

Question Paper Preview

Notations :

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

Question Paper Name:	Junior Executive ATC Shift 1
Subject Name:	Junior Executive ATC
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Display Marks:	Yes
Calculator:	None
Magnifying Glass Required?:	No
Ruler Required?:	No
Eraser Required?:	No
Scratch Pad Required?:	No
Rough Sketch/Notepad Required?:	No
Protractor Required?:	No

Junior Executive ATC Shift 1

Group Number :	1
Group Id :	8266621
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Group Marks:	120

Physics and Mathematics

Section Id :	8266621
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	60
Number of Questions to be attempted:	60
Section Marks:	60
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	8266621
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 8266621 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

According to Einstein's prediction in 1905, the measured values of the quantities that depend on the relative motion of the frame of reference and the observer are:

Options :

1. ✘ mass and time
2. ✘ time and length
3. ✘ mass and length
4. ✔ mass, length and time

Question Number : 1 Question Id : 8266621 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

1905 में आइंस्टीन की भविष्यवाणी के अनुसार, मात्राओं के मापित मान जो संदर्भ विन्यास की आपेक्षिक गति और पर्यवेक्षक पर आधारित होते हैं, वे इनमें से क्या हैं?

Options :

1. ✘ द्रव्यमान और समय
2. ✘ समय और लम्बाई
3. ✘ द्रव्यमान और लम्बाई
4. ✔ द्रव्यमान, विस्तार और समय

Question Number : 2 Question Id : 8266622 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The relativistic mass of a proton moving with a speed of 2.4×10^8 m/s (rest mass of proton = 1.67×10^{-27} kg and $c=3.0 \times 10^8$ m/s) is:

Options :

1. ✘ 1.39×10^{-27} kg
2. ✔ 2.78×10^{-27} kg
3. ✘ 5.17×10^{-27} kg
4. ✘ 5.56×10^{-27} kg

Question Number : 2 Question Id : 8266622 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक प्रोटॉन का सापेक्षवादी द्रव्यमान जो 2.4×10^8 मी/सै (प्रोटॉन का शेष द्रव्यमान = 1.67×10^{-27} किग्रा और $c=3.0 \times 10^8$ मी/सै.) की गति से गतिशील है, इनमें से क्या है?

Options :

1. ✘ 1.39×10^{-27} किग्रा

2. ✓ 2.78×10^{-27} किग्रा

3. ✗ 5.17×10^{-27} किग्रा

4. ✗ 5.56×10^{-27} किग्रा

Question Number : 3 Question Id : 8266623 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A rocket ship is 100 m in length when measured before leaving the launching pad. When in flight, a ground observer measures its length as 75 m. The velocity of the rocket ship is:

Options :

1. ✗ 0.98×10^8 m/s

2. ✗ 1.15×10^8 m/s

3. ✗ 1.33×10^8 m/s

4. ✓ 1.98×10^8 m/s

Question Number : 3 Question Id : 8266623 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

लॉन्चिंग पैड छोड़ने से पहले मापे गए एक रॉकेट शिप की लम्बाई 100 मी है, एक ज़मीन पर खड़ा एक व्यक्ति इसकी लम्बाई 75 मी. मापता है, जब रॉकेट शिप हवा में होता है। रॉकेट शिप का वेग इनमें से कितना है?

Options :

1. ✗ 0.98×10^8 मी./सै.

2. ✗ 1.15×10^8 मी./सै.

3. ✗ 1.33×10^8 मी./सै.

4. ✓ 1.98×10^8 मी./सै.

Question Number : 4 Question Id : 8266624 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

An astronaut at rest has a heart rate of 65 beats/min. When the astronaut's spaceship moves at a speed of 0.6c, her heart rate as measured by an earth observer will be:

Options :

1. ✗ 26 beats/min

2. ✓ 52 beats/min

3. ✗ 74 beats/min

4. ✗ 104 beats/min

Question Number : 4 Question Id : 8266624 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

विराम की अवस्था में, एक अंतरिक्ष यात्री की हृदय गति 65 बीट/मिनट है। जब अंतरिक्ष यात्री का स्पेसशिप $0.6c$ की गति से चलता है, तो भूमि के पर्यवेक्षक द्वारा मापे गए अनुसार उसकी हृदय गति इनमें से कितनी होगी?

Options :

- ✘ 26 बीट/मिनट
- ✔ 52 बीट/मिनट
- ✘ 74 बीट/मिनट
- ✘ 104 बीट/मिनट

Question Number : 5 Question Id : 8266625 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Frame S' moves relative to frame S at $0.60c$ in the direction of increasing x . In frame S' , a particle is measured to have a velocity of $0.4c$ in the direction of increasing x' . The velocity of the particle as measured in frame S is:

Options :

- ✘ $0.26c$
- ✘ $0.52c$
- ✔ $0.81c$
- ✘ $0.92c$

Question Number : 5 Question Id : 8266625 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

फ्रेम S' फ्रेम S के सापेक्ष, वृद्धिमान x की दिशा में $0.60c$ पर गतिशील होता है। फ्रेम S' में, वृद्धिमान x' की दिशा में एक कण का वेग $0.4c$ मापा गया है। फ्रेम S में, कण का मापा गया वेग इनमें से कितना है?

Options :

- ✘ $0.26c$
- ✘ $0.52c$
- ✔ $0.81c$
- ✘ $0.92c$

Question Number : 6 Question Id : 8266626 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

An electron whose rest mass is 9.11×10^{-31} kg moves with a speed of $0.8c$. What is its kinetic energy? ($c = 3 \times 10^8$ m/s)

Options :

- ✘ 2.47×10^{-14} J

2. ✘ $3.41 \times 10^{-14} \text{ J}$
3. ✘ $4.36 \times 10^{-14} \text{ J}$
4. ✔ $5.47 \times 10^{-14} \text{ J}$

Question Number : 6 Question Id : 8266626 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक इलेक्ट्रॉन जिसका विराम द्रव्यमान 9.11×10^{-31} किग्रा है, $0.8 c$ की गति से गतिमान होता है। इसकी गतिज ऊर्जा कितनी है? ($c = 3 \times 10^8 \text{ m/s}$)

Options :

1. ✘ $2.47 \times 10^{-14} \text{ J}$
2. ✘ $3.41 \times 10^{-14} \text{ J}$
3. ✘ $4.36 \times 10^{-14} \text{ J}$
4. ✔ $5.47 \times 10^{-14} \text{ J}$

Question Number : 7 Question Id : 8266627 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A nuclear reaction gives off a total of 10^{17} J energy. How much mass is spent in the process?

Options :

1. ✘ 0.11 kg
2. ✔ 1.11 kg
3. ✘ 111 kg
4. ✘ 81.3 kg

Question Number : 7 Question Id : 8266627 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक नाभिकीय अभिक्रिया कुल 10^{17} J ऊर्जा छोड़ती है। इस प्रक्रिया में कितना द्रव्यमान प्रयुक्त हुआ?

Options :

1. ✘ 0.11 किग्रा
2. ✔ 1.11 किग्रा
3. ✘ 111 किग्रा
4. ✘ 81.3 किग्रा

Question Number : 8 Question Id : 8266628 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A silicon monoxide ($n=1.45$) film of 100 nm thickness is used to coat a glass camera lens ($n=1.56$). What wavelength of light in the visible region will be most efficiently transmitted by this system?

Options :

1. ✓ 580 nm
2. ✗ 640 nm
3. ✗ 430 nm
4. ✗ 628 nm

Question Number : 8 Question Id : 8266628 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

सिलिकॉन मोनोऑक्साइड ($n=1.45$) की एक फिल्म, जिसकी मोटाई 100 nm है, एक ग्लास कैमरा लेंस ($n=1.56$) को कोट करने के लिए प्रयुक्त की जाती है। इस प्रणाली द्वारा प्रत्यक्ष क्षेत्र में किस तरंग दैर्घ्य (wavelength) का प्रकाश अत्याधिक कुशलता के साथ पारगमित किया जाएगा?

Options :

1. ✓ 580 nm
2. ✗ 640 nm
3. ✗ 430 nm
4. ✗ 628 nm

Question Number : 9 Question Id : 8266629 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

In a Newton's rings experiment, light of wavelength λ and a lens of radius of curvature R are used. The difference in diameters of 25th and 16th dark rings is:

Options :

1. ✗ $\sqrt{\lambda R}$
2. ✓ $2\sqrt{\lambda R}$
3. ✗ $3\sqrt{\lambda R}$
4. ✗ $4\sqrt{\lambda R}$

Question Number : 9 Question Id : 8266629 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

न्यूटन के रिंग के प्रयोग में, λ तरंग दैर्घ्य (wavelength) का प्रकाश और R वक्रता त्रिज्या का लेंस प्रयुक्त किया जाता है। 25वें और 16वें डार्क रिंग के व्यास में अंतर इनमें से कितना होगा?

Options :

1. ✗ $\sqrt{\lambda R}$

2. ✓ $2\sqrt{\lambda R}$

3. ✗ $3\sqrt{\lambda R}$

4. ✗ $4\sqrt{\lambda R}$

Question Number : 10 Question Id : 82666210 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Interference fringes are observed with a biprism of refracting angle 1° and refractive index 1.5 on a screen 100 cm away from it. The wavelength of light used is 5890 \AA . If the distance between the source and the biprism is 20 cm, the fringe width is:

Options :

1. ✗ 0.101 mm

2. ✓ 0.202 mm

3. ✗ 0.508 mm

4. ✗ 0.680 mm

Question Number : 10 Question Id : 82666210 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

अपवर्तन कोण 1° और अपवर्तनांक 1.5 के बाईप्रिज्म के साथ इससे 100 सेमी दूर स्क्रीन पर व्यतिकरण फ्रिंज देखे जाते हैं। प्रयुक्त प्रकाश की तरंग दैर्घ्य (wavelength) 5890 \AA है। यदि स्रोत और बाईप्रिज्म के बीच की दूरी 20 सेमी है तो फ्रिंज की मोटाई इनमें से क्या है?

Options :

1. ✗ 0.101 mm

2. ✓ 0.202 mm

3. ✗ 0.508 mm

4. ✗ 0.680 mm

Question Number : 11 Question Id : 82666211 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A Fraunhofer diffraction is produced from a light source of 580 nm. The light goes through a single slit and onto a screen a meter away. The first dark fringe is 5.0 mm from the central bright fringe. What is the slit width?

Options :

1. ✗ 0.10 mm

2. ✓ 0.12 mm

3. ✗ 0.24 mm

4. ✗ 0.52 mm

Question Number : 11 Question Id : 82666211 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

580 nm के एक प्रकाश स्रोत से एक फ्रॉन्होफर विवर्तन निर्मित किया जाता है। प्रकाश एक सिंगल स्लिट से जाता है और एक मीटर दूर रखी स्क्रीन पर पड़ता है। पहला डार्क फ्रिंज केंद्रीय ब्राइट फ्रिंज से 5.0 mm पर है। स्लिट की चौड़ाई क्या है?

