} 1 & 0 & \lambda \\ 0 & 1 & 0 \\ 1 & 0 & 1 \end{pmatrix}$ अव्युत्क्रमणीय आव्यूह है:

1. 0

2. –1

3. 1

4. 2

Options :
485584157209. 1

485584157210. 2
485584157211. 3
485584157212. 4

Question Number : 859 Question Id : 48558439304 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

If the order of a matrix A is 2×3, the order of matrix B is 3×4 and the order of matrix C is 3×4, then the order of the matrix $(A.B).C^T$ is

1. 2×3
2. 3×3
3. 3×4
4. 4×3

Options :
485584157213. 1
485584157214. 2
485584157215. 3
485584157216. 4

Question Number : 859 Question Id : 48558439304 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

यदि आव्यूह A की कोटि 2×3 है, आव्यूह B की कोटि 3×4 तथा आव्यूह C की कोटि 3×4 है, तो $(A.B).C^T$ कि कोटि होगी -

1. 2×3
2. 3×3
3. 3×4
4. 4×3

Options :
485584157213. 1
485584157214. 2
485584157215. 3
485584157216. 4

Question Number : 860 Question Id : 48558439305 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The value of the determinant $\begin{vmatrix} x+y & y+z & z+x \\ z & x & y \\ 1 & 1 & 1 \end{vmatrix}$ is:

1. 1

2. 2

3. 0

4. -1

Options :
485584157217. 1
485584157218. 2
485584157219. 3
485584157220. 4

Question Number : 860 Question Id : 48558439305 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

सारणिक $\begin{vmatrix} x+y & y+z & z+x \\ z & x & y \\ 1 & 1 & 1 \end{vmatrix}$ का मान है:

1. 1

2. 2

3. 0

4. -1

Options :
485584157217. 1
485584157218. 2
485584157219. 3

485584157220. 4

Question Number : 861 Question Id : 48558439306 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

Match List I with List II

	LIST I (Functions)		LIST II (Derivatives)
A.	$f(x)=\sin^{-1}x$	I.	$\frac{1}{1+x^2}, x \in R$
B.	$f(x)=\tan^{-1}x$	II.	$\frac{1}{\sqrt{1-x^2}}, x \in (-1,1)$
C.	$f(x)=\cos^{-1}x$	III.	$-\frac{1}{\sqrt{1-x^2}}, x \in (-1,1)$
D.	$f(x)=\cot^{-1}x$	IV.	$-\frac{1}{1+x^2}, x \in R$

Choose the correct answer from the options given below:

1. A-III, B-I, C-II, D-IV

2. A-I, B-IV, C-III, D-II

3. A-II, B-I, C-III, D-IV

4. A-I, B-II, C-III, D-IV

Options :

485584157221. 1

485584157222. 2

485584157223. 3

485584157224. 4

Question Number : 861 Question Id : 48558439306 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

सूची I का सूची II से मिलान कीजिए

	सूची I (फलन)		सूची II (अवकलज)
A.	$f(x)=\sin^{-1}x$	I.	$\frac{1}{1+x^2}, x \in R$
B.	$f(x)=\tan^{-1}x$	II.	$\frac{1}{\sqrt{1-x^2}}, x \in (-1,1)$
C.	$f(x)=\cos^{-1}x$	III.	$-\frac{1}{\sqrt{1-x^2}}, x \in (-1,1)$
D.	$f(x)=\cot^{-1}x$	IV.	$-\frac{1}{1+x^2}, x \in R$

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

1. A-III, B-I, C-II, D-IV

2. A-I, B-IV, C-III, D-II

3. A-II, B-I, C-III, D-IV

4. A-I, B-II, C-III, D-IV

Options :

485584157221. 1

485584157222. 2

485584157223. 3

485584157224. 4

Question Number : 862 Question Id : 48558439307 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

If $y = A\sin x + B\cos x$, Where A and B are constants, then $\frac{d^2y}{dx^2}$ is equal to:

1. y
2. $-y$
3. x
4. $-x$

Options :
485584157225. 1
485584157226. 2
485584157227. 3
485584157228. 4

Question Number : 862 Question Id : 48558439307 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

यदि $y = A\sin x + B\cos x$, जहाँ A तथा B अचर हैं, तो $\frac{d^2y}{dx^2}$ बराबर है:

1. y
2. $-y$
3. x
4. $-x$

Options :
485584157225. 1
485584157226. 2
485584157227. 3
485584157228. 4

Question Number : 863 Question Id : 48558439308 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

If $f(x)=\begin{cases}\frac{1-\cos 4x}{x^2}, & x\neq 0\\ k, & x=0\end{cases}$ is continuous at $x=0$, then the value of k is:

1. 8

2. 7

3. 6

4. 4

Options :

485584157229. 1
485584157230. 2
485584157231. 3
485584157232. 4

Question Number : 863 Question Id : 48558439308 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

यदि $f(x)=\begin{cases}\frac{1-\cos 4x}{x^2}, & x\neq 0\\ k, & x=0\end{cases}$ $x=0$ पर संतत है, तो k का मान होगा:

1. 8

2. 7

3. 6

4. 4

Options :

485584157229. 1
485584157230. 2
485584157231. 3
485584157232. 4

Question Number : 864 Question Id : 48558439309 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The slope of the normal to the curve $y=2x^2+3\sin x$ at $x=0$, is:

1. 3

2. -3

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

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

Options :

485584157233. 1
485584157234. 2
485584157235. 3
485584157236. 4

Question Number : 864 Question Id : 48558439309 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

वक्र $y = 2x^2 + 3\sin x$ की $x = 0$ पर अभिलंब की प्रवणता है:

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

Options :
485584157233. 1
485584157234. 2
485584157235. 3
485584157236. 4

Question Number : 865 Question Id : 48558439310 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

If the function $f(x) = \frac{k\sin x + 2\cos x}{\sin x + \cos x}$ is increasing for all values of x, then

1. $k < 1$
2. $1 < k$
3. $k > 2$
4. $k < 2$

Options :

485584157237. 1
485584157238. 2
485584157239. 3
485584157240. 4

Question Number : 865 Question Id : 48558439310 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

यदि फलन $f(x)=\frac{k\sin x+2\cos x}{\sin x+\cos x}$, x के सभी मान के लिए वर्धमान है, तो -

1. $k<1$

2. $1<k$

3. $k>2$

4. $k<2$

Options :
485584157237. 1
485584157238. 2
485584157239. 3
485584157240. 4

Question Number : 866 Question Id : 48558439311 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

For fencing of flower bed with 100 cm long wire in the form of circular sector, the maximum area of the flower bed is :

1. 1000 cm^2

2. 225 cm^2

3. 625 cm^2

4. 500 cm^2

Options :
485584157241. 1

485584157242. 2
485584157243. 3
485584157244. 4

Question Number : 866 Question Id : 48558439311 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

एक फूल के बगीचे की वृत्तखंड के रूप में घेरने के लिए 100 सेमी लंबी तार की आवश्यकता है तो फूल के बगीचे का अधिकतम क्षेत्र है:

1. 1000 सेमी^{2}

2. 225 सेमी^{2}

3. 625 सेमी^{2}

4. 500 सेमी^{2}

Options :
485584157241. 1

485584157242. 2
485584157243. 3

485584157244. 4

Question Number : 867 Question Id : 48558439312 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

Match List I with List II

LIST I		LIST II	
A.	$\int_0^{\frac{\pi}{2}} \frac{\sin^2 x}{\sin^2 x + \cos^2 x}\, dx$	I.	$\frac{\pi}{4} - \frac{1}{2}$
B.	$\int_0^{\pi} \frac{x \sin x}{1 + \cos^2 x}\, dx$	II.	0
C.	$\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} x \cos x\, dx$	III.	$\frac{\pi}{4}$
D.	$\int_{-\frac{\pi}{4}}^{\frac{\pi}{4}} \sin^2 x\, dx$	IV.	$\frac{\pi^2}{4}$

Choose the correct answer from the options given below:

1. A-III, B-IV, C-II, D-I

2. A-I, B-IV, C-II, D-III

3. A-I, B-II, C-III, D-IV

4. A-IV, B-III, C-II, D-I

Options :
485584157245. 1

485584157246. 2
485584157247. 3
485584157248. 4

Question Number : 867 Question Id : 48558439312 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	$\int_0^{\frac{\pi}{2}} \frac{\sin^{\frac{7}{2}} x}{\sin^{\frac{7}{2}} x + \cos^{\frac{7}{2}} x} dx$	I.	$\frac{\pi}{4} - \frac{1}{2}$
B.	$\int_0^{\pi} \frac{x \sin x}{1 + \cos^2 x} dx$	II.	0
C.	$\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} x \cos x \, dx$	III.	$\frac{\pi}{4}$
D.	$\int_{-\frac{\pi}{4}}^{\frac{\pi}{4}} \sin^2 x \, dx$	IV.	$\frac{\pi^2}{4}$