Options :

1. ✖ 0.10 mm
2. ✔ 0.12 mm
3. ✖ 0.24 mm
4. ✖ 0.52 mm

Question Number : 12 Question Id : 82666212 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Fraunhofer diffraction at a double slit is observed using a light of wavelength λ . The width of each slit is a and the width of opaque portion between the two slits is b . The angular separation between any two consecutive maxima in diffraction pattern is:

Options :

1. ✖ $\lambda b / (a+b)^2$
2. ✖ $\lambda a / b^2$
3. ✖ $\lambda b / a^2$
4. ✔ $\lambda / (a+b)$

Question Number : 12 Question Id : 82666212 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

तरंग दैर्घ्य (wavelength) λ के प्रकाश को प्रयुक्त करके, डबल स्लिट पर फ्रॉन्होफर विवर्तन देखा जाता है। प्रत्येक स्लिट की चौड़ाई a है और दो स्लिट के बीच के अपारदर्शी भाग की चौड़ाई b है। विवर्तन पैटर्न में किन्हीं दो क्रमानुगत मैक्सिमा के बीच कोणीय पृथक्करण इनमें से कितना होगा:

Options :

1. ✖ $\lambda b / (a+b)^2$
2. ✖ $\lambda a / b^2$
3. ✖ $\lambda b / a^2$
4. ✔ $\lambda / (a+b)$

Question Number : 13 Question Id : 82666213 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Light of wavelength 600 nm is incident normally on a diffraction grating 3.00 cm wide. If second order line is observed at an angle of 30° , what is the total number of lines on the grating?

Options :

1. ✖ 15000
2. ✖ 14500
3. ✖ 13500
4. ✔ 12500

Question Number : 13 Question Id : 82666213 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

600 nm तरंग दैर्घ्य (wavelength) का प्रकाश सामान्यतः 3.00 सेमी मोटे डिफ्रैक्शन ग्रेटिंग पर आपतित किया जाता है। यदि 30° के कोण पर सैकेण्ड ऑर्डर लाइन पायी जाती है तो ग्रेटिंग पर लाइनों की कुल संख्या कितनी है?

Options :

1. ✖ 15000
2. ✖ 14500
3. ✖ 13500
4. ✔ 12500

Question Number : 14 Question Id : 82666214 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The specific rotation of a 10 % sugar solution is 60° . If the length of the polarimeter tube containing sugar solution is 20 cm, the plane of polarisation of light is rotated by:

Options :

1. ✖ 24°
2. ✖ 19°
3. ✔ 12°
4. ✖ 31°

Question Number : 14 Question Id : 82666214 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

10% चीनी के घोल का विशिष्ट आवर्तन 60° है। यदि पोलारी मीटर ट्यूब की लंबाई, जिसमें चीनी का घोल है, 20 सेमी है, तो प्रकाश ध्रुवण का प्लेन इनमें कितना आवर्तित होगा?

Options :

1. ✖ 24°
2. ✖ 19°

3. ✓ 12°

4. ✗ 31°

Question Number : 15 Question Id : 82666215 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

When light from a single point passes through calcite, it often forms two images. Each of two images are formed from light that has been polarised by:

Options :

1. ✗ reflection
2. ✗ selective absorption
3. ✓ double refraction
4. ✗ Scattering

Question Number : 15 Question Id : 82666215 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

जब प्रकाश क्वेल्साइट के माध्यम से एकल बिंदु से गुजरता है, प्रायः यह दो छवियाँ बनाता है। प्रकाश द्वारा निर्मित दोनों छवियों में प्रत्येक का इनमें से ध्रुवण किसके द्वारा होता है?

Options :

1. ✗ परावर्तन
2. ✗ चयनात्मक अवशोषण
3. ✓ दोहरा अपवर्तन
4. ✗ प्रकीर्णन

Question Number : 16 Question Id : 82666216 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The momentum of an electron is measured as 4.80×10^{-27} kg m/s with an uncertainty of 2.4×10^{-29} kg m/s. What is the minimum uncertainty in the determination of its position? ($h = 6.63 \times 10^{-34}$ J s)

Options :

1. ✗ 3.20×10^{-5} m
2. ✓ 4.40×10^{-6} m
3. ✗ 6.40×10^{-3} m
4. ✗ 1.12×10^{-4} m

Question Number : 16 Question Id : 82666216 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक इलेक्ट्रॉन का संवेग 4.80×10^{-27} किग्रा मी./सै. के रूप में, 2.4×10^{-29} किग्रा मी./सै. की अनिश्चितता के साथ मापा जाता है। इसके स्थान को निर्धारित करने में न्यूनतम अनिश्चितता कितनी है? ($h = 6.63 \times 10^{-34}$ J s)

Options :

1. ✘ 3.20×10^{-5} मी
2. ✔ 4.40×10^{-6} मी
3. ✘ 6.40×10^{-3} मी
4. ✘ 1.12×10^{-4} मी

Question Number : 17 Question Id : 82666217 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

An electron in a TV tube has a speed of 6×10^7 m/s .What is the de Broglie wavelength associated with the electron ($m = 9.11 \times 10^{-31}$ kg)?

Options :

1. ✔ 0.121 Å
2. ✘ 0.248 Å
3. ✘ 0.347 Å
4. ✘ 0.867 Å

Question Number : 17 Question Id : 82666217 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक टीवी ट्यूब में एक इलेक्ट्रॉन की गति 6×10^7 मी./सै. है। इलेक्ट्रॉन ($m = 9.11 \times 10^{-31}$ किग्रा) से जुड़ी डी ब्रोग्ली तरंग दैर्घ्य (wavelength) कितनी है?

Options :

1. ✔ 0.121 Å
2. ✘ 0.248 Å
3. ✘ 0.347 Å
4. ✘ 0.867 Å

Question Number : 18 Question Id : 82666218 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A helium- neon laser emits red light having a wavelength of 632.8 nm and a power of 0.5 mW. How many photons are emitted each second?

Options :

1. ✘ 3.3×10^{16}
2. ✔ 1.6×10^{15}

3. ✖ 4.8×10^{17}

4. ✖ 2.6×10^{18}

Question Number : 18 Question Id : 82666218 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक हीलीयम-नियॉन लेसर लाल प्रकाश, जिसकी तरंग दैर्घ्य (wavelength) 632.8 nm है, और 0.5 mW शक्ति का उत्सर्जन करता है। प्रति सैकेण्ड कितने फोटॉन्स उत्सर्जित होते हैं?

Options :

1. ✖ 3.3×10^{16}

2. ✔ 1.6×10^{15}

3. ✖ 4.8×10^{17}

4. ✖ 2.6×10^{18}

Question Number : 19 Question Id : 82666219 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The spacing between layers of atoms in KCl crystal is 3.1×10^{-10} m. A beam of X-rays is constructively scattered in first order from the surface of the crystal at an angle of 2.9° . The wavelength of X-rays is _____ ($\sin 2.9^\circ = 0.0506$)

Options :

1. ✖ 1.32×10^{-11} m

2. ✖ 3.71×10^{-11} m

3. ✔ 3.14×10^{-11} m

4. ✖ 4.24×10^{-11} m

Question Number : 19 Question Id : 82666219 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

KCl क्रिस्टल में परमाणुओं के बीच अंतराल 3.1×10^{-10} मी है। क्रिस्टल की सतह से 2.9° के कोण पर एक्स-रेज की प्रथम स्तर की एक बीम रचनात्मक रूप से प्रकीर्ण जाती है। एक्स-रेज की तरंग दैर्घ्य (wavelength) इनमें से कितनी है? ($\sin 2.9^\circ = 0.0506$)

Options :

1. ✖ 1.32×10^{-11} मी

2. ✖ 3.71×10^{-11} मी

3. ✔ 3.14×10^{-11} मी

4. ✖ 4.24×10^{-11} मी

Question Number : 20 Question Id : 82666220 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

X-rays of wavelength of 0.4500 nm are scattered from free electrons in a target. What is the wavelength of photons scattered at 60° relative to the incident rays? ($h = 6.63 \times 10^{-34}$ J s, $m_e = 9.11 \times 10^{-31}$ kg, $c = 3 \times 10^8$ m/s)

Options :

1. ✖ 0.4476 nm
2. ✖ 0.4488 nm
3. ✔ 0.4512 nm
4. ✖ 0.4524 nm

Question Number : 20 Question Id : 82666220 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

0.4500 nm तरंग दैर्घ्य (wavelength) की एक्स-रेज़ एक टारगेट के मुक्त इलेक्ट्रॉन्स से प्रकीर्ण की जाती है। आपतित किरणों के सापेक्ष 60° पर प्रकीर्ण फोटॉन्स की तरंग दैर्घ्य (wavelength) इनमें से कितनी है? ($h = 6.63 \times 10^{-34}$ J s, $m_e = 9.11 \times 10^{-31}$ kg, $c = 3 \times 10^8$ m/s)

Options :

1. ✖ 0.4476 nm
2. ✖ 0.4488 nm
3. ✔ 0.4512 nm
4. ✖ 0.4524 nm

Question Number : 21 Question Id : 82666221 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

X-rays of wavelength of 0.0650 nm undergo Compton scattering from free electrons in carbon. If photons are scattered at 90° relative to the incident rays, what percentage of initial X-ray photon energy is transferred to an electron in such a scattering? ($h = 6.63 \times 10^{-34}$ J s, $m_e = 9.11 \times 10^{-31}$ kg, $c = 3 \times 10^8$ m/s)

Options :

1. ✖ 1.2 %
2. ✖ 2.4 %
3. ✔ 3.6 %
4. ✖ 4.6 %

Question Number : 21 Question Id : 82666221 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

0.0650 nm तरंग दैर्घ्य (wavelength) की एक्स-रेज़ कार्बन में मुक्त इलेक्ट्रॉन्स से कॉम्पटन प्रकीर्णन से गुजरती है। यदि आपतित किरणों के सापेक्ष, 90° पर फोटॉन्स प्रकीर्ण होते हैं तो इस प्रकीर्णन में एक इलेक्ट्रॉन को प्रारम्भिक एक्स-रेज़ फोटॉन्स ऊर्जा का कितना प्रतिशत अंतरित होता है? ($h = 6.63 \times 10^{-34}$ J s, $m_e = 9.11 \times 10^{-31}$ kg, $c = 3 \times 10^8$ m/s)

Options :

1. ✘ 1.2%
2. ✘ 2.4%
3. ✔ 3.6%
4. ✘ 4.6%

Question Number : 22 Question Id : 82666222 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The electric field between two plates of a parallel plate (area = 8.0×10^{-2} m²) capacitor is given by $E = (6.8 \times 10^6 - 8.4 \times 10^5 t)$ V/m, where t is in seconds. What is the magnitude of the displacement current between the plates? ($\epsilon_0 = 8.85 \times 10^{-12}$ F/m)

Options :

1. ✘ 3.57×10^{-6} A
2. ✔ 5.95×10^{-7} A
3. ✘ 7.36×10^{-8} A
4. ✘ 8.46×10^{-9} A

Question Number : 22 Question Id : 82666222 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

दो प्लेटों में से एक समानांतर प्लेट की (क्षेत्रफल = 8.0×10^{-2} m²) इलेक्ट्रिक फील्ड कैपेसीटर $E = (6.8 \times 10^6 - 8.4 \times 10^5 t)$ V/m द्वारा दिया जाता है, t सैकेण्ड्स में है। दो प्लेटों के बीच विस्थापित करंट का परिमाण क्या है? ($\epsilon_0 = 8.85 \times 10^{-12}$ F/m)

Options :

1. ✘ 3.57×10^{-6} A
2. ✔ 5.95×10^{-7} A
3. ✘ 7.36×10^{-8} A
4. ✘ 8.46×10^{-9} A

Question Number : 23 Question Id : 82666223 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The Poynting vector of an electromagnetic wave in vacuum is

$S = \{(120 \text{ W/m}^2) \sin^2 [(8.0 \text{ rad/m}) z + (2.4 \times 10^9 \text{ rad/s}) t]\} \mathbf{k}$. What is the wavelength?

Options :

1. ✓ 0.79 m
2. ✗ 0.24 m
3. ✗ 0.068 m
4. ✗ 0.0488 m

Question Number : 23 Question Id : 82666223 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निर्वात में एक विद्युत चुम्बकीय तरंग का पॉइंटिंग वेक्टर

$S = \{(120 \text{ W/m}^2) \sin^2 [(8.0 \text{ rad/m}) z + (2.4 \times 10^9 \text{ rad/s}) t]\} \mathbf{k}$ है। तरंग दैर्घ्य (wavelength) क्या है?

Options :

1. ✓ 0.79 मी
2. ✗ 0.24 मी
3. ✗ 0.068 मी
4. ✗ 0.0488 मी

Question Number : 24 Question Id : 82666224 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A plane polarized electromagnetic wave is travelling in free space along +x direction. The amplitude of its electric field is $E_0 = 240 \text{ N/C}$ and its frequency is 150 MHz. Electric field of the wave can be written as:

Options :

1. ✗ $E = \{(240 \text{ N/C}) \sin [(3.14 \text{ rad/m}) x + (9.42 \times 10^8 \text{ rad/s}) t]\} \mathbf{j}$
2. ✓ $E = \{(240 \text{ N/C}) \sin [(3.14 \text{ rad/m}) x - (9.42 \times 10^8 \text{ rad/s}) t]\} \mathbf{j}$
3. ✗ $E = \{(240 \text{ N/C}) \sin [(2.09 \text{ rad/m}) x + (6.27 \times 10^8 \text{ rad/s}) t]\} \mathbf{j}$
4. ✗ $E = \{(240 \text{ N/C}) \sin [(2.09 \text{ rad/m}) x - (6.27 \times 10^8 \text{ rad/s}) t]\} \mathbf{j}$

Question Number : 24 Question Id : 82666224 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक समतल ध्रुवीकृत विद्युत चुम्बकीय तरंग +x के साथ मुक्त स्पेस में जा रही है। इसके विद्युत क्षेत्र का आयाम $E_0 = 240 \text{ N/C}$ और इसकी आवृत्ति 150 MHz है। तरंग का विद्युत क्षेत्र इसमें से किस प्रकार लिखा जा सकता है?

Options :

1. ✖ $E = \{(240 \text{ N/C}) \sin [(3.14 \text{ rad/m}) x + (9.42 \times 10^8 \text{ rad/s}) t]\} j$

2. ✔ $E = \{(240 \text{ N/C}) \sin [(3.14 \text{ rad/m}) x - (9.42 \times 10^8 \text{ rad/s}) t]\} j$

3. ✖ $E = \{(240 \text{ N/C}) \sin [(2.09 \text{ rad/m}) x + (6.27 \times 10^8 \text{ rad/s}) t]\} j$

4. ✖ $E = \{(240 \text{ N/C}) \sin [(2.09 \text{ rad/m}) x - (6.27 \times 10^8 \text{ rad/s}) t]\} j$

Question Number : 25 Question Id : 82666225 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Two parallel plates (each of area 400 cm^2) of a capacitor are given equal and opposite charges of magnitude $3.56 \mu\text{C}$. The space between the plates is filled with a dielectric. If the electric field in the dielectric is $1.2 \times 10^6 \text{ V/m}$, what is the dielectric constant of the material? ($\epsilon_0 = 8.85 \times 10^{-12} \text{ F/m}$)

Options :

1. ✖ 2.4

2. ✖ 4.7

3. ✖ 6.5

4. ✔ 8.4

Question Number : 25 Question Id : 82666225 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक कैपेसिटर की दो समानांतर प्लेटें (जिनमें से प्रत्येक का क्षेत्रफल 400 वर्ग सेमी है) को $3.56 \mu\text{C}$ परिमाण का बराबर और विवपरीत आवेश दिया गया है। प्लेटों के बीच का स्पेस एक परावैद्युत से भरा गया है। यदि परावैद्युत में विद्युत क्षेत्र $1.2 \times 10^6 \text{ V/m}$ है तो पदार्थ का परावैद्युत का स्थिरांक इनमें से क्या है? ($\epsilon_0 = 8.85 \times 10^{-12} \text{ F/m}$)

Options :

1. ✖ 2.4

2. ✖ 4.7

3. ✖ 6.5

4. ✔ 8.4

Question Number : 26 Question Id : 82666226 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A magnetic field of 1.2 T is applied to a paramagnetic gas. The atoms of the gas have magnetic dipole moment of $1.5 \times 10^{-23} \text{ J/T}$. At what temperature, will the mean translational kinetic energy of an atom of the gas be equal to the energy required to change the alignment of atom's magnetic dipole from anti-parallel to parallel (to the magnetic field)? (Boltzmann constant = $1.38 \times 10^{-23} \text{ J/K}$)

Options :

1. ✖ 0.82 K

2. ✔ 1.74 K

3. ✖ 21.6 K

4. ✖ 300 K

Question Number : 26 Question Id : 82666226 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

1.2 T का एक चुम्बकीय क्षेत्र एक अनुचुम्बकीय गैस पर लगाया जाता है। गैस के परमाणुओं का 1.5×10^{-23} J/T का चुम्बकीय द्विध्रुवीय आघूर्ण है। किस तापमान पर, गैस के एक परमाणु की माध्य स्थानांतरीय गतिज ऊर्जा उस ऊर्जा के बराबर होगी, जो परमाणु के चुम्बकीय द्विध्रुव को एंटी-पैरलल से पैरलल (चुम्बकीय क्षेत्र के) संरेखण को बदलने के लिए अपेक्षित है? (बोल्टजमान स्थिरांक = 1.38×10^{-23} J/K)

Options :

1. ✖ 0.82 K
2. ✔ 1.74 K
3. ✖ 21.6 K
4. ✖ 300 K

Question Number : 27 Question Id : 82666227 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The Curie temperature for iron is:

Options :

1. ✖ 3862 K
2. ✖ 627 K
3. ✖ 1388 K
4. ✔ 1043 K

Question Number : 27 Question Id : 82666227 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

आयरन के लिए क्यूरी तापमान इनमें से क्या है?

Options :

1. ✖ 3862 K
2. ✖ 627 K
3. ✖ 1388 K
4. ✔ 1043 K

Question Number : 28 Question Id : 82666228 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A light beam is incident on a metal target with a work function of 2.3 eV. If a stopping potential of 1.3 V is required, what is the wavelength of the incident light? ($h = 6.63 \times 10^{-34}$ J s, $c = 3 \times 10^8$ m/s, $1 \text{ eV} = 1.6 \times 10^{-19}$ J):

Options :

1. ✓ 345 nm
2. ✗ 487 nm
3. ✗ 765 nm
4. ✗ 1411 nm

Question Number : 28 Question Id : 82666228 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

प्रकाश की एक बीम धातु के एक लक्ष्य पर 2.3 eV के वर्क फंक्शन के साथ आपतित होती है। यदि 1.3 V का स्टॉपिंग विभव अपेक्षित हो, तो आपतित प्रकाश की तरंग दैर्घ्य (wavelength) क्या है? ($h = 6.63 \times 10^{-34}$ J s, $c = 3 \times 10^8$ m/s, $1 \text{ eV} = 1.6 \times 10^{-19}$ J)

Options :

1. ✓ 345 nm
2. ✗ 487 nm
3. ✗ 765 nm
4. ✗ 1411 nm

Question Number : 29 Question Id : 82666229 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

What is the minimum X-ray wavelength produced when electrons are accelerated through a potential of 50000 V? ($h = 6.63 \times 10^{-34}$ J s, $c = 3 \times 10^8$ m/s, $1 \text{ eV} = 1.6 \times 10^{-19}$ J)

Options :

1. ✗ 19.6×10^{-12} m
2. ✓ 24.9×10^{-12} m
3. ✗ 35.8×10^{-12} m
4. ✗ 68.3×10^{-12} m

Question Number : 29 Question Id : 82666229 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

जब 50000 V के विभव के माध्यम से इलेक्ट्रॉन त्वरित किए जाते हैं तो निर्मित न्यूनतम एक्स-रे तरंग दैर्घ्य (wavelength) कितनी होगी? ($h = 6.63 \times 10^{-34}$ J s, $c = 3 \times 10^8$ m/s, $1 \text{ eV} = 1.6 \times 10^{-19}$ J)

Options :

1. ✗ 19.6×10^{-12} मी
2. ✓ 24.9×10^{-12} मी

3. ✖ 35.8×10^{-12} मी

4. ✖ 68.3×10^{-12} मी

Question Number : 30 Question Id : 82666230 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The quantum mechanical model of the hydrogen atom requires that if the principal quantum number is 4, the number of different permitted orbital quantum numbers will be:

Options :

1. ✖ five

2. ✔ four

3. ✖ two

4. ✖ one

Question Number : 30 Question Id : 82666230 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

हाइड्रोजन परमाणु के क्वांटम यांत्रिक मॉडल हेतु अपेक्षित है कि यदि मुख्य क्वांटम संख्या 4 हो तो विभिन्न अनुमत कक्षीय क्वांटम संख्या इनमें से कौन सी होगी?

Options :

1. ✖ पाँच

2. ✔ चार

3. ✖ दो

4. ✖ एक

Question Number : 31 Question Id : 82666231 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The function $f(x) = x|x|$ is _____

Options :

1. ✖ not continuous at the origin.

2. ✔ differentiable at the origin.

3. ✖ not differentiable at origin.

4. ✖ limit does not exist at origin.

Question Number : 31 Question Id : 82666231 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

फलन $f(x) = x|x|$,

Options :

1. ✖ मूल बिंदु पर संतत नहीं है
2. ✔ मूल बिंदु पर अवकलनीय है
3. ✖ मूल बिंदु पर अवकलनीय नहीं है
4. ✖ मूल बिंदु पर कोई सीमा नहीं है

Question Number : 32 Question Id : 82666232 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If $y = (\sin^{-1}x)^2$ then:

Options :

1. ✔ $(1-x^2)y_{n+2} - (2n+1)xy_{n+1} - n^2y_n = 0$
2. ✖ $(1-x^2)y_{n+2} - (2n+1)xy_{n+1} + n^2y_n = 0$
3. ✖ $(1-x^2)y_{n+2} + (2n+1)xy_{n+1} - n^2y_n = 0$
4. ✖ $(1-x^2)y_{n+2} - (2n-1)xy_{n+1} - n^2y_n = 0$

Question Number : 32 Question Id : 82666232 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि $y = (\sin^{-1}x)^2$ है, तो

Options :

1. ✔ $(1-x^2)y_{n+2} - (2n+1)xy_{n+1} - n^2y_n = 0$
2. ✖ $(1-x^2)y_{n+2} - (2n+1)xy_{n+1} + n^2y_n = 0$
3. ✖ $(1-x^2)y_{n+2} + (2n+1)xy_{n+1} - n^2y_n = 0$
4. ✖ $(1-x^2)y_{n+2} - (2n-1)xy_{n+1} - n^2y_n = 0$

Question Number : 33 Question Id : 82666233 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A triangle of maximum area inscribed in a circle of radius r:

Options :

1. ✖ is a right angled triangle with hypotenuse measuring $2r$
2. ✔ is an equilateral triangle
3. ✖ is an isosceles triangle of height r
4. ✖ does not exist

Question Number : 33 Question Id : 82666233 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक r त्रिज्या वाले वृत्त के अंदर अधिकतम क्षेत्रफल वाला बना त्रिभुज

Options :