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

1. A-III, B-IV, C-II, D-I
2. A-I, B-IV, C-II, D-III
3. A-I, B-II, C-III, D-IV
4. A-IV, B-III, C-II, D-I

Options :
485584157245. 1
485584157246. 2
485584157247. 3
485584157248. 4

Question Number : 868 Question Id : 48558439313 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The area of the region bounded by $|x| + |y| = 1, x \geq 0, y \geq 0$ is:

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

Options :

485584157249. 1
485584157250. 2
485584157251. 3
485584157252. 4

Question Number : 868 Question Id : 48558439313 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

$|x| + |y| = 1, x \geq 0, y \geq 0$ से घिरे क्षेत्र का क्षेत्रफल है:

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

Options :
485584157249. 1

485584157250. 2
485584157251. 3
485584157252. 4

Question Number : 869 Question Id : 48558439314 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The area of the region bounded by the curve $y = \sqrt{3x+10}$, x-axis and between the lines $x = -3$ and $x = 2$ is equal to :

1. $\frac{110}{9}$
2. $\frac{252}{9}$
3. $\frac{114}{9}$
4. $\frac{126}{9}$

Options :
485584157253. 1
485584157254. 2
485584157255. 3

485584157256. 4

Question Number : 869 Question Id : 48558439314 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

वक्र $y=\sqrt{3x+10}$, x-अक्ष तथा रेखा $x=-3$ तथा $x=2$ से घिरे क्षेत्र का क्षेत्रफल है -

1. $\frac{110}{9}$
2. $\frac{252}{9}$
3. $\frac{114}{9}$
4. $\frac{126}{9}$

Options :
485584157253. 1
485584157254. 2
485584157255. 3
485584157256. 4

Question Number : 870 Question Id : 48558439315 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The value of the integral $\int \frac{1-\sin x}{\cos^2 x}dx$ is:

1. $\sec x - \tan x + C$, Where C is an arbitrary constant.
2. $\tan x - \sec x + C$, Where C is an arbitrary constant.
3. $\sec x \tan x + C$, Where C is an arbitrary constant.
4. $\tan x + \sec x + C$, Where C is an arbitrary constant.

Options :
485584157257. 1
485584157258. 2
485584157259. 3
485584157260. 4

Question Number : 870 Question Id : 48558439315 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

समाकलन $\int \frac{1-\sin x}{\cos^2 x} dx$ का मान है:

1. $\sec x - \tan x + C$, जहाँ C एक स्वेच्छ अचर है।

2. $\tan x - \sec x + C$, जहाँ C एक स्वेच्छ अचर है।

3. $\sec x \tan x + C$, जहाँ C एक स्वेच्छ अचर है।

4. $\tan x + \sec x + C$, जहाँ C एक स्वेच्छ अचर है।

Options :

485584157257. 1
485584157258. 2
485584157259. 3
485584157260. 4

Question Number : 871 Question Id : 48558439316 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

Match List I with List II

	LIST I		LIST II
A.	Differential equation $\frac{d^2y}{dx^2}+\left(\frac{dy}{dx}\right)^{\frac{1}{2}}+x^{\frac{1}{3}}=0$	I.	order 2, degree 1
B.	$\frac{dy}{dx}=\frac{x^{\frac{1}{2}}}{y^{\frac{1}{2}}(1+x)^{\frac{1}{2}}}$	II.	order 2, degree not defined
C.	$\frac{d^2y}{dx^2}=\cos 3x+\sin 3x$	III.	order 2, degree 4
D.	$\frac{d^2y}{dx^2}+2\frac{dy}{dx}+y=\log\left(\frac{dy}{dx}\right)$	IV.	order 1, degree 2

Choose the correct answer from the options given below:

1. A-I, B-II, C-III, D-IV

2. A-III, B-IV, C-I, D-II

3. A-III, B-II, C-IV, D-I

4. A-III, B-I, C-II, D-IV

Options :
485584157261. 1
485584157262. 2
485584157263. 3
485584157264. 4

Question Number : 871 Question Id : 48558439316 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

सूची I का सूची II से मिलान कीजिए

	सूची I		सूची II
A.	अवकल समीकरण $\frac{d^2y}{dx^2}+\left(\frac{dy}{dx}\right)^{\frac{1}{4}}+x^{\frac{1}{5}}=0$	I.	कोटि 2, घात 1
B.	$\frac{dy}{dx}=\frac{x^{\frac{1}{2}}}{y^{\frac{1}{2}}(1+x)^{\frac{1}{2}}}$	II.	कोटि 2, घात परिभाषित नहीं
C.	$\frac{d^2y}{dx^2}=\cos 3x+\sin 3x$	III.	कोटि 2, घात 4
D.	$\frac{d^2y}{dx^2}+2\frac{dy}{dx}+y=\log\left(\frac{dy}{dx}\right)$	IV.	कोटि 1, घात 2

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

1. A-I, B-II, C-III, D-IV
2. A-III, B-IV, C-I, D-II
3. A-III, B-II, C-IV, D-I
4. A-III, B-I, C-II, D-IV

Options :

485584157261. 1
485584157262. 2
485584157263. 3
485584157264. 4

Question Number : 872 Question Id : 48558439317 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The general solution of the differential equation $xdy - ydx = 0$ represents :

1. a rectangular hyperbola
2. parabola whose vertex is at origin.
3. straight line passing through origin.
4. a circle whose center is at origin.

Options :
485584157265. 1

485584157266. 2
485584157267. 3
485584157268. 4

Question Number : 872 Question Id : 48558439317 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

अवकल समीकरण $xdy - ydx = 0$ का व्यापक हल निरूपित करता है :

1. एक आयताकार अतिपरवलय
2. परवयल जिसका शीर्ष मूल बिंदु पर है।
3. सरल रेखा जो मूल बिंदु से गुजरती है।
4. एक वृत्त जिसका केंद्र मूल बिंदु पर है।

Options :
485584157265. 1

485584157266. 2
485584157267. 3
485584157268. 4

Question Number : 873 Question Id : 48558439318 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The vectors $3\hat{i} - \hat{j} + 2\hat{k}, 2\hat{i} + \hat{j} + 3\hat{k}$ and $\hat{i} + \lambda\hat{j} - \hat{k}$ are coplanar if λ is:

1. -2
2. 0
3. 2
4. any real number

Options :
485584157269. 1
485584157270. 2
485584157271. 3
485584157272. 4

Question Number : 873 Question Id : 48558439318 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

सदिश $3\hat{i} - \hat{j} + 2\hat{k}, 2\hat{i} + \hat{j} + 3\hat{k}$ तथा $\hat{i} + \lambda\hat{j} - \hat{k}$ एकतलीय है तो λ का मान है :

1. -2
2. 0
3. 2
4. कोई वास्तविक संख्या

Options :
485584157269. 1
485584157270. 2
485584157271. 3
485584157272. 4

Question Number : 874 Question Id : 48558439319 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

ABCD is a rhombus, whose diagonals intersect at E. Then $\overrightarrow{EA}+\overrightarrow{EB}+\overrightarrow{EC}+\overrightarrow{ED}$ equals to :

1. $\vec{0}$
2. $\overrightarrow{AD}$
3. $2\overrightarrow{BC}$
4. $2\overrightarrow{AD}$

Options :

485584157273. 1
485584157274. 2
485584157275. 3
485584157276. 4

Question Number : 874 Question Id : 48558439319 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

ABCD एक समचतुर्भुज है जिसके विकर्ण एक दुसरे को E पर काटते हैं, तो $\overrightarrow{EA}+\overrightarrow{EB}+\overrightarrow{EC}+\overrightarrow{ED}$ बराबर है :

1. $\vec{0}$
2. $\overrightarrow{AD}$
3. $2\overrightarrow{BC}$
4. $2\overrightarrow{AD}$

Options :

485584157273. 1
485584157274. 2
485584157275. 3
485584157276. 4

Question Number : 875 Question Id : 48558439320 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

The angle at which the normal to the plane $4x + 8y + z = 7$ is inclined to y-axis is :

1. $\cos^{-1}\left(\frac{4}{9}\right)$
2. $\cos^{-1}\left(\frac{1}{9}\right)$
3. $\cos^{-1}\left(\frac{8}{9}\right)$
4. $\cos^{-1}\left(\frac{5}{9}\right)$

Options :
485584157277. 1
485584157278. 2

485584157279. 3
485584157280. 4

Question Number : 875 Question Id : 48558439320 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

वह कोण जिसपर समतल $4x + 8y + z = 7$ का अभिलंब y-अक्ष पर झुका हो, है :