- ✘ कर्ण की माप $2r$ वाला एक समकोण त्रिभुज है
- ✔ एक समबाहु त्रिभुज है
- ✘ r की ऊँचाई वाला एक समद्विबाहु त्रिभुज
- ✘ नहीं हो सकता है।

Question Number : 34 Question Id : 82666234 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

For any quadratic function $px^2 + qx + r$ the value of θ in Lagrange's theorem is always:

Options :

- ✔ $\frac{1}{2}$ (whatever p, q, r, a and h may be)
- ✘ 0 (whatever p, q, r, a and h may be)
- ✘ $(a + h)/2$ (whatever p, q, r, a and h may be)
- ✘ $(a-h)/2$ (whatever p, q, r, a and h may be)

Question Number : 34 Question Id : 82666234 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

किसी द्विघात फलन $px^2 + qx + r$ के लिए, लाग्रान्ज परिमेय में θ का मान सदैव होता है:

Options :

- ✔ $\frac{1}{2}$ (p, q, r, a और h कुछ भी हो सकता है।)
- ✘ 0 (p, q, r, a और h कुछ भी हो सकता है।)
- ✘ $(a + h)/2$ (p, q, r, a और h कुछ भी हो सकता है।)
- ✘ $(a - h)/2$ (p, q, r, a और h कुछ भी हो सकता है।)

Question Number : 35 Question Id : 82666235 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The differential equation $(y^2 e^{xy^2} + 6x)dx + (2xye^{xy^2} - 4y)dy = 0$ is:

Options :

- ✘ linear, homogeneous and exact
- ✘ non-linear, homogeneous and exact
- ✔ non-linear, non-homogeneous and exact

4. ✘ non-linear, non-homogeneous and inexact

Question Number : 35 Question Id : 82666235 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

अवकलनीय समीकरण $(y^2 e^{xy} + 6x)dx + (2xye^{xy} - 4y)dy = 0$ है :

Options :

1. ✘ रेखीय, सजातीय, निश्चित
2. ✘ अरेखीय, सजातीय, निश्चित
3. ✔ अरेखीय, विजातीय, निश्चित
4. ✘ अरेखीय, विजातीय, अनिश्चित

Question Number : 36 Question Id : 82666236 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Solving by variation of parameter $y'' - 2y' + y = e^x \log x$, the value of Wronskion W is:

Options :

1. ✔ e^{2x}
2. ✘ 2
3. ✘ e^{-2x}
4. ✘ -2

Question Number : 36 Question Id : 82666236 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

पैरामीटर की विभिन्नता के द्वारा $y'' - 2y' + y = e^x \log x$ को हल करने पर, ब्रोस्कियन W का मान है:

Options :

1. ✔ e^{2x}
2. ✘ 2
3. ✘ e^{-2x}
4. ✘ -2

Question Number : 37 Question Id : 82666237 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The differential equation $f_{xx} + 2f_{xy} + 4f_{yy} = 0$ is classified as:

Options :

1. ✔ elliptic

2. ✖ hyperbolic
3. ✖ parabolic
4. ✖ Circular

Question Number : 37 Question Id : 82666237 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

अवकलनीय समीकरण $f_{xx} + 2f_{xy} + 4f_{yy} = 0$ का वर्गीकरण है:

Options :

1. ✔ दीर्घवृत्तीय
2. ✖ अतिपरवलयीय
3. ✖ परवलयीय
4. ✖ वृत्ताकार

Question Number : 38 Question Id : 82666238 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The solution of the differential equation $\left(x \sin\left(\frac{y}{x}\right)\right) dx - \left(y \sin\left(\frac{y}{x}\right) - x\right) dy = 0$ is:

Options :

1. ✖ $\cos\left(\frac{y}{x}\right) = 0$
2. ✖ $\sin\left(\frac{y}{x}\right) = 0$
3. ✔ $\cos\left(\frac{y}{x}\right) - \log x = c$
4. ✖ $\sin\left(\frac{y}{x}\right) - \log x = c$

Question Number : 38 Question Id : 82666238 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

अवकलनीय समीकरण $\left(x \sin\left(\frac{y}{x}\right)\right) dx - \left(y \sin\left(\frac{y}{x}\right) - x\right) dy = 0$ का हल है:

Options :

1. ✖ $\cos\left(\frac{y}{x}\right) = 0$
2. ✖ $\sin\left(\frac{y}{x}\right) = 0$
3. ✔ $\cos\left(\frac{y}{x}\right) - \log x = c$

4. ✖ $\sin\left(\frac{y}{x}\right) - \log x = c$

Question Number : 39 Question Id : 82666239 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Complimentary function of the differential equation $x^2 \frac{d^2y}{dx^2} + 4x \frac{dy}{dx} + 2y = e^{x^2}$

Options :

1. ✖ $c_1x + c_2x^{-1}$
2. ✔ $c_1x^{-1} + c_2x^{-2}$
3. ✖ $c_1x^{-1} + c_2x^2$
4. ✖ $c_1x + c_2x^2$

Question Number : 39 Question Id : 82666239 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

अवकलनीय समीकरण $x^2 \frac{d^2y}{dx^2} + 4x \frac{dy}{dx} + 2y = e^{x^2}$ का संपूरक फलन है:

Options :

1. ✖ $c_1x + c_2x^{-2}$
2. ✔ $c_1x^{-1} + c_2x^{-2}$
3. ✖ $c_1x^{-1} + c_2x^2$
4. ✖ $c_1x + c_2x^2$

Question Number : 40 Question Id : 82666240 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If $x \in S$ a non-empty set of real numbers, then:

Options :

1. ✖ $\text{Inf } x = \text{Sup}(x)$
2. ✖ $\text{Inf } x = - \text{Sup}(x)$
3. ✖ $\text{Inf } x = \text{Sup}(-x)$
4. ✔ $\text{Inf } x = - \text{Sup}(-x)$

Question Number : 40 Question Id : 82666240 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि $x \in S$ एक वास्तविक संख्याओं का अरिक्त समुच्चय है, तो:

Options :

1. ✖ $\text{Inf } x = \text{Sup}(x)$

2. ✘ $\text{Inf } x = - \text{Sup}(x)$

3. ✘ $\text{Inf } x = \text{Sup}(-x)$

4. ✔ $\text{Inf } x = - \text{Sup}(-x)$

Question Number : 41 Question Id : 82666241 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Which amongst the following expressions is not true?

Options :

1. ✔ $\lim_{n \rightarrow \infty} \frac{3n+2}{n+1} = 1$

2. ✘ $\lim_{n \rightarrow \infty} \frac{1+3+5+\dots+(2n-1)}{n^2} = 1$

3. ✘ $\lim_{n \rightarrow \infty} \frac{3+2\sqrt{n}}{\sqrt{n}} = 2$

4. ✘ $\lim_{n \rightarrow \infty} \sqrt[n]{n} = 1$

Question Number : 41 Question Id : 82666241 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्नलिखित में से कौन सा व्यंजक सही नहीं है?

Options :

1. ✔ $\lim_{n \rightarrow \infty} \frac{3n+2}{n+1} = 1$

2. ✘ $\lim_{n \rightarrow \infty} \frac{1+3+5+\dots+(2n-1)}{n^2} = 1$

3. ✘ $\lim_{n \rightarrow \infty} \frac{3+2\sqrt{n}}{\sqrt{n}} = 2$

4. ✘ $\lim_{n \rightarrow \infty} \sqrt[n]{n} = 1$

Question Number : 42 Question Id : 82666242 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Let $\sum u_n$ be a series of positive terms and let $\lim_{n \rightarrow \infty} u_n^{1/n} = l$, then, which

among the following does not express the condition for the Cauchy's n^{th} root test?

Options :

1. ✘ If $l < 1$, $\sum u_n$ converges

2. ✘ If $l > 1$, $\sum u_n$ diverges

3. ✘ If $l = 1$, the test fails and the series may either converge or diverge

4. ✓ If $l=0$, the series neither converges nor diverges

Question Number : 42 Question Id : 82666242 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

मान लीजिए, $\sum u_n$ एक धनात्मक पदों की एक श्रृंखला है और मान लीजिए $\lim_{n \rightarrow \infty} u_n^{1/n} = l$ है, तो निम्नलिखित में से कौन सा काँची के n वें मूल परीक्षण के लिए परिस्थिति व्यक्त नहीं करता है?

Options :

1. ✗ यदि $l < 1$, $\sum u_n$ अभिसारी है।
2. ✗ यदि $l > 1$, $\sum u_n$, अपसारी है।
3. ✗ यदि $l = 1$ है तो परीक्षण असफल है और श्रृंखला या तो अभिसारी है या अपसारी।
4. ✓ यदि $l = 0$ है, तो श्रृंखला न तो अभिसारी है न ही अपसारी है।

Question Number : 43 Question Id : 82666243 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The value of x for which the following series converges is:

$$x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} + \dots - \infty$$

Options :

1. ✗ the series converges for $x > 1$
2. ✓ the series converges for $-1 < x \leq 1$
3. ✗ the series diverges for $-1 < x < 1$
4. ✗ the series converges for $-1 \leq x \leq 1$

Question Number : 43 Question Id : 82666243 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

x का मान जिसके लिए निम्नलिखित श्रृंखला अभिसारी है:

$$x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} + \dots - \infty$$

Options :

1. ✗ $x > 1$ के लिये श्रृंखला अभिसारी है
2. ✓ $-1 < x \leq 1$ के लिये श्रृंखला अभिसारी है
3. ✗ $-1 < x < 1$ के लिये श्रृंखला अपसारी है
4. ✗ $-1 \leq x \leq 1$ के लिये श्रृंखला अभिसारी है

Question Number : 44 Question Id : 82666244 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If A is a square matrix of order n the inverse A^{-1} exists, if _____.

Options :

1. ✘ 0 is an eigen value of A
2. ✔ 0 is not an eigen value of A
3. ✘ 1 is an eigen value of A
4. ✘ 1 is not an eigen value of A

Question Number : 44 Question Id : 82666244 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि A एक n कोटि का वर्ग आव्यूह है तो इसका प्रतिलोम A^{-1} होता है, यदि:

Options :

1. ✘ 0, A का एक अभिलक्षणिक मान है
2. ✔ 0, A का एक अभिलक्षणिक मान नहीं है
3. ✘ 1, A का एक अभिलक्षणिक मान है
4. ✘ 1, A का एक अभिलक्षणिक मान नहीं है

Question Number : 45 Question Id : 82666245 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If f_1 and f_2 are two linear functionals on vector space V defined as $f_1(a, b) = a + 2b$, $f_2(a, b) = 3a - b$, then $(3f_1 - 4f_2)(a, b)$ is equal to:

Options :

1. ✘ $9a + 10b$
2. ✔ $-9a + 10b$
3. ✘ $a + b$
4. ✘ $2a + 6b$

Question Number : 45 Question Id : 82666245 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि f_1 और f_2 सदिश समष्टि V पर दो रैखिक फलन हैं जो $f_1(a, b) = a + 2b$, $f_2(a, b) = 3a - b$ के रूप में परिभाषित हैं, तो $(3f_1 - 4f_2)(a, b)$, के बराबर हैं:

Options :

1. ✘ $9a + 10b$
2. ✔ $-9a + 10b$
3. ✘ $a + b$
4. ✘ $2a + 6b$

Question Number : 46 Question Id : 82666246 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Let $X = (3, 2, -1)$, $Y = (2, 4, 1)$, $Z = (4, 0, -3)$ and $W = (10, 4, -5)$ be vectors in \mathbb{R}^3 , a real vector space. Which one of the following is correct?