1. $\cos^{-1}\left(\frac{4}{9}\right)$
2. $\cos^{-1}\left(\frac{1}{9}\right)$
3. $\cos^{-1}\left(\frac{8}{9}\right)$
4. $\cos^{-1}\left(\frac{5}{9}\right)$

Options :
485584157277. 1
485584157278. 2

485584157279. 3
485584157280. 4

Question Number : 876 Question Id : 48558439321 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

If each side of a cube is x, then the angle between the diagonals of the cube is:

1. $\cos^{-1}\left(\frac{1}{\sqrt{3}}\right)$
2. $\cos^{-1}\left(\frac{1}{3}\right)$
3. $\cos^{-1}\left(-\frac{1}{\sqrt{3}}\right)$
4. $\cos^{-1}\left(-\frac{1}{3}\right)$

Options :

485584157281. 1
485584157282. 2
485584157283. 3
485584157284. 4

Question Number : 876 Question Id : 48558439321 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

यदि घन की प्रत्येक भुजा x है, तो घन के विकर्णों के बीच का कोण है :

1. $\cos^{-1}\left(\frac{1}{\sqrt{3}}\right)$
2. $\cos^{-1}\left(\frac{1}{3}\right)$
3. $\cos^{-1}\left(-\frac{1}{\sqrt{3}}\right)$
4. $\cos^{-1}\left(-\frac{1}{3}\right)$

Options :

485584157281. 1
485584157282. 2
485584157283. 3
485584157284. 4

Question Number : 877 Question Id : 48558439322 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

Which of the following statements is true?

A. If the feasible region for a LPP is unbounded, maximum or minimum of the objective function Z = ax + by may or may not exist.
B. Maximum value of the objective function Z = ax + by in a LPP always occurs at only one corner point of the feasible region.
C. In a LPP, the minimum value of the objective function Z = ax + by (a, b > 0) is always 0 if origin is one of the corner points of feasible region.
D. In a LPP the max value of the objective function Z = ax + by is always finite.

Choose the correct answer from the options given below:

1. B, C and D only

2. A and C only

3. A, B and C only

4. C and D only

Options :
485584157285. 1
485584157286. 2

485584157287. 3
485584157288. 4

Question Number : 877 Question Id : 48558439322 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

निम्न में से कौन सा कथन सत्य नहीं है?

A. यदि किसी LPP का सुसंगत क्षेत्र अपरिबद्ध है तो उद्देश्य फलन Z = ax + का अधिकतम व न्यूनतम मान अस्तित्व में हो सकता है या नहीं भी हो सकता है।
B. उद्देश्य फलन Z = ax + by का अधिकतम मान सुसंगत क्षेत्र के केवल एक कोनीय बिंदु पर होता है।
C. किसी LPP में उद्देश्य फलन Z = ax + by (a, b > 0) का न्यूनतम मान शून्य है, यदि मूल बिंदु एक कोणीय बिंदु है।
D. किसी LPP में उद्देश्य फलन Z = ax + by का अधिकतम मान परिमित होता है।

नीचे दिये गए विकल्पों में से सही उत्तर का चयन करें:

1. केवल B, C तथा D

2. केवल A और C

3. केवल A, B तथा C

4. केवल C तथा D

Options :
485584157285. 1
485584157286. 2
485584157287. 3

485584157288. 4

Question Number : 878 Question Id : 48558439323 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value

Comprehension	MCQ2

The corner points of the feasible region determined by the system of linear inequalities are (0, 0), (4, 0), (2, 4) and (0, 5). If the maximum value of Z = ax + by where a, b > 0 occurs at both (2, 4) and (4, 0) then

1. a = 2b
2. 2a = b
3. a = b
4. 3a = b

Options :
485584157289. 1

485584157290. 2
485584157291. 3
485584157292. 4

Question Number : 878 Question Id : 48558439323 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

किसी सुसंगत क्षेत्र के कोनीय बिन्दु (0, 0), (4, 0), (2, 4) एवं (0, 5) का निर्धारण रैखिक असमीकरणों के निकाय द्वारा होता है। यदि Z = ax + by जहाँ a, b > 0 का महत्तम मान दो बिन्दुओं (2, 4) एवं (4, 0) पर स्थित हो तो -

1. a = 2b
2. 2a = b
3. a = b
4. 3a = b

Options :
485584157289. 1

485584157290. 2
485584157291. 3
485584157292. 4

Question Number : 879 Question Id : 48558439324 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

In a box consisting 100 bulbs, 10 are defective. The probability that out of a sample of 5 bulbs, none is defective is:

1. 10^{-1}
2. $\left(\frac{1}{2}\right)^5$
3. $\left(\frac{9}{10}\right)^5$
4. $\left(\frac{9}{10}\right)$

Options :
485584157293. 1
485584157294. 2
485584157295. 3
485584157296. 4

Question Number : 879 Question Id : 48558439324 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

एक बक्सा जिसमें 100 बल्ब है, जिसमें 10 बल्ब खराब हैं, तो 5 बल्बों के प्रतिदर्श में एक भी बल्ब के खराब ना होने की प्रायिकता है :

1. 10^{-1}
2. $\left(\frac{1}{2}\right)^5$
3. $\left(\frac{9}{10}\right)^5$
4. $\left(\frac{9}{10}\right)$

Options :
485584157293. 1
485584157294. 2
485584157295. 3
485584157296. 4

Question Number : 880 Question Id : 48558439325 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ2

Which of the following are not the probability distribution of a random variable ?

A.

X	0	1	2
P(X)	0.4	0.4	0.2

B.

X	0	1	2	3	4
P(X)	0.4	0.4	0.2	−0.1	0.3

C.

Y	−1	0	1
P(Y)	0.6	0.1	0.2

D.

Z	3	2	1	0	−1
P(Z)	0.3	0.2	0.4	0.1	0.05

E.

X	0	1	2
P(X)	$\frac{25}{36}$	$\frac{10}{36}$	$\frac{1}{36}$

Choose the correct answer form the options given below:

1. A and E only

2. B, C and D only

3. A, D and E only

4. C, A and D only

Options :
485584157297. 1
485584157298. 2
485584157299. 3
485584157300. 4

Question Number : 880 Question Id : 48558439325 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ2

निम्न में कौन-सा यादृच्छ चर का प्रायिकता बंटन नहीं है?

A.

X	0	1	2
P(X)	0.4	0.4	0.2

B.

X	0	1	2	3	4
P(X)	0.4	0.4	0.2	−0.1	0.3

C.

Y	−1	0	1
P(Y)	0.6	0.1	0.2

D.

Z	3	2	1	0	−1
P(Z)	0.3	0.2	0.4	0.1	0.05

E.

X	0	1	2
P(X)	$\frac{25}{36}$	$\frac{10}{36}$	$\frac{1}{36}$

नीचे दिये विकल्पों में से सही उत्तर चुनें:

1. केवल A तथा E
2. केवल B, C तथा D
3. केवल A, D तथा E
4. केवल C, A तथा D

Options :
485584157297. 1
485584157298. 2
485584157299. 3
485584157300. 4

Sub-Section Number : 2
Sub-Section Id : 4855842951

Question Shuffling Allowed : No
Is Section Default? : null

Question Number : 881 Question Id : 48558439326 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	Comp1

Set A has 4 elements and the set B has 6 elements, then the number of injective mappings that can be defined from A to B is :

1. 360
2. 15
3. 24
4. 1296

Options :
485584157301. 1
485584157302. 2
485584157303. 3
485584157304. 4

Question Number : 881 Question Id : 48558439326 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp1

समुच्चय A के 4 अवयव हैं तथा समुच्चय B के 6 अवयव हैं तो A से B के बीच परिभाषित एकैकी प्रतिचित्रों की संख्या है :

1. 360
2. 15
3. 24
4. 1296

Options :

485584157301. 1
485584157302. 2
485584157303. 3
485584157304. 4

Question Number : 882 Question Id : 48558439327 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp1

The maximum value of the function $y = 2 - |x - 3|$ is :

1. 0
2. 3
3. 2
4. 5

Options :

485584157305. 1
485584157306. 2
485584157307. 3
485584157308. 4

Question Number : 882 Question Id : 48558439327 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp1

फलन $y = 2 - |x - 3|$ का अधिकतम मान है:

1. 0
2. 3
3. 2
4. 5

Options :
485584157305. 1

485584157306. 2
485584157307. 3
485584157308. 4

Question Number : 883 Question Id : 48558439328 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	Comp1

If $xy = e^{(x-y)}$, then value of $\frac{dy}{dx}$ at (1,1) is :

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

Options :

485584157309. 1
485584157310. 2
485584157311. 3
485584157312. 4

Question Number : 883 Question Id : 48558439328 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp1

यदि $xy = e^{(x-y)}$, तो (1,1) पर $\frac{dy}{dx}$ का मान है:

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

Options :
485584157309. 1
485584157310. 2
485584157311. 3
485584157312. 4

Question Number : 884 Question Id : 48558439329 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp1

If $\vec{a}$ and $\vec{b}$ are two non zero vectors such that $|\vec{a}|=10, |\vec{b}|=2$ and $\vec{a}\cdot\vec{b}=12$, then value of $|\vec{a}\times\vec{b}|$ is :

1. 5

2. 10

3. 14

4. 16

Options :
485584157313. 1
485584157314. 2
485584157315. 3
485584157316. 4

Question Number : 884 Question Id : 48558439329 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	Comp1

यदि $\vec{a}$ एवं $\vec{b}$ दो अशून्य सदिश इस प्रकार हैं कि $|\vec{a}|=10, |\vec{b}|=2$ तथा $\vec{a}\cdot\vec{b}=12$, तो $|\vec{a}\times\vec{b}|$ का मान है:

1. 5

2. 10

3. 14

4. 16

Options :
485584157313. 1
485584157314. 2
485584157315. 3
485584157316. 4

Question Number : 885 Question Id : 48558439330 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp1

The direction cosines of a line which makes equal angles with the co-ordinate axes is/are :

1. 1, 1, 1

2. $-1, -1, -1$

3. $\pm\frac{1}{\sqrt{3}}, \pm\frac{1}{\sqrt{3}}, \pm\frac{1}{\sqrt{3}}$

4. $\pm\sqrt{3}, \pm\sqrt{3}, \pm\sqrt{3}$

Options :

485584157317. 1
485584157318. 2
485584157319. 3

Question Number : 885 Question Id : 48558439330 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	Comp1

रेखा जो निर्देशांक अक्षों के साथ समान कोण बनाता है, के दिक-कोज्या हैं -

1. 1, 1, 1

2. $-1, -1, -1$

3. $\pm\frac{1}{\sqrt{3}}, \pm\frac{1}{\sqrt{3}}, \pm\frac{1}{\sqrt{3}}$

4. $\pm\sqrt{3}, \pm\sqrt{3}, \pm\sqrt{3}$

Options :

485584157317. 1
485584157318. 2
485584157319. 3
485584157320. 4

Applied Mathematics

Section Id :	4855841043
Section Number :	3
Section type :	Online
Mandatory or Optional :	Optional
Number of Questions :	35
Number of Questions to be attempted :	25
Section Marks :	125
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	4855842952
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 886 Question Id : 48558439331 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

Value of $2^{48} (\text{mod } 15)$: is:

1. 1

2. 0

3. -1

4. 7

Options :

485584157321. 1

485584157322. 2

485584157323. 3
485584157324. 4

Question Number : 886 Question Id : 48558439331 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

2^{45}(मापांक 15) का मान है :

1. 1
2. 0
3. –1
4. 7

Options :
485584157321. 1
485584157322. 2
485584157323. 3
485584157324. 4

Question Number : 887 Question Id : 48558439332 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

A retailer has 900 kg of wheat, a part of which he sells at 10% loss and the remaining at a profit of 8%. Overall, he makes a profit of 6%, the quantity sold at profit is :

1. 100 kg
2. 450 kg
3. 600 kg
4. 800 kg

Options :
485584157325. 1
485584157326. 2
485584157327. 3
485584157328. 4

Question Number : 887 Question Id : 48558439332 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

एक दुकानदार के पास 900 किलोग्राम गेहूँ है, जिसका कुछ भाग वह 10% की हानि पर बेचता है तथा शेष को 8% लाभ पर बेचता है। इस प्रकार वह कुल 6% का लाभ कमाता है तो लाभ पर बेची गई मात्रा है :

1. 100 किलोग्राम

2. 450 किलोग्राम

3. 600 किलोग्राम

4. 800 किलोग्राम

Options :

485584157325. 1
485584157326. 2
485584157327. 3
485584157328. 4

Question Number : 888 Question Id : 48558439333 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

A tank can be filled by two pipes A and B in 18 minutes and 24 minutes respectively. Another tap C can empty the full tank in 36 minutes. If the tap C is opened 6 minutes after the pipes A and B are opened, the tank will become full in a total of :

1. 6 minutes

2. 12 minutes

3. 18 minutes

4. 36 minutes

Options :
485584157329. 1
485584157330. 2
485584157331. 3
485584157332. 4

Question Number : 888 Question Id : 48558439333 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

एक टंकी को दो पाईप A एवं B क्रमशः 18 मिनट और 24 मिनट में भर सकते हैं। एक अन्य नल C पूरी टंकी को 36 मिनट में खाली कर सकता है। यदि नल C को पाईप A और B के खोलने के 6 मिनट बाद खोला जाता है तो टंकी कुल कितनी देर में पूर्णतया भर जाएगी?

1. 6 मिनट

2. 12 मिनट

3. 18 मिनट

4. 36 मिनट

Options :

485584157329. 1
485584157330. 2
485584157331. 3
485584157332. 4

Question Number : 889 Question Id : 48558439334 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

The ratio of speeds of a motor boat and that of current of water is 35:6. The boat goes against the current in 6 hours 50 minutes. The time taken by boat to come back is :

1. 4 hours 50 minutes
2. 5 hours
3. 5 hours 40 minutes
4. 6 hours 50 minutes

Options :
485584157333. 1
485584157334. 2
485584157335. 3
485584157336. 4

Question Number : 889 Question Id : 48558439334 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

एक मोटर नाव तथा धारा की चाल का अनुपात 35:6 है। नाव धारा के विपरीत 6 घंटे 50 मिनट में जाता है, तो इसे वापस आने में समय लगेगा :-

1. 4 घंटा 50 मिनट
2. 5 घंटा
3. 5 घंटा 40 मिनट
4. 6 घंटा 50 मिनट

Options :
485584157333. 1
485584157334. 2
485584157335. 3
485584157336. 4

Question Number : 890 Question Id : 48558439335 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

₹3,60,000, ₹4,20,000 and ₹4,80,000 were invested by three friends A, B and C respectively in a business. If they earned a net profit of ₹2,10,000, the share of B's profit is:

1. ₹60,000

2. ₹80,000

3. ₹75,000

4. ₹70,000

Options :

485584157337. 1

485584157338. 2

485584157339. 3

485584157340. 4

Question Number : 890 Question Id : 48558439335 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

तीन मित्रों A, B एंव C द्वारा किसी व्यापार में क्रमशः ₹3,60,000, ₹4,20,000 तथा ₹4,80,000 का निवेश किया गया। यदि उन्होंने ₹2,10,000 का कुल लाभ अर्जन किया तो लाभ में B की हिस्सेदारी है -

1. ₹60,000

2. ₹80,000

3. ₹75,000

4. ₹70,000

Options :

485584157337. 1
485584157338. 2
485584157339. 3
485584157340. 4

Question Number : 891 Question Id : 48558439336 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

The solution set of inequalities :

$x + 3 \leq 0$ and $2x + 5 \leq 0$; if $x \in R$ is:

1. $(-\infty, -3)$

2. $\{\ldots\ldots, -5, -4, -3\}$

3. $(-\infty, -3]$

4. $\{-3, -2, -1, 0, \ldots\ldots\}$

Options :

485584157341. 1

485584157342. 2
485584157343. 3
485584157344. 4

Question Number : 891 Question Id : 48558439336 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

असमताओं

$x + 3 \leq 0$ तथा $2x + 5 \leq 0$; यदि $x \in R$, का हल समुच्चय है:

1. $(-\infty, -3)$
2. {..... –5, –4, –3}
3. $(-\infty, -3]$
4. {–3, –2, –1, 0, ...}

Options :
485584157341. 1
485584157342. 2
485584157343. 3
485584157344. 4

Question Number : 892 Question Id : 48558439337 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

If A is a symmetric matrix and $n \in N$, then A^n is:

1. Symmetric matrix
2. Skew Symmetric matrix
3. A diagonal matrix
4. Zero matrix

Options :
485584157345. 1
485584157346. 2
485584157347. 3
485584157348. 4

Question Number : 892 Question Id : 48558439337 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

यदि A एक सममित आव्यूह है तथा $n \in N$, तो A^n होगा:

1. सममित आव्यूह
2. विषम-सममित आव्यूह
3. विकर्ण आव्यूह
4. शून्य आव्यूह

Options :
485584157345. 1
485584157346. 2
485584157347. 3
485584157348. 4

Question Number : 893 Question Id : 48558439338 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

If the transpose of matrix A is matrix B, where $A=\begin{bmatrix} 2a & 1 & 3b \\ 1 & 2 & 4c \\ 5 & 6 & 0 \end{bmatrix}$ and $B=\begin{bmatrix} 4 & 1 & 5 \\ 1 & 2 & 6 \\ 9 & 3 & 0 \end{bmatrix}$ then the value of $3a + 2b + 4c$ is:

1. $\frac{23}{4}$
2. 9
3. 15
4. 17

Options :
485584157349. 1
485584157350. 2
485584157351. 3
485584157352. 4

Question Number : 893 Question Id : 48558439338 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

यदि आव्यूह A का परिवर्त आव्यूह B है, जहाँ $A=\begin{bmatrix}2a & 1 & 3b\\ 1 & 2 & 4c\\ 5 & 6 & 0\end{bmatrix}$ तथा $B=\begin{bmatrix}4 & 1 & 5\\ 1 & 2 & 6\\ 9 & 3 & 0\end{bmatrix}$ तो $3a+2b+4c$ का मान है:

1. $\frac{23}{4}$
2. 9
3. 15
4. 17

Options :

485584157349. 1

485584157350. 2
485584157351. 3
485584157352. 4

Question Number : 894 Question Id : 48558439339 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

A matrix P of order 2×3 with each entry 0 or 1 and α is a scalar which is 3 or 4. If $R = \alpha A$, then number of matrices R formed is :

1. 63
2. 64
3. 128
4. 127

Options :

485584157353. 1
485584157354. 2
485584157355. 3
485584157356. 4

Question Number : 894 Question Id : 48558439339 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

2×3 कोटि का एक आव्यूह P जिसकी प्रत्येक प्रविष्टि 0 या 1 है तथा α एक अदिश है जो 3 या 4 है।
यदि $R = \alpha A$ हो, तो निर्मित आव्यूहों R की संख्या होगी :

1. 63
2. 64
3. 128
4. 127

Options :

485584157353. 1

485584157354. 2
485584157355. 3
485584157356. 4

Question Number : 895 Question Id : 48558439340 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

If $f(x)$ is a function which is derivable in an interval I containing a point c, then match List I with List II.

	LIST I		LIST II
A.	$f(x)$ has second order derivative at $x = c$ such that $f'(c) = 0$ and $f''(c) < 0$; then	I.	point of inflexion of $f(x)$
B.	Necessary condition for point $x = c$ to be extreme point of $f(x)$ is:	II.	'c' is point of local minima of $f(x)$
C.	If $f'(x)$ does not change its sign as x crosses the point $x = c$ then it is called a	III.	c is a critical point of $f(x)$
D.	$f(x)$ has second order derivative at $x = c$ such that $f'(c)$ and $f''(c) > 0$; then	IV.	'c' is point of local maxima of $f(x)$

Choose the correct answer from the options given below:

1. A-IV, B-I, C-III, D-II

2. A-II, B-I, C-III, D-IV

3. A-II, B-III, C-I, D-IV

4. A-IV, B-III, C-I, D-II

Options :

485584157357. 1
485584157358. 2
485584157359. 3
485584157360. 4

Question Number : 895 Question Id : 48558439340 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

यदि $f(x)$ एक अंतराल I जिसमें एक बिंदु c शामिल है, में अवकलनीय फलन है। तब सूची I को सूची II से मेल कीजिए

	सूची I		सूची II
A.	$f(x)$ का $x=c$ पर द्वितीय कोटि का अवकलन इस प्रकार है कि $f'(c)=0$ और $f''(c)<0$ तब	I.	$f(x)$ का नतिपरिवर्तन बिंदु
B.	बिंदु $x=c$ का $f(x)$ के चरम बिंदु होने की आवश्यक शर्त है	II.	c f का स्थानीय निम्निष्ठ बिंदु है।
C.	यदि $f(x)$, x के बिंदु c को काटने पर चिन्ह नहीं बदलता है, तब यह कहलाता है :	III.	c $f(x)$ का एकक्रांतिक बिंदु है।
D.	$f(x)$ का $x=c$ पर द्वितीय कोटि का अवकलन इस प्रकार है की $f'(c)$ और $f''(c)>0$, तब	IV.	c $f(x)$ का स्थानीय उच्चिष्ठ बिंदु है।

निचे दिये गये विकल्पों में से सही उत्तर चुने:

1. A-IV, B-I, C-III, D-II

2. A-II, B-I, C-III, D-IV

3. A-II, B-III, C-I, D-IV

4. A-IV, B-III, C-I, D-II

Options :
485584157357. 1
485584157358. 2
485584157359. 3
485584157360. 4

Question Number : 896 Question Id : 48558439341 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

If $y=\sqrt{\log x+\sqrt{\log x+\sqrt{\log x+\sqrt{\log x+\ldots}}}}$, then $\frac{dy}{dx}$ is :

1. $\frac{1}{y(2x-1)}$

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

3. $\frac{1}{x(2y-1)}$

4. $\frac{1}{x(y-1)}$

Options :
485584157361. 1
485584157362. 2
485584157363. 3
485584157364. 4

Question Number : 896 Question Id : 48558439341 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

यदि $y=\sqrt{\log x+\sqrt{\log x+\sqrt{\log x+\sqrt{\log x+\ldots}}}}$, तो $\frac{dy}{dx}$ है :

1. $\frac{1}{y(2x-1)}$
2. $\frac{1}{xy-1}$
3. $\frac{1}{x(2y-1)}$
4. $\frac{1}{x(y-1)}$

Options :

485584157361. 1
485584157362. 2
485584157363. 3
485584157364. 4

Question Number : 897 Question Id : 48558439342 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

The price per unit of a commodity produced by a company is given by $P = 92 - 2x^2$, where x is the quantity demanded. The marginal revenue of producing 3 units of such a commodity shall be :

1. 28
2. 38
3. 26
4. 44

Options :
485584157365. 1
485584157366. 2

485584157367. 3
485584157368. 4

Question Number : 897 Question Id : 48558439342 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

एक कंपनी द्वारा उत्पादित एक वस्तु का प्रति इकाई मूल्य $P = 92 - 2x^2$, द्वारा दिया जाता है। इस प्रकार की वस्तु का 3 इकाइयों का उत्पादन करने पर सीमांत राजस्व होगा :

1. 28
2. 38
3. 26
4. 44

Options :
485584157365. 1
485584157366. 2
485584157367. 3
485584157368. 4

Question Number : 898 Question Id : 48558439343 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

For the function $f(x) = 2e^{5x} + 10$, which of the following is the most appropriate option.

1. The minimum value of f is 10
2. f has no maximum possible value.
3. f has no minimum possible value.
4. f has neither maximum nor minimum possible value.

Options :
485584157369. 1
485584157370. 2
485584157371. 3
485584157372. 4

Question Number : 898 Question Id : 48558439343 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

फलन $f(x) = 2e^{5x} + 10$ के लिए निम्न में से कौन सबसे उपयुक्त विकल्प है -

1. f का न्यूनतम मान 10 है
2. f का कोई अधिकतम मान संभव नहीं है
3. f का कोई न्यूनतम मान संभव नहीं है
4. f का ना तो अधिकतम ना ही न्यूनतम मान संभव है

Options :
485584157369. 1
485584157370. 2
485584157371. 3

485584157372. 4

Question Number : 899 Question Id : 48558439344 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

If $x\sqrt{1+y}+y\sqrt{1+x}=0; x \neq y$, then value of $\frac{d^2y}{dx^2}+2\frac{dy}{dx}$ at $x=1$ is:

1. 0
2. $\frac{1}{4}$
3. $-\frac{1}{4}$
4. $\frac{1}{8}$

Options :

485584157373. 1
485584157374. 2
485584157375. 3
485584157376. 4

Question Number : 899 Question Id : 48558439344 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

यदि $x\sqrt{1+y}+y\sqrt{1+x}=0; x \neq y$, तो $\frac{d^2y}{dx^2}+2\frac{dy}{dx}$ का $x=1$ पर मान है:

1. 0
2. $\frac{1}{4}$
3. $-\frac{1}{4}$
4. $\frac{1}{8}$

Options :

485584157373. 1
485584157374. 2
485584157375. 3
485584157376. 4

Question Number : 900 Question Id : 48558439345 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

For a discrete random variable X, whose probability distribution is defined as :

$$P(x)=\begin{cases}2k(x+1); & x=0,\ 1\\ 3kx; & x=2\\ k(5-x); & x=3\end{cases}$$

The value of mean will be:

1. $\frac{6}{7}$
2. $\frac{15}{7}$
3. $\frac{12}{7}$
4. $\frac{11}{7}$

Options :

485584157377. 1
485584157378. 2
485584157379. 3
485584157380. 4

Question Number : 900 Question Id : 48558439345 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

एक असतत यादृच्छ चर X के लिए, जिसकी प्रायिकता बंटन इस प्रकार परिभाषित है:

$$P(x)=\begin{cases}2k(x+1); & x=0,\ 1\\ 3kx; & x=2\\ k(5-x); & x=3\end{cases}$$

के माध्य का मान होगा :

1. $\frac{6}{7}$
2. $\frac{15}{7}$
3. $\frac{12}{7}$
4. $\frac{11}{7}$

Options :

485584157377. 1
485584157378. 2
485584157379. 3
485584157380. 4

Question Number : 901 Question Id : 48558439346 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

Consider the following statements with respect to probability distributions:

A. When mean (μ) = 1 and standard deviation (σ) = 0 for a data set, normal distribution is called standard normal distribution.
B. In a normal distribution of data, z is given by $z = \frac{\mu - x}{\sigma}$
C. P('r' success) is the $(r + 1)^{th}$ term in the binomial expansion of $(q + p)^n$.
D. In a random experiment, a collection of trials is called Bernoulli, if trials are dependent by nature.
E. When a random variable whose value is obtained by measuring and it takes many values between two values, it is called a continuous random variable.