Options :

1. ✘ $2X + Z = W, Y + Z = W$
2. ✔ $2X - Y = Z, Y + 2Z = W$
3. ✘ $X + Z = W, 2X + Y = Z$
4. ✘ $Y + 2Z = W, X - Y = Z$

Question Number : 46 Question Id : 82666246 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

मान लीजिए, \mathbb{R}^3 में $X = (3, 2, -1)$, $Y = (2, 4, 1)$, $Z = (4, 0, -3)$ तथा $W = (10, 4, -5)$ सदिश, एक वास्तविक सदिश समष्टि है। निम्नलिखित में से कौन सा कथन सत्य है?

Options :

1. ✘ $2X + Z = W, Y + Z = W$
2. ✔ $2X - Y = Z, Y + 2Z = W$
3. ✘ $X + Z = W, 2X + Y = Z$
4. ✘ $Y + 2Z = W, X - Y = Z$

Question Number : 47 Question Id : 82666247 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Under which one of the following condition does the system of

equations $\begin{bmatrix} 1 & 2 & 4 \\ 2 & 1 & 2 \\ 1 & 2 & a-4 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 6 \\ 4 \\ a \end{bmatrix}$ have a unique solution?

Options :

1. ✘ For all $a \in \mathbb{R}$
2. ✘ $a = 8$
3. ✘ For all $a \in \mathbb{Z}$
4. ✔ $a \neq 8$

Question Number : 47 Question Id : 82666247 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्नलिखित में से किस परिस्थिति के अंतर्गत समीकरणों की प्रणाली

$\begin{bmatrix} 1 & 2 & 4 \\ 2 & 1 & 2 \\ 1 & 2 & a-4 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 6 \\ 4 \\ a \end{bmatrix}$ का एक अद्वितीय हल है?

Options :

1. ✘ सभी $a \in \mathbb{R}$ के लिये
2. ✘ $a = 8$
3. ✘ सभी $a \in \mathbb{Z}$ के लिये
4. ✔ $a \neq 8$

Question Number : 48 Question Id : 82666248 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Consider the following assertions:

- I. $\text{Rank}(ST) = \text{Rank } S = \text{Rank } T$
- II. $\text{Rank}(ST) = \text{Rank } S$, if T is non-singular
- III. $\text{Rank}(ST) = \text{Rank } T$, if T is non-singular

where $S, T : V \rightarrow V$ are linear transformations of a finite dimensional vector space V . Which of these is/ are correct?

Options :

1. ✘ only I
2. ✔ only II
3. ✘ I and II
4. ✘ II and III

Question Number : 48 Question Id : 82666248 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्नलिखित कथनों पर विचार करें:

- I. $\text{रैंक}(ST) = \text{रैंक } S = \text{रैंक } T$
- II. $\text{रैंक}(ST) = \text{रैंक } S$, यदि T व्युत्क्रमणीय है
- III. $\text{रैंक}(ST) = \text{रैंक } T$, यदि T व्युत्क्रमणीय है

जहाँ $S, T : V \rightarrow V$, परिमित आयामी सदिश समष्टि के लिए एक रैखिक परिवर्तन है। इनमें से कौन सा/से सही हैं?

Options :

1. ✘ केवल I
2. ✔ केवल II
3. ✘ I और II
4. ✘ II और III

Question Number : 49 Question Id : 82666249 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The order of convergence of Newton Raphson method is:

Options :

1. ✓ 2
2. ✗ 0
3. ✗ 3
4. ✗ 1

Question Number : 49 Question Id : 82666249 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

न्यूटन रफसन विधि के अभिसरण का क्रम है:

Options :

1. ✓ 2
2. ✗ 0
3. ✗ 3
4. ✗ 1

Question Number : 50 Question Id : 82666250 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The Gauss Seidal method gives results faster when the pivotal element are:

Options :

1. ✗ smaller than other coefficients
2. ✓ larger than other coefficients
3. ✗ equal to other coefficients
4. ✗ less than equal to other coefficients

Question Number : 50 Question Id : 82666250 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

गॉस साइडेल विधि शीघ्रता से परिणाम प्रदान करती है जब मूलभूत अवयव होते:

Options :

1. ✗ अन्य गुणांकों से छोटे होते हैं
2. ✓ अन्य गुणांकों से बड़े होते हैं
3. ✗ अन्य गुणांकों के बराबर होते हैं
4. ✗ अन्य गुणांकों के बराबर से कम होते हैं

Question Number : 51 Question Id : 82666251 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The value of $f(3)$ from the following table using the Lagrange's formula is:

x	0	1	2	4	5	6
f(x)	1	14	15	5	6	19

Options :

- ✓ 10
- ✗ 10.5
- ✗ 11
- ✗ 11.5

Question Number : 51 Question Id : 82666251 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्नलिखित तालिका में लाग्रान्ज के सूत्र का प्रयोग करने पर $f(3)$ का मान है:

x	0	1	2	4	5	6
f(x)	1	14	15	5	6	19

Options :

- ✓ 10
- ✗ 10.5
- ✗ 11
- ✗ 11.5

Question Number : 52 Question Id : 82666252 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Trapezoidal rule for the evaluation of $\int_a^b f(x)dx$ requires the interval $[a, b]$ to be divided into:

Options :

- ✗ $2n$ subintervals of equal width
- ✗ $2n + 1$ subintervals of equal width
- ✓ any number of subintervals of equal width
- ✗ $3n$ subintervals of equal width

Question Number : 52 Question Id : 82666252 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$\int_a^b f(x)dx$ के मूल्यांकन के लिए समलम्बाकार नियम के अंतराल $[a, b]$ को _____ में विभाजित किए जाने की आवश्यक है:

Options :

1. ✖ बराबर चौड़ाई के $2n$ उप-अन्तराल
2. ✖ बराबर चौड़ाई के $2n + 1$ उप-अन्तराल
3. ✔ बराबर चौड़ाई के किसी भी संख्या में उप-अन्तराल
4. ✖ बराबर चौड़ाई के $3n$ उप-अन्तराल

Question Number : 53 Question Id : 82666253 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The complex numbers $z_1 = 1 + 2i$, $z_2 = 4 - 2i$, $z_3 = 1 - 6i$ form the vertices of a:

Options :

1. ✖ right angled triangle
2. ✔ isosceles triangle
3. ✖ equilateral triangle
4. ✖ scalene triangle

Question Number : 53 Question Id : 82666253 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

सम्मिश्र संख्याएँ $z_1 = 1 + 2i$, $z_2 = 4 - 2i$, $z_3 = 1 - 6i$ किसके शीर्ष बनाते हैं?

Options :

1. ✖ समकोण त्रिभुज
2. ✔ समद्विबाहु त्रिभुज
3. ✖ समबाहु त्रिभुज
4. ✖ विषमबाहु त्रिभुज

Question Number : 54 Question Id : 82666254 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The Cauchy Riemann equations for $f(z) = u(x, y) + iv(x, y)$ to be analytic are:

Options :

1. ✖ $\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} = 0$, $\frac{\partial^2 v}{\partial x^2} + \frac{\partial^2 v}{\partial y^2} = 0$
2. ✖ $\frac{\partial u}{\partial x} = -\frac{\partial v}{\partial y}$, $\frac{\partial u}{\partial y} = -\frac{\partial v}{\partial x}$
3. ✔ $\frac{\partial u}{\partial x} = \frac{\partial v}{\partial y}$, $\frac{\partial u}{\partial y} = -\frac{\partial v}{\partial x}$
4. ✖ $\frac{\partial u}{\partial x} = -\frac{\partial v}{\partial y}$, $\frac{\partial u}{\partial y} = \frac{\partial v}{\partial x}$

Question Number : 54 Question Id : 82666254 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$f(z) = u(x, y) + iv(x, y)$ के कौची रीमान समीकरण होने के लिए विश्लेषणात्मक हैं:

Options :

1. ✘ $\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} = 0, \frac{\partial^2 v}{\partial x^2} + \frac{\partial^2 v}{\partial y^2} = 0$

2. ✘ $\frac{\partial u}{\partial x} = -\frac{\partial v}{\partial y}, \frac{\partial u}{\partial y} = -\frac{\partial v}{\partial x}$

3. ✔ $\frac{\partial u}{\partial x} = \frac{\partial v}{\partial y}, \frac{\partial u}{\partial y} = -\frac{\partial v}{\partial x}$

4. ✘ $\frac{\partial u}{\partial x} = -\frac{\partial v}{\partial y}, \frac{\partial u}{\partial y} = \frac{\partial v}{\partial x}$

Question Number : 55 Question Id : 82666255 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If $f(z)$ is analytic in a simply connected domain D , then for every closed path C in D :

Options :

1. ✔ $\oint_C f(z) dz = 0$

2. ✘ $\oint_C f(z) dz = 1$

3. ✘ $\oint_C f(z) dz \neq 0$

4. ✘ $\oint_C f(z) dz \neq 1$

Question Number : 55 Question Id : 82666255 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि $f(z)$, एक पूरी तरह से जुड़े हुए डोमेन D में एक विश्लेषणात्मक (analytic) है, तो D में प्रत्येक बंद पथ C के लिए:

Options :

1. ✔ $\oint_C f(z) dz = 0$

2. ✘ $\oint_C f(z) dz = 1$

3. ✘ $\oint_C f(z) dz \neq 0$

4. ✘ $\oint_C f(z) dz \neq 1$

Question Number : 56 Question Id : 82666256 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The series $\sum_{n=1}^{\infty} \frac{z^n}{n\sqrt{n+1}}$, $|z| \leq 1$ is:

Options :

1. ✘ uniformly but not absolutely convergent
2. ✔ uniformly and absolutely convergent
3. ✘ absolutely convergent but not uniformly convergent
4. ✘ convergent but not uniformly

Question Number : 56 Question Id : 82666256 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

श्रृंखला $\sum_{n=1}^{\infty} \frac{z^n}{n\sqrt{n+1}}$, $|z| \leq 1$ है:

Options :

1. ✘ सर्वसम, परन्तु पूर्णतया अभिसरण नहीं है
2. ✔ सर्वसम और पूर्णतया अभिसरण है
3. ✘ पूर्णतया अभिसरण है परन्तु सर्वसम अभिसरण नहीं है
4. ✘ अभिसरण है परन्तु सर्वसम नहीं

Question Number : 57 Question Id : 82666257 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$\int \frac{dx}{(x+1)^2(x^2+1)} =$

Options :

1. ✘ $\frac{1}{2} \log(x+1) + \frac{1}{2(x+1)} - \frac{1}{4} \log(x^2+1)$
2. ✘ $\frac{1}{2} \log(x+1) - \frac{1}{2(x+1)} + \frac{1}{4} \log(x^2+1)$
3. ✘ $\frac{1}{2} \log(x+1) + \frac{1}{2(x+1)} + \frac{1}{4} \log(x^2+1)$
4. ✔ $\frac{1}{2} \log(x+1) - \frac{1}{2(x+1)} - \frac{1}{4} \log(x^2+1)$

Question Number : 57 Question Id : 82666257 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$\int \frac{dx}{(x+1)^2(x^2+1)} =$

Options :

1. ✖ $\frac{1}{2} \log(x+1) + \frac{1}{2(x+1)} - \frac{1}{4} \log(x^2+1)$

2. ✖ $\frac{1}{2} \log(x+1) - \frac{1}{2(x+1)} + \frac{1}{4} \log(x^2+1)$

3. ✖ $\frac{1}{2} \log(x+1) + \frac{1}{2(x+1)} + \frac{1}{4} \log(x^2+1)$

4. ✔ $\frac{1}{2} \log(x+1) - \frac{1}{2(x+1)} - \frac{1}{4} \log(x^2+1)$

Question Number : 58 Question Id : 82666258 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The value of $\int_0^{\pi/2} \sin^7 x \cos^4 x dx$ is equal to:

Options :

1. ✖ $\frac{16}{1515}$

2. ✔ $\frac{16}{1155}$

3. ✖ $\frac{16}{1551}$

4. ✖ $\frac{16}{5115}$

Question Number : 58 Question Id : 82666258 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$\int_0^{\pi/2} \sin^7 x \cos^4 x dx$ का मान किसके बराबर है?