Choose the correct answer from the options given below:

1. C and E only
2. A and B only
3. B and C only
4. C and D only

Options :
485584157381. 1
485584157382. 2
485584157383. 3
485584157384. 4

Question Number : 901 Question Id : 48558439346 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

प्रायिकता बंटन के संदर्भ में निम्नलिखित कथनों पर विचार करें:

A. एक डाटा समुच्चय में, यदि माध्य (μ) = 1 और मानक विचलन (σ) = 0, प्रसमान्य बंटन को मानक प्रसमान्य बंटन कहा जाता है।
B. आंकड़ों के प्रसमान्य बंटन में z, $z = \frac{\mu - x}{\sigma}$ द्वारा दिया जाता है।
C. $(q + p)^n$ के द्विपद विस्तार में $(r + 1)$ वाँ पद P('r' सफलताएँ) है।
D. एक यादृच्छिक प्रयोग में, प्रयासों का समुच्चय बरनौली कहलाता है यदि प्रयास गुणधर्म से निर्भर है।
E. जब एक यादृच्छिक चर जिसका मान मापन द्वारा लिया जाता है और यह दो मानों के बीच बहुत से मान लेता है तब उसे सतत यादृच्छिक चर कहते हैं।

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

1. केवल C और E
2. केवल A और B
3. केवल B और C
4. केवल C और D

Options :
485584157381. 1
485584157382. 2
485584157383. 3

485584157384. 4

Question Number : 902 Question Id : 48558439347 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

A die is thrown n times. A random variable X denotes the number of times, the number on the dice is greater than 4 and $P(X = 1) = 2P(X = 2)$. The value of n is:

1. 2
2. 3
3. 4
4. 5

Options :
485584157385. 1

485584157386. 2
485584157387. 3
485584157388. 4

Question Number : 902 Question Id : 48558439347 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

एक पासे को n बार फेंका गया। एक यादृच्छ चर X पासे पर 4 से अधिक संख्या जितनी बार आती है, को सूचित करता है तथा $P(X = 1) = 2P(X = 2)$, तो n का मान है :

1. 2
2. 3
3. 4
4. 5

Options :

485584157385. 1
485584157386. 2
485584157387. 3
485584157388. 4

Question Number : 903 Question Id : 48558439348 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

Two balls are chosen randomly from an urn containing 8 white and 4 black balls by a player. Suppose that he wins ₹30 for each black ball selected and loses ₹15 for each white ball selected. The expected value of winning amount is:

1. ₹12.72
2. ₹14.72
3. ₹15
4. ₹00

Options :
485584157389. 1
485584157390. 2
485584157391. 3
485584157392. 4

Question Number : 903 Question Id : 48558439348 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

एक खिलाड़ी द्वारा एक बर्तन जिसमें 8 सफेद और 4 काली गेंदे हैं, दो गेंद यादृच्छिक रूप से चुनी जाती है। मान कि प्रत्येक काली गेंद के चुने जाने पर वह ₹30 जीत जाता है और प्रत्येक सफेद गेंद चुने जाने पर ₹15 हार जाता है। जीती गई राशि का प्रत्याशित मूल्य है :

1. ₹12.72
2. ₹14.72
3. ₹15
4. ₹00

Options :
485584157389. 1
485584157390. 2
485584157391. 3
485584157392. 4

Question Number : 904 Question Id : 48558439349 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

Consider the following statements:

A. Cost of living at two different cities can be compared with volume index.
B. When the prices of rice are to be compared we use price index.
C. In Laspeyre's price index number weight is considered as price in current year.
D. Purchasing power of money can be assessed through consumer price index.
E. Fisher Index number is called ideal index number.

Choose the correct answer from the options given below:

1. A and B only

2. B, D and E only

3. A, B and C only

4. C only

Options :
485584157393. 1

485584157394. 2
485584157395. 3
485584157396. 4

Question Number : 904 Question Id : 48558439349 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

निम्नलिखित कथनों पर विचार करें :

A. दो विभिन्न शहरों में जीवन यापन की लागत की तुलना आयतन सूचकांक द्वारा की जा सकती है।
B. जब चावल के मूल्यों की तुलना की जाती है, तब हम मूल्य सूचकांक प्रयोग करते हैं।
C. लासपेयरें मूल्य सूचकांक में भार, चालू वर्ष में मूल्य के रूप में जाना जाता है।
D. मुद्रा की क्रय शक्ति उपभोक्ता मूल्य सूचकांक द्वारा निर्धारित की जा सकती है।
E. फिशर सूचकांक को आदर्श सूचकांक कहा जाता है।

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

1. केवल A और B

2. केवल B, D और E

3. केवल A, B और C

4. केवल C

Options :
485584157393. 1
485584157394. 2

485584157395. 3
485584157396. 4

Question Number : 905 Question Id : 48558439350 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

Match List I with List II

	LIST I		LIST II
A.	Marshall Edgeworth's Index Number	I.	$\frac{\sum P_1 q_0}{\sum P_0 q_0} \times 100$
B.	Laspeyre's Index Number	II.	$\sqrt{\frac{\sum P_1 q_0}{\sum P_0 q_0} \times \frac{\sum P_1 q_1}{\sum P_0 q_1}} \times 100$
C.	Fisher's Ideal Index Number	III.	$\frac{\sum P_1 q_1}{\sum P_0 q_1} \times 100$
D.	Paasche's Index Number	IV.	$\frac{\sum P_1 (q_0 + q_1)}{\sum P_0 (q_0 + q_1)} \times 100$

Choose the correct answer from the options given below:

1. A-I, B-II, C-IV, D-III

2. A-IV, B-I, C-II, D-III

3. A-II, B-IV, C-III, D-I

4. A-III, B-I, C-II, D-IV

Options :

485584157397. 1
485584157398. 2
485584157399. 3
485584157400. 4

Question Number : 905 Question Id : 48558439350 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

सूची I का सूची II से मिलान कीजिए

	सूची I		सूची II
A.	मार्शल ऐजवर्थ सूचकांक	I.	$\frac{\sum P_1 q_0}{\sum P_0 q_0} \times 100$
B.	लेस्पेयर सूचकांक	II.	$\sqrt{\frac{\sum P_1 q_0}{\sum P_0 q_0} \times \frac{\sum P_1 q_1}{\sum P_0 q_1}} \times 100$
C.	फिशर का आदर्श सूचकांक	III.	$\frac{\sum P_1 q_1}{\sum P_0 q_1} \times 100$
D.	पाशे सूचकांक	IV.	$\frac{\sum P_1 (q_0 + q_1)}{\sum P_0 (q_0 + q_1)} \times 100$

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

1. A-I, B-II, C-IV, D-III

2. A-IV, B-I, C-II, D-III

3. A-II, B-IV, C-III, D-I

4. A-III, B-I, C-II, D-IV

Options :
485584157397. 1

485584157398. 2
485584157399. 3

485584157400. 4

Question Number : 906 Question Id : 48558439351 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

Consider the table below on the quantities of commodities alongside their prices in the year 2020 and 2022.