Options :

1. ✖ $\frac{16}{1515}$

2. ✔ $\frac{16}{1155}$

3. ✖ $\frac{16}{1551}$

4. ✖ $\frac{16}{5115}$

Question Number : 59 Question Id : 82666259 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The area bounded by the parabola $y^2 = 4ax$ and its latus rectum is equal to:

Options :

1. ✖ $\frac{8}{3}\pi a^2$
2. ✖ $\frac{7}{3}a^2$
3. ✔ $\frac{8}{3}a^2$
4. ✖ $\frac{8}{3}(a^2 + 1)$

Question Number : 59 Question Id : 82666259 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

परवलय $y^2 = 4ax$ से घिरे क्षेत्रफल और इसकी नाभिलंब जीवा किसके बराबर है?

Options :

1. ✖ $\frac{8}{3}\pi a^2$
2. ✖ $\frac{7}{3}a^2$
3. ✔ $\frac{8}{3}a^2$
4. ✖ $\frac{8}{3}(a^2 + 1)$

Question Number : 60 Question Id : 82666260 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The value of $\iint r \sin \theta dr d\theta$ over the cardioid $r = a(1 - \cos \theta)$ above the initial line is:

Options :

1. ✔ $\frac{4}{3}a^2$
2. ✖ $\frac{8}{3}a^2$
3. ✖ $\frac{4}{3}\pi a^2$
4. ✖ $\frac{8}{3}\pi a^2$

Question Number : 60 Question Id : 82666260 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

प्रारंभिक रेखा से ऊपर कार्डायोड $r = a(1 - \cos \theta)$ से अधिक $\iint r \sin \theta dr d\theta$ का मान है:

Options :

1. ✓ $\frac{4}{3}a^2$

2. ✗ $\frac{8}{3}a^2$

3. ✗ $\frac{4}{3}\pi a^2$

4. ✗ $\frac{8}{3}\pi a^2$

English Language

Section Id :	8266622
Section Number :	2
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	17
Number of Questions to be attempted:	17
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	8266622
Question Shuffling Allowed :	Yes

Question Number : 61 Question Id : 82666261 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the word that is closest in meaning to the word in capitals.

SUPERFICIAL

Options :

1. ✗ Artificial

2. ✗ Fake

3. ✓ Shallow

4. ✗ Stupid

Question Number : 61 Question Id : 82666261 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the word that is closest in meaning to the word in capitals.

SUPERFICIAL

Options :

1. ✗ Artificial

2. ✗ Fake

3. ✓ Shallow

4. ✗ Stupid

Question Number : 62 Question Id : 82666262 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the word that is opposite in meaning to the word in capitals.

COMMON

Options :

1. ✗ Regular

2. ✓ Rare

3. ✗ Priceless

4. ✗ Worthless

Question Number : 62 Question Id : 82666262 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the word that is opposite in meaning to the word in capitals.

COMMON

Options :

1. ✗ Regular

2. ✓ Rare

3. ✗ Priceless

4. ✗ Worthless

Question Number : 63 Question Id : 82666263 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the word that best defines the phrase.

Giving undue favours to one's own kith and kin

Options :

1. ✓ Nepotism

2. ✗ Favouritism

3. ✗ Jingoism

4. ✗ Patriotism

Question Number : 63 Question Id : 82666263 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the word that best defines the phrase.

Giving undue favours to one's own kith and kin

Options :

1. ✓ nepotism

2. ✖ favouritism

3. ✖ jingoism

4. ✖ patriotism

Question Number : 64 Question Id : 82666264 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the correct spelling of the word to complete the sentence.

_____ means to be steady and persistent in one's course of action.

Options :

1. ✖ Perserverance

2. ✖ Perservance

3. ✔ Perseverance

4. ✖ Persaverance

Question Number : 64 Question Id : 82666264 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the correct spelling of the word to complete the sentence.

_____ means to be steady and persistent in one's course of action.

Options :

1. ✖ perserverance

2. ✖ perservance

3. ✔ perseverance

4. ✖ persaverance

Question Number : 65 Question Id : 82666265 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase that best expresses the meaning of the underlined idiom.

It's no secret that he got elected by playing to the gallery.

Options :

1. ✖ influencing the public

2. ✖ performing cheap tricks

3. ✔ appealing to popular taste

4. ✖ entertaining people

Question Number : 65 Question Id : 82666265 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase that best expresses the meaning of the underlined idiom.

It's no secret that he got elected by playing to the gallery.

Options :

1. ✘ influencing the public
2. ✘ performing cheap tricks
3. ✔ appealing to popular taste
4. ✘ entertaining people

Question Number : 66 Question Id : 82666266 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrasal verb that best completes the sentence.

Parents often worry about their teenage children _____ a huge phone bill.

Options :

1. ✔ running up
2. ✘ building up
3. ✘ ending up
4. ✘ making up

Question Number : 66 Question Id : 82666266 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrasal verb that best completes the sentence.

Parents often worry about their teenage children _____ a huge phone bill.

Options :

1. ✔ running up
2. ✘ building up
3. ✘ ending up
4. ✘ making up

Question Id : 82666267 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (67 to 70)

Question Label : Comprehension

Given below is a passage with four blanks. For each blank, four alternatives are provided. Select one of them to fill each blank.

No one can _____ (1) when an earthquake will occur. Some earthquakes are _____ (2) felt and cause little damage. Others are disastrous and the damage is extensive. However, buildings are stronger today and emergency crews are _____ (3) quickly. These actions help lessen the losses _____ (4) by earthquakes.

Sub questions

Question Number : 67 Question Id : 82666268 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (1) by choosing the best option.

Options :

1. ✓ forecast
2. ✗ predict
3. ✗ think
4. ✗ plan

Question Number : 68 Question Id : 82666269 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (2) by choosing the best option.

Options :

1. ✗ hardly
2. ✗ strongly
3. ✗ easily
4. ✓ barely

Question Number : 69 Question Id : 82666270 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (3) by choosing the best option.

Options :

1. ✗ brought up
2. ✓ put in place
3. ✗ set up
4. ✗ drawn up

Question Number : 70 Question Id : 82666271 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (4) by choosing the best option.

Options :

1. ✓ caused
2. ✗ that will be caused
3. ✗ are caused
4. ✗ that is caused

Question Id : 82666267 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (67 to 70)

Question Label : Comprehension

Given below is a passage with four blanks. For each blank, four alternatives are provided. Select one of them to fill each blank.

No one can _____ (1) when an earthquake will occur. Some earthquakes are _____ (2) felt and cause little damage. Others are disastrous and the damage is extensive. However, buildings are stronger today and emergency crews are _____ (3) quickly. These actions help lessen the losses _____ (4) by earthquakes.

Sub questions

Question Number : 67 Question Id : 82666268 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (1) by choosing the best option.

Options :

1. forecast
2. predict
3. think
4. plan

Question Number : 68 Question Id : 82666269 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (2) by choosing the best option.

Options :

1. hardly
2. strongly
3. easily
4. barely

Question Number : 69 Question Id : 82666270 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (3) by choosing the best option.

Options :

1. brought up
2. put in place
3. set up
4. drawn up

Question Number : 70 Question Id : 82666271 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (4) by choosing the best option.

Options :

1. ✓ caused
2. ✗ that will be caused
3. ✗ are caused
4. ✗ that is caused

Question Number : 71 Question Id : 82666272 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Fill in the blanks with the word that best completes the sentence.

Shilpa was so _____ that she didn't realize that the milk had boiled over.

Options :

1. ✓ preoccupied
2. ✗ absorbed
3. ✗ distracted
4. ✗ confused

Question Number : 71 Question Id : 82666272 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Fill in the blanks with the word that best completes the sentence.

Shilpa was so _____ that she didn't realize that the milk had boiled over.

Options :

1. ✓ preoccupied
2. ✗ absorbed
3. ✗ distracted
4. ✗ confused

Question Number : 72 Question Id : 82666273 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Choose the word which is closest to the meaning of the underlined word.

The team of intrepid explorers made their way across the frozen Arctic.

Options :

1. ✗ curious
2. ✗ strong
3. ✓ brave
4. ✗ fearful

Question Number : 72 Question Id : 82666273 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Choose the word which is closest to the meaning of the underlined word.

The team of intrepid explorers made their way across the frozen Arctic.

Options :

1. ✘ curious
2. ✘ strong
3. ✔ brave
4. ✘ fearful

Question Number : 73 Question Id : 82666274 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

*Given below are four-sentence paragraphs (S1-S4). S1 and S4 are given.
From the options (P, Q, R) choose two sentences which can be S2 and S3.*

S1: Twitter is fast building up a whole new vocabulary.

S2: _____

S3: _____

S4: With over 25 million users accessing Twitter, it does not come as a surprise that virtual is fast becoming real.

P: The phenomenon reflects the rise of social networking and its influence on popular culture.

Q: Words like - "Tweetheart"; a user admired by many, and 'tweet tooth,' a strong desire to send a tweet - have made it to the dictionary.

R: Publishers of Collins dictionary have added dozens of new words to its latest edition, thanks to the social networking site.

Options :

1. ✘ PQ
2. ✔ RP
3. ✘ QR
4. ✘ RQ

Question Number : 73 Question Id : 82666274 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Given below are four-sentence paragraphs (S1-S4). S1 and S4 are given.
From the options (P, Q, R) choose two sentences which can be S2 and S3.

S1: Twitter is fast building up a whole new vocabulary.

S2: _____

S3: _____

S4: With over 25 million users accessing Twitter, it does not come as a surprise that virtual is fast becoming real.

P: The phenomenon reflects the rise of social networking and its influence on popular culture.

Q: Words like - "Tweethart"; a user admired by many, and 'tweet tooth,' a strong desire to send a tweet -have made it to the dictionary.

R: Publishers of Collins dictionary have added dozens of new words to its latest edition, thanks to the social networking site.

Options :

1. ✘ PQ
2. ✔ RP
3. ✘ QR
4. ✘ RQ

Question Number : 74 Question Id : 82666275 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Given below are four-sentence paragraphs (S1-S4). S1 and S4 are given.

From the options (P, Q, R) choose two sentences which can be S2 and S3.

S1: In January 1991, police arrested a man for selling magic pencils for \$225 each.

S2: _____

S3: _____

S4: These would make the computers mark wrong answers as correct.

P. According to him, the pencils contained electronic signals which would confuse the computers marking the exams.

Q. The pencils, the man claimed, would automatically produce correct answers in university entrance exams.

R. Dozens of students who had bought the pencils complained that the magic hadn't worked for them.

Options :

1. ✘ PQ
2. ✘ PR

3. ✖ RQ

4. ✔ QP

Question Number : 74 Question Id : 82666275 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Given below are four-sentence paragraphs (S1-S4). S1 and S4 are given. From the options (P, Q, R) choose two sentences which can be S2 and S3.

S1: In January 1991, police arrested a man for selling magic pencils for \$225 each.