Commodity	Prices(₹)		Quantities	
	In 2020 Year	In 2022 Year	In 2020 Year	In 2022 Year
A	1	2	5	6
B	3	4	3	4
C	5	6	2	5
D	4	5	1	3
E	3	4	4	6

The value of $\sum p_1 q_0$ is :

1. 40

2. 55

3. 73

4. 97

Options :
485584157401. 1
485584157402. 2

485584157403. 3
485584157404. 4

Question Number : 906 Question Id : 48558439351 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

दी गई तालिका पर विचार करे जो वस्तुओं की मात्रा तथा वर्ष 2020 तथा 2022 में उनकी कीमत को दर्शाता है :

वस्तु	कीमत (₹)		मात्रा	
	वर्ष 2020 में	वर्ष 2022 में	वर्ष 2020 में	वर्ष 2022 में
A	1	2	5	6
B	3	4	3	4
C	5	6	2	5
D	4	5	1	3
E	3	4	4	6

$\sum p_{19}q_{0}$ का मान है:

1. 40
2. 55
3. 73
4. 97

Options :

485584157401. 1
485584157402. 2
485584157403. 3
485584157404. 4

Question Number : 907 Question Id : 48558439352 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

The following data is taken from a simple random sample :

3, 7, 5, 9, 15, 11, 8, 4, 6, 2

The point estimate of the population standard deviation is:

1. $\frac{2}{3}$
2. $\frac{4}{9}$
3. $\frac{2}{3}\sqrt{35}$
4. $\frac{4}{9}\sqrt{35}$

Options :

485584157405. 1
485584157406. 2
485584157407. 3
485584157408. 4

Question Number : 907 Question Id : 48558439352 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

निम्नलिखित आँकड़े एक प्रतिदर्श यादृच्छ प्रतिचयन से लिए गये हैं :

3, 7, 5, 9, 15, 11, 8, 4, 6, 2

समष्टि मानक विचलन का बिन्दु आकल है:

1. $\frac{2}{3}$
2. $\frac{4}{9}$
3. $\frac{2}{3}\sqrt{35}$
4. $\frac{4}{9}\sqrt{35}$

Options :
485584157405. 1
485584157406. 2
485584157407. 3

485584157408. 4

Question Number : 908 Question Id : 48558439353 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

For a certain data test statistic 't' is calculated as: $|t| = \left|\frac{65-68}{\frac{4}{\sqrt{15}}}\right| = 2.90$, then select the correct option :

1. $\bar{x} = 68; \mu = 65, n = 16$
2. $\bar{x} = 65; \mu = 68, n = 16$
3. $\bar{x} = 15; n = 4, \mu = 3$
4. $\bar{x} = 65; \mu = 68, n = 14$

Options :
485584157409. 1
485584157410. 2
485584157411. 3

485584157412. 4

Question Number : 908 Question Id : 48558439353 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

किसी निश्चित आंकड़े के लिए परीक्षण प्रतिदर्शन 't' की गणना इस प्रकार है : $|t|=\left|\frac{65-68}{\frac{4}{\sqrt{15}}}\right|=2.90$, तो निम्न में से सही विकल्प है:

1. $\bar{x}=68; \mu=65, n=16$
2. $\bar{x}=65; \mu=68, n=16$
3. $\bar{x}=15; n=4, \mu=3$
4. $\bar{x}=65; \mu=68, n=14$

Options :
485584157409. 1
485584157410. 2
485584157411. 3
485584157412. 4

Question Number : 909 Question Id : 48558439354 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

Suppose that a 95% confidence interval states that population mean is greater than 100 and less than 300. Then the value of sample mean ($\bar{x}$) and margin of error (E) respectively are:

1. 150, ±100
2. 100, ±100
3. 250, ±50
4. 200, ±100

Options :
485584157413. 1
485584157414. 2
485584157415. 3
485584157416. 4

Question Number : 909 Question Id : 48558439354 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

मान लीजिए कि 95% विश्वस्यता अन्तराल के अनुसार समष्टि माध्य 100 से अधिक किन्तु 300 से कम होता है तो प्रतिदर्श माध्य ($\bar{x}$) तथा उपांत त्रुटि का मान (E) क्रमशः है -

1. 150, ±100
2. 100, ±100
3. 250, ±50
4. 200, ±100

Options :

485584157413. 1

485584157414. 2
485584157415. 3
485584157416. 4

Question Number : 910 Question Id : 48558439355 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

Shyam takes a loan of ₹5,00,000 with 8% annual interest rate for 10 years. The value of EMI under flat rate system is:

1. ₹4166.67
2. ₹7500
3. ₹8332
4. ₹50000

Options :

485584157417. 1
485584157418. 2
485584157419. 3
485584157420. 4

Question Number : 910 Question Id : 48558439355 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

श्याम ₹5,00,000 का एक ऋण 8% वार्षिक ब्याज की दर से 10 वर्षों के लिए लेता है। सपाट दर विधि के अन्तर्गत समान मासिक किस्त का मान है :

1. ₹4166.67
2. ₹7500
3. ₹8332
4. ₹50000

Options :

485584157417. 1
485584157418. 2
485584157419. 3
485584157420. 4

Question Number : 911 Question Id : 48558439356 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

A machine costing ₹ one lakh depreciates at constant rate 10%. Estimated useful life of machine is 8 years.

Match List I with List II

	LIST I		LIST II
A.	Total depreciation in 2nd and 3rd year is	I.	₹81,000
B.	Value of machine after one year is	II.	₹17,100
C.	Value of machine after 2 years is:	III.	₹43050
D.	Scrap value of machine is ; given $(1.1)^3 = 2.144$ & $(0.9)^8 = 0.4305$	IV.	₹90,000

Choose the correct answer from the options given below:

1. A-II, B-III, C-IV, D-I

2. A-II, B-IV, C-III, D-I

3. A-II, B-IV, C-I, D-III

4. A-II, B-I, C-IV, D-III

Options :
485584157421. 1
485584157422. 2

485584157423. 3
485584157424. 4

Question Number : 911 Question Id : 48558439356 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

एक मशीन जिसकी कीमत एक लाख रुपये है 10% की नियत दर से घट रहा है। यदि मशीन का अनुमानित जीवन काल 8 वर्ष हो तो,

सूची I का सूची II से मिलान कीजिए

	सूची I		सूची II
A.	दूसरे व तीसरे वर्ष में कुल अवमूल्यन	I.	₹81,000
B.	1 वर्ष पश्चात मशीन की कीमत	II.	₹17,100
C.	2 वर्ष पश्चात मशीन की कीमत	III.	₹43050
D.	मशीन की अपघर्षित कीमत ; दिया है $(1.1)^3 = 2.144$ & $(0.9)^8 = 0.4305$	IV.	₹90,000

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

1. A-II, B-III, C-IV, D-I

2. A-II, B-IV, C-III, D-I

3. A-II, B-IV, C-I, D-III

4. A-II, B-I, C-IV, D-III

Options :
485584157421. 1
485584157422. 2

485584157423. 3
485584157424. 4

Question Number : 912 Question Id : 48558439357 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

A bond of face value ₹1000 matures in 10 years and interest is paid annually at 4% per annum. If the present value of the bond is ₹838, find the yield to maturity $(1.04)^{-10} \approx 0.676$.

1. 1.6% p.a.
2. 2.0% p.a.
3. 2.6% p.a.
4. 3.2% p.a.

Options :

485584157425. 1
485584157426. 2
485584157427. 3
485584157428. 4

Question Number : 912 Question Id : 48558439357 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

₹1000 अंकित मूल्य वाला बॉन्ड 10 वर्ष में परिपक्व हो जाता है तथा इसपर 4% प्रति वर्ष की दर से ब्याज देय है। यदि बॉन्ड का वर्तमान मूल्य ₹838 है तो परिपक्वता पर प्राप्ति दर है : $(1.04)^{-10} \approx 0.676$.

1. 1.6% प्रतिवर्ष
2. 2.0% प्रतिवर्ष
3. 2.6% प्रतिवर्ष
4. 3.2% प्रतिवर्ष

Options :

485584157425. 1
485584157426. 2
485584157427. 3
485584157428. 4

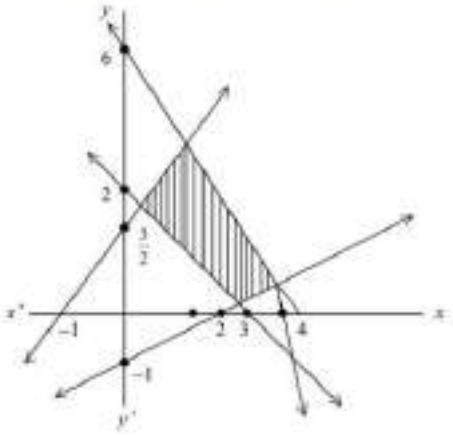
Question Number : 913 Question Id : 48558439358 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	MCQ3

Consider the following feasible region. Which of the following constraints represents the feasible region?



A. $2x + 3y \leq 6$
B. $x - 2y \leq 2$
C. $3x + 2y \leq 12$
D. $3x - 2y \leq -3$
E. $x - 2y \geq -1$

Choose the correct answer from the options given below:

1. A, C and E only

2. B, D and E only

3. B and C only

4. A, B and D only

Options :
485584157429. 1
485584157430. 2
485584157431. 3

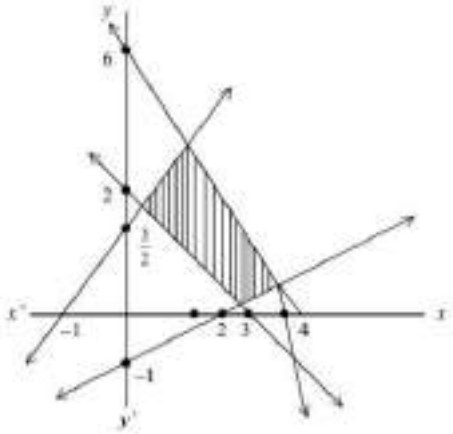
485584157432. 4

Question Number : 913 Question Id : 48558439358 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

निम्न सुसंगत क्षेत्र पर विचार करें। निम्न में कौन से व्यवरोध सुसंगत क्षेत्र को निरूपित करते हैं?



A. $2x + 3y \leq 6$
B. $x - 2y \leq 2$
C. $3x + 2y \leq 12$
D. $3x - 2y \leq -3$
E. $x - 2y \geq -1$

नीचे दिये गये विकल्पों में से सही उत्तर चुनें :

1. केवल A, C और E
2. केवल B, D और E
3. केवल B और C
4. केवल A, B और D

Options :
485584157429. 1
485584157430. 2
485584157431. 3
485584157432. 4

Question Number : 914 Question Id : 48558439359 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

The graph of the inequality $3x - 2y > 6$ is

1. Half plane that contains origin
2. Half plane that neither contains origin nor the points on the line $3x - 2y = 6$
3. Whole XOY-plane excluding points on $2x + 3y = 6$
4. Entire XOY-plme

Options :
485584157433. 1
485584157434. 2
485584157435. 3
485584157436. 4

Question Number : 914 Question Id : 48558439359 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

असमता $3x - 2y > 6$ का ग्राफ है :

1. अर्द्ध तल जिसमें मूल बिन्दु शामिल है।
2. अर्द्ध तल जिसमें ना तो मूल बिन्दु शामिल है ना ही रेखा $3x - 2y = 6$ पर स्थित कोई बिन्दु
3. संपूर्ण XOY तल जिसमें $2x + 3y = 6$ पर स्थित बिन्दु शामिल ना हो
4. संपूर्ण XOY तल

Options :
485584157433. 1
485584157434. 2
485584157435. 3
485584157436. 4

Question Number : 915 Question Id : 48558439360 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

An electric company has 300 Transistors, 400 Capacitors and 500 Inductors. The company wishes to make electronic goods using two circuits A and B. Requirement by circuit is as follows:

	Transistor	Capacitor	Inductor
A	175	300	200
B	125	100	300

The profit from circuit A and B is ₹2000 and ₹3000 respectively then constrains of the LLP based on this data are :

1. $7x + 5y \leq 12;\ 3x + y \leq 4;\ 2x + 3y \leq 5;\ x, y \geq 0;$
2. $7x + 5y \leq 12;\ x + 3y \leq 4;\ 2x + 3y \leq 5;\ x, y \geq 0$
3. $7x + 5y \geq 12;\ 3x + y \geq 4;\ 2x + 3y \geq 5;\ x, y \geq 0;$
4. $7x + 5y \leq 12;\ 3x + y = 4;\ 2x + 3y \leq 5;\ x, y \geq 0;$

Options :
485584157437. 1
485584157438. 2
485584157439. 3
485584157440. 4

Question Number : 915 Question Id : 48558439360 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	MCQ3

एक विद्युत कंपनी के पास 300 ट्रांजिस्टर, 400 संधारित्र तथा 500 प्रेरक हैं। कंपनी विद्युत सामग्री को परिपथ A एवं B की मदद से बनाना चाहती है। परिपथों की आवश्यकता नीचे दी गयी हैं :

	ट्रांजिस्टर	संधारित्र	प्रेरक
A	175	300	200
B	125	100	300

परिपथ A एवं B से लाभ क्रमशः ₹2000 और ₹3000 है तब इस डाटा पर आधारित रैखिक प्रोग्रामन समस्या के व्यवरोध हैं :

1. $7x + 5y \leq 12;\ 3x + y \leq 4;\ 2x + 3y \leq 5;\ x, y \geq 0;$
2. $7x + 5y \leq 12;\ x + 3y \leq 4;\ 2x + 3y \leq 5;\ x, y \geq 0$
3. $7x + 5y \geq 12;\ 3x + y \geq 4;\ 2x + 3y \geq 5;\ x, y \geq 0;$
4. $7x + 5y \leq 12;\ 3x + y = 4;\ 2x + 3y \leq 5;\ x, y \geq 0;$

Options :
485584157437. 1

485584157438. 2
485584157439. 3
485584157440. 4

Sub-Section Number : 2
Sub-Section Id : 4855842953
Question Shuffling Allowed : No
Is Section Default? : null

Question Number : 916 Question Id : 48558439361 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp2

In a 1000 m race, A beats B by 50 meters or 10 seconds. The time taken by A to complete the race is:

1. 150 seconds
2. 200 seconds
3. 190 seconds
4. 250 seconds

Options :
485584157441. 1
485584157442. 2

485584157443. 3
485584157444. 4

Question Number : 916 Question Id : 48558439361 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp2

1000 मी. के एक दौड़ में A, B को 50 मीटर या 10 सेकेंड से हराता है। A को दौड़ पूरा करने में लगा समय है :

1. 150 सेकेंड

2. 200 सेकेंड

3. 190 सेकेंड

4. 250 सेकेंड

Options :

485584157441. 1
485584157442. 2
485584157443. 3
485584157444. 4

Question Number : 917 Question Id : 48558439362 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp2

If $x = 4t^2, y = \frac{3}{t^3}$, then $\frac{d^2y}{dx^2}$ at $t = 1$ is :

1. $\frac{15}{8}$

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

3. $\frac{15}{16}$

4. $\frac{45}{64}$

Options :

485584157445. 1
485584157446. 2
485584157447. 3
485584157448. 4

Question Number : 917 Question Id : 48558439362 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp2

यदि $x = 4t^2, y = \frac{3}{t^3}$, तो $t = 1$ पर $\frac{d^2y}{dx^2}$ का मान है :

1. $\frac{15}{8}$
2. $\frac{2}{3}$
3. $\frac{15}{16}$
4. $\frac{45}{64}$

Options :
485584157445. 1
485584157446. 2
485584157447. 3
485584157448. 4

Question Number : 918 Question Id : 48558439363 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp2

In a binomial distribution, the probability of getting a success is $\frac{1}{3}$ and the standard deviation is 4. Then its mean is :

1. 8
2. 24
3. 16
4. 32

Options :
485584157449. 1
485584157450. 2
485584157451. 3
485584157452. 4

Question Number : 918 Question Id : 48558439363 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp2

किसी द्विपद बंटन में एक सफलता प्राप्त करने की प्रायिकता $\frac{1}{3}$ तथा मानक विचलन 4 है तो माध्य हैं :

1. 8

2. 24

3. 16

4. 32

Options :
485584157449. 1
485584157450. 2
485584157451. 3
485584157452. 4

Question Number : 919 Question Id : 48558439364 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	Comp2

For the given five values 17, 26, 20, 35, 44, the three years moving averages are :

1. 19, 25, 31

2. 18, 20, 32

3. 15, 17, 22

4. 21, 27, 33

Options :
485584157453. 1
485584157454. 2
485584157455. 3
485584157456. 4

Question Number : 919 Question Id : 48558439364 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp2

दिये गये पांच मानों के लिए 17, 26, 20, 35, 44 तीन वर्षीय चल औसत हैं :

1. 19, 25, 31

2. 18, 20, 32

3. 15, 17, 22

4. 21, 27, 33

Options :
485584157453. 1
485584157454. 2
485584157455. 3
485584157456. 4

Question Number : 920 Question Id : 48558439365 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 : 5 Wrong Marks : 1
Question Key Details :

Key	Value
Comprehension	Comp2

A vehicle whose cost is ₹7,00,000 will depreciate to a scrap value of ₹1,50,000 in 5 years. Using linear method of depreciation, the book value of the vehicle at the end of third year is:

1. ₹1,10,000
2. ₹3,70,000
3. ₹2,70,000
4. ₹2,50,000

Options :
485584157457. 1
485584157458. 2
485584157459. 3
485584157460. 4

Question Number : 920 Question Id : 48558439365 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 : 5 Wrong Marks : 1

Question Key Details :

Key	Value
Comprehension	Comp2

एक वाहन जिसकी कीमत ₹7,00,000 है, 5 वर्षों में घटकर इसका अपघर्षित मूल्य ₹1,50,000 हो जाएगा। अवमूल्यन की रेखिक विधि का प्रयोग कर तीसरे वर्ष के अंत में वाहन की कीमत होगी :

1. ₹1,10,000
2. ₹3,70,000
3. ₹2,70,000
4. ₹2,50,000

Options :
485584157457. 1
485584157458. 2
485584157459. 3
485584157460. 4

Physical Education

Group Number :	19
Group Id :	485584900
Group Maximum Duration :	45
Group Minimum Duration :	45
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	200
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No