S2: _____

S3: _____

S4: These would make the computers mark wrong answers as correct.

P. According to him, the pencils contained electronic signals which would confuse the computers marking the exams.

Q. The pencils, the man claimed, would automatically produce correct answers in university entrance exams.

R. Dozens of students who had bought the pencils complained that the magic hadn't worked for them.

Options :

1. ✖ PQ

2. ✖ PR

3. ✖ RQ

4. ✔ QP

Question Number : 75 Question Id : 82666276 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that best completes the sentence.

The motion to increase pay, _____ was widely praised.

Options :

1. ✔ which was passed unanimously

2. ✖ which will be passed unanimously

3. ✖ has been passed unanimously

4. ✖ that could be passed unanimously

Question Number : 75 Question Id : 82666276 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that best completes the sentence.

The motion to increase pay, _____ was widely praised.

Options :

1. ✓ which was passed unanimously
2. ✗ which will be passed unanimously
3. ✗ has been passed unanimously
4. ✗ that could be passed unanimously

Question Number : 76 Question Id : 82666277 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Anita: What about our plans for the weekend?

Mehta: Everything set. But if Anna comes to know about it, _____

Options :

1. ✗ the whole thing should be ruined.
2. ✗ the whole thing has to be ruined.
3. ✓ the whole thing could be ruined.
4. ✗ the whole thing must be ruined.

Question Number : 76 Question Id : 82666277 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Anita: What about our plans for the weekend?

Mehta: Everything set. But if Anna comes to know about it, _____

Options :

1. ✗ the whole thing should be ruined.
2. ✗ the whole thing has to be ruined.
3. ✓ the whole thing could be ruined.
4. ✗ the whole thing must be ruined.

Question Number : 77 Question Id : 82666278 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

_____ my fellow employees. I would like to thank the management for the support they have given us in organizing the event.

Options :

1. ✓ On behalf of
2. ✗ On the behalf of
3. ✗ From the behalf
4. ✗ From the behalf of

Question Number : 77 Question Id : 82666278 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

_____ my fellow employees, I would like to thank the management for the support they have given us in organizing the event.

Options :

1. ✓ On behalf of
2. ✗ On the behalf of
3. ✗ From the behalf
4. ✗ From the behalf of

Question Number : 78 Question Id : 82666279 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

It is important for the president _____ seen as a threat.

Options :

1. ✗ to not be
2. ✗ not being
3. ✓ not to be
4. ✗ that she wasn't

Question Number : 78 Question Id : 82666279 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

It is important for the president _____ seen as a threat.

Options :

1. ✗ to not be
2. ✗ not being
3. ✓ not to be
4. ✗ that she wasn't

Question Number : 79 Question Id : 82666280 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that could replace the underlined section.

When I turn forty five, I will be a doctor for twenty years.

Options :

1. ✗ would have been a doctor for twenty years.
2. ✓ will have been a doctor for twenty years.
3. ✗ shall be a doctor for twenty years.
4. ✗ would be a doctor for twenty years.

Question Number : 79 Question Id : 82666280 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that could replace the underlined section.

When I turn forty five, I will be a doctor for twenty years.

Options :

1. ✘ would have been a doctor for twenty years.
2. ✔ will have been a doctor for twenty years.
3. ✘ shall be a doctor for twenty years.
4. ✘ would be a doctor for twenty years.

Question Number : 80 Question Id : 82666281 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that could replace the underlined section.

Although we had tickets, we will be kept waiting for an hour.

Options :

1. ✘ had kept waiting
2. ✘ had been kept waiting
3. ✘ had been made to keep waiting
4. ✔ were kept waiting

Question Number : 80 Question Id : 82666281 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Although we had tickets, we will be kept waiting for an hour.

Options :

1. ✘ had kept waiting
2. ✘ had been kept waiting
3. ✘ had been made to keep waiting
4. ✔ were kept waiting

General Intelligence / Reasoning

Section Id :	8266623
Section Number :	3
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	15
Number of Questions to be attempted:	15
Section Marks:	15
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number: 1
Sub-Section Id: 8266623
Question Shuffling Allowed : Yes

Question Number : 81 Question Id : 82666282 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

What is related to 'Bus' in the same way as 'Rail' is related to 'Train'?

Options :

1. ✘ Passenger
2. ✔ Road
3. ✘ Bus stand
4. ✘ Conductor

Question Number : 81 Question Id : 82666282 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

जिस प्रकार 'रेल' से 'ट्रेन' संबंधित है उसी प्रकार 'बस' से क्या संबंधित है?

Options :

1. ✘ यात्री
2. ✔ सड़क
3. ✘ बस स्टैंड
4. ✘ परिचालक

Question Number : 82 Question Id : 82666283 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the related word from the given alternatives

Shoe : leather :: Table : ?

Options :

1. ✘ Chair
2. ✘ Desk
3. ✔ Wood
4. ✘ Carpenter

Question Number : 82 Question Id : 82666283 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

दिए गए विकल्पों से संबंधित शब्द का चयन करें।

जूते : चमड़ा :: मेज़ : ?

Options :

1. ✘ कुर्सी
2. ✘ डेस्क
3. ✔ लकड़ी
4. ✘ बढई

Question Number : 83 Question Id : 82666284 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the related number from the given alternatives

15 : 105 :: 17 : ?

Options :

1. ✔ 119
2. ✘ 126
3. ✘ 136
4. ✘ 153

Question Number : 83 Question Id : 82666284 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

दिए गए विकल्पों से संबंधित संख्या का चयन करें।

15 : 105 :: 17 : ?

Options :

1. ✔ 119
2. ✘ 126
3. ✘ 136
4. ✘ 153

Question Number : 84 Question Id : 82666285 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the one which is different from the other three alternatives.

Options :

1. ✘ Bangle
2. ✘ Ring
3. ✘ Necklace
4. ✔ Diamond

Question Number : 84 Question Id : 82666285 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

किसी एक का चयन करें जो अन्य तीन विकल्पों से अलग है।

Options :

1. ✘ चूड़ी
2. ✘ अंगूठी
3. ✘ हार
4. ✔ हीरा

Question Number : 85 Question Id : 82666286 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A class of boys stands in a single line. One boy is 22nd in order from both the ends. How many boys are there in the class?

Options :

1. ✘ 42
2. ✔ 43
3. ✘ 44
4. ✘ 45

Question Number : 85 Question Id : 82666286 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक कक्षा के विद्यार्थी एक सीधी रेखा में खड़े हैं। एक लड़के का क्रम दोनो छोर से 22 वाँ है। कक्षा में कितने लड़के हैं?

Options :

1. ✘ 42
2. ✔ 43
3. ✘ 44
4. ✘ 45

Question Number : 86 Question Id : 82666287 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Introducing a boy, Anita said, "He is the son of the only child of my grandfather." How is Anita related to that boy?

Options :

1. ✔ Sister
2. ✘ Cousin
3. ✘ Aunt
4. ✘ Niece

Question Number : 86 Question Id : 82666287 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक लड़के का परिचय कराते हुए अनीता कहती है, "वह मेरे दादा के इकलौते बच्चे का बेटा है।" अनीता उस लड़के से किस प्रकार संबंधित है?

Options :

1. ✓ बहन
2. ✗ कज़न
3. ✗ बुआ
4. ✗ भांजी

Question Number : 87 Question Id : 82666288 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If in a certain code language, UTENSIL is coded as WVGPUKN, how will TRIANGLE be coded in the same language?

Options :

1. ✗ USJBOHMF
2. ✗ SQHZMFKD
3. ✓ VTKCPING
4. ✗ VTKBOHNG

Question Number : 87 Question Id : 82666288 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि किसी विशेष कोड भाषा में UTENSIL को WVGPUKN के रूप में कोडित किया जाता है, तो उसी कोड भाषा में TRIANGLE को किस प्रकार कोडित किया जायेगा?

Options :

1. ✗ USJBOHMF
2. ✗ SQHZMFKD
3. ✓ VTKCPING
4. ✗ VTKBOHNG

Question Number : 88 Question Id : 82666289 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

From the alternatives, select the word that cannot be formed using the letters in the given word.

Given Word: INDUSTRY

Options :

1. ✗ STUDY
2. ✓ DUSTER
3. ✗ TURN
4. ✗ DRY

Question Number : 88 Question Id : 82666289 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्न विकल्पों में उस शब्द का चुनाव करें जो दिये गए शब्द के अक्षरों से नहीं बन सकता है।
दिया गया शब्द: INDUSTRY

Options :

1. ✘ STUDY
2. ✔ DUSTER
3. ✘ TURN
4. ✘ DRY

Question Number : 89 Question Id : 82666290 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Today Ravi came late to the school. Suman came twenty minutes later but Ajay reached five minutes before Ravi's arrival. Shrikant reached two minutes before Suman reached the school. Who was the last to reach the school?

Options :

1. ✘ Srikant
2. ✘ Ravi
3. ✘ Ajay
4. ✔ Suman

Question Number : 89 Question Id : 82666290 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

आज रवि विद्यालय देर से पहुँचा है, सुमन उसके 20 मिनट बाद आयी है और अजय रवि से 5 मिनट पहले आया है, श्रीकांत सुमन से 2 मिनट पहले पहुँचा है। विद्यालय में सबसे देरी से कौन आया है?

Options :

1. ✘ श्रीकांत
2. ✘ रवि
3. ✘ अजय
4. ✔ सुमन

Question Number : 90 Question Id : 82666291 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Arrange the following words in a meaningful order (ascending Order)

1. Point 2. Triangle 3. Square 4. Angle 5. Line

Options :

1. ✔ 1, 5, 4, 2, 3
2. ✘ 2, 1, 4, 5, 3

3. ✘ 3, 2, 1, 5, 4

4. ✘ 4, 1, 5, 2, 3

Question Number : 90 Question Id : 82666291 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्नलिखित शब्दों की एक सार्थक क्रम में व्यवस्था करें।
आरोही क्रम में:

1. बिंदु 2. त्रिभुज 3. वर्ग 4. कोण 5. रेखा

Options :

1. ✔ 1, 5, 4, 2, 3

2. ✘ 2, 1, 4, 5, 3

3. ✘ 3, 2, 1, 5, 4

4. ✘ 4, 1, 5, 2, 3

Question Number : 91 Question Id : 82666292 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Choose the correct alternative that will complete the given series.

110, 99, 86, 71, 54, ?

Options :

1. ✘ 39

2. ✘ 37

3. ✔ 35

4. ✘ 33

Question Number : 91 Question Id : 82666292 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्न में से सही विकल्प को चुनें जो दी गई श्रृंखला को पूरा करेगा।

110, 99, 86, 71, 54, ?

Options :

1. ✘ 39

2. ✘ 37

3. ✔ 35

4. ✘ 33

Question Number : 92 Question Id : 82666293 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Choose the Correct alternative that will complete the given series

FIL, HKN, JMP, ?

Options :

1. ✘ LOM
2. ✘ LON
3. ✘ LOQ
4. ✔ LOR

Question Number : 92 Question Id : 82666293 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्न में से सही विकल्प को चुनें जो दी गई श्रृंखला को पूरा करेगा।
FIL, HKN, JMP, ?

Options :

1. ✘ LOM
2. ✘ LON
3. ✘ LOQ
4. ✔ LOR

Question Number : 93 Question Id : 82666294 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

What is related to 'Bird' in the same way as 'House' is related to 'Man'?

Options :

1. ✘ Wings
2. ✘ Hole
3. ✔ Nest
4. ✘ Sky

Question Number : 93 Question Id : 82666294 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

जिस प्रकार 'पुरुष' से 'घर' संबंधित है उसी प्रकार 'पक्षी' से क्या संबंधित है?

Options :

1. ✘ पंख
2. ✘ छिद्र
3. ✔ घोंसला
4. ✘ आकाश

Question Number : 94 Question Id : 82666295 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the relative word from the given alternatives.

Breathe : Nose :: Walk : ?

Options :

1. ✘ Pavement
2. ✔ Foot
3. ✘ Crutch
4. ✘ Walking stick

Question Number : 94 Question Id : 82666295 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

दिए गए विकल्पों में से संबंधित शब्द का चयन करें।

साँस लेना : नाक :: चलना : ?

Options :

1. ✘ पटरी
2. ✔ पैर
3. ✘ बैसाखी
4. ✘ सहारे की छड़ी

Question Number : 95 Question Id : 82666296 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the related number from the given alternatives.

62 : 30 :: 84 : ?

Options :

1. ✔ 41
2. ✘ 42
3. ✘ 43
4. ✘ 44

Question Number : 95 Question Id : 82666296 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

दिए गए विकल्पों में से संबंधित संख्या का चयन करें।

62 : 30 :: 84 : ?

Options :

1. ✔ 41
2. ✘ 42
3. ✘ 43
4. ✘ 44

General Aptitude/Numerical Ability

Section Id :	8266624
Section Number :	4
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	15
Number of Questions to be attempted:	15
Section Marks:	15
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	8266624
Question Shuffling Allowed :	Yes

Question Number : 96 Question Id : 82666297 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The sum of first 12 terms of the series

$$1^2 + (1^2 + 2^2) + (1^2 + 2^2 + 3^2) + \underline{\hspace{2cm}} \text{ is}$$

Options :

- 1372
- 2028
- 2197
- 2366

Question Number : 96 Question Id : 82666297 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

श्रेणी $1^2 + (1^2+2^2) + (1^2+2^2+3^2)+ \underline{\hspace{2cm}}$ के प्रथम 12 पदों का योग है।

Options :

- 1372
- 2028
- 2197
- 2366

Question Number : 97 Question Id : 82666298 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The first seven terms of an arithmetic progression are $7x+4$, $9y$, $7z-6$, $4x+10$, $3k$, $3x-6$, and $k+12$.

The second, fifth and seventh terms of this progression form an infinite geometric progression. The sum of the terms of this geometric progression is:

Options :

- 106

2. ✖ 126

3. ✔ 162

4. ✖ 180

Question Number : 97 Question Id : 82666298 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

किसी समांतर श्रेणी के प्रथम सात पद हैं:

$7x + 4$, $9y$, $7z + 6$, $4x + 10$, $3k$, $3x + 6$ और $k + 12$.

इस श्रेणी का दूसरा, पाँचवाँ और सातवाँ पद एक अनन्त गुणोत्तर श्रेणी बनाते हैं। इस गुणोत्तर श्रेणी का योग है:

Options :

1. ✖ 106

2. ✖ 126

3. ✔ 162

4. ✖ 180

Question Number : 98 Question Id : 82666299 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If the 7th term of an arithmetic progression is $\frac{1}{9}$ and its 9th term is $\frac{1}{7}$, then its 63rd term is:

Options :

1. ✔ 1

2. ✖ 2

3. ✖ 3

4. ✖ 8

Question Number : 98 Question Id : 82666299 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि किसी समांतर श्रेणी का सातवाँ पद $\frac{1}{9}$ और नवाँ पद $\frac{1}{7}$ है, तो इसका 63 वाँ पद है:

Options :

1. ✔ 1

2. ✖ 2

3. ✖ 3

4. ✖ 8

Question Number : 99 Question Id : 826662100 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The sum of the values of x for which

$$7^{1+x} + 7^{1-x} = 50, \text{ is}$$

Options :

1. ✘ -2
2. ✘ -1
3. ✔ 0
4. ✘ 2

Question Number : 99 Question Id : 826662100 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

X के उन सभी मानों का योग, जिसके लिए

$$7^{1+x} + 7^{1-x} = 50 \text{ है, निम्न है:}$$

Options :

1. ✘ -2
2. ✘ -1
3. ✔ 0
4. ✘ 2

Question Number : 100 Question Id : 826662101 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The expression $\left[\frac{1}{1-x} + \frac{3-5x^2}{1-x^2} - \frac{4+5x}{1+x+x^2} \right] \times \frac{x^2-1}{2x^2}$, where $x > 1$, is equal to:

Options :

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

Question Number : 100 Question Id : 826662101 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

व्यंजक $\left[\frac{1}{1-x} + \frac{3-5x^2}{1-x^2} - \frac{4+5x}{1+x+x^2} \right] \times \frac{x^2-1}{2x^2}$, जहाँ $x > 1$, बराबर है:

Options :

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

Question Number : 101 Question Id : 826662102 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If $x^2 = y + z$, $y^2 = z + x$ and $z^2 = x + y$, then the value of $\sqrt{\frac{1}{1+x} + \frac{1}{1+y} + \frac{1}{1+z}}$ is

Options :

1. ✘ ± 1
2. ✔ 1
3. ✘ 2
4. ✘ ± 2

Question Number : 101 Question Id : 826662102 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि $x^2 = y + z$, $y^2 = z + x$ और $z^2 = x + y$ है, तो

$\sqrt{\frac{1}{1+x} + \frac{1}{1+y} + \frac{1}{1+z}}$ का मान है:

Options :

1. ✘ ± 1
2. ✔ 1
3. ✘ 2
4. ✘ ± 2

Question Number : 102 Question Id : 826662103 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A spherical balloon of radius r metres subtends an angle θ at the eye of an observer. If the angle of elevation of its centre is α , then the height of the centre of the balloon is:

Options :

1. ✔ $r \sin \alpha \operatorname{cosec} \frac{\theta}{2}$
2. ✘ $r \sin \frac{\alpha}{2} \operatorname{cosec} \theta$
3. ✘ $r \sin \theta \operatorname{cosec} \frac{\alpha}{2}$
4. ✘ $r \sin \frac{\theta}{2} \operatorname{cosec} \alpha$

Question Number : 102 Question Id : 826662103 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक गोलाकार गुब्बारा जिसकी त्रिज्या r मीटर है, प्रेक्षक की आँख पर कोण θ अंतरित करता है। यदि इसके केंद्र का उन्नयन कोण α है, तो गुब्बारे के केंद्र की ऊंचाई है:

Options :

1. ✓ $r \sin \alpha \operatorname{cosec} \frac{\theta}{2}$
2. ✗ $r \sin \frac{\alpha}{2} \operatorname{cosec} \theta$
3. ✗ $r \sin \theta \operatorname{cosec} \frac{\alpha}{2}$
4. ✗ $r \sin \frac{\theta}{2} \operatorname{cosec} \alpha$

Question Number : 103 Question Id : 826662104 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The monthly incomes of A and B are Rs. 60000 and Rs. 48000 respectively. A saves $33\frac{1}{3}\%$ of his income and B spends 60% of his income. By what percent should A's savings be increased such that the ratio of expenditures of A and B gets reversed?

Options :

1. ✗ 66.67
2. ✗ 86.56
3. ✗ 93.33
4. ✓ 96.32

Question Number : 103 Question Id : 826662104 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A और B की मासिक आय क्रमशः ₹ 60000 और ₹ 48000 है। A अपनी आय का $33\frac{1}{3}\%$ बचाता है और B अपनी आय का 60% व्यय करता है। A की बचत में कितने प्रतिशत की वृद्धि की जाए ताकि A और B के व्ययों का अनुपात उलट जाए?

Options :

1. ✗ 66.67
2. ✗ 86.56
3. ✗ 93.33
4. ✓ 96.32

Question Number : 104 Question Id : 826662105 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The price of an article increases by 10% every year. If the difference between the prices at the end of the 3rd year and the 4th year was Rs. 423.5, what was the price of the article at the end of second year?

Options :

1. ✖ Rs 3465.9
2. ✔ Rs 3850
3. ✖ Rs 4235
4. ✖ Rs 4658.5

Question Number : 104 Question Id : 826662105 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

किसी वस्तु की मूल्य में प्रतिवर्ष 10% की वृद्धि होती है। यदि इस वस्तु के तीसरे और चौथे वर्ष के मूल्य में अंतर रु 423.5 था, तो वस्तु का मूल्य दूसरे वर्ष के अंत में क्या था?

Options :

1. ✖ रु 3456.9
2. ✔ रु 3850
3. ✖ रु 4235
4. ✖ रु 4658.5

Question Number : 105 Question Id : 826662106 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If the difference between the cost price and selling price of an article is Rs. x and the loss incurred is $y\%$, then the selling price of the article (in Rupees) is:

Options :

1. ✖ $(50-y) \left(\frac{x}{y}\right)$
2. ✖ $(50+y) \left(\frac{x}{y}\right)$
3. ✔ $(100-y) \left(\frac{x}{y}\right)$
4. ✖ $(100-y) \left(\frac{y}{x}\right)$

Question Number : 105 Question Id : 826662106 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि किसी वस्तु के क्रयमूल्य और विक्रयमूल्य में अंतर रु x है, और जो हानि हुई वह $y\%$ है, तो वस्तु का विक्रय मूल्य (रु में) है:

Options :

1. ✖ $(50 - y) \left(\frac{x}{y}\right)$
2. ✖ $(50 + y) \left(\frac{x}{y}\right)$
3. ✔ $(100 - y) \left(\frac{x}{y}\right)$

4. ✘ $(100 - y) \left(\frac{y}{x}\right)$

Question Number : 106 Question Id : 826662107 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The profit percent of A and B is the same for selling an article for Rs. 8400 each, but A calculated his profit on the selling price while B calculated it on its cost price, which is equal to $33\frac{1}{3}\%$. The sum of their profit (in Rs.) is

Options :

1. ✘ Rs 2100
2. ✘ Rs 2800
3. ✘ Rs 3500
4. ✔ Rs 4900

Question Number : 106 Question Id : 826662107 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक वस्तु को अलग अलग रू 8400 में बेचने पर A और B का लाभ प्रतिशत समान हैं, लेकिन A ने अपना लाभ वस्तु के विक्रय मूल्य पर तथा B ने उसे क्रय मूल्य पर परिकल्पित किया, जो कि $33\frac{1}{3}\%$ के बराबर था। उनके लाभों का योग (रू में) है:

Options :

1. ✘ रू 2100
2. ✘ रू 2800
3. ✘ रू 3500
4. ✔ रू 4900

Question Number : 107 Question Id : 826662108 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Sudha can row her boat at a speed of 5 km/hour in still water. If it takes her $3\frac{15}{16}$ hours more to row the boat 10.5 km upstream than to return downstream, then the speed of the stream (in km/h) is:

Options :

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

Question Number : 107 Question Id : 826662108 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

सुधा अपनी नाव को शांत जल में 5 किमी/घंटा की गति से खे सकती है। नाव द्वारा उसको 10.5 किमी धारा के विपरीत जाने में लगा समय, धारा के अनुकूल वापस आने में लगे समय से $3\frac{15}{16}$ घंटे अधिक हो, तो धारा की चाल (किमी/घंटा में) है:

Options :

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

Question Number : 108 Question Id : 826662109 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$33\frac{1}{3}\%$ of a journey was covered at the speed of 20 km/hour, one-fourth at 30 km/hour and the rest at 50 km/hour. The average speed (in km/hour) for the whole journey was:

Options :

1. ✔ 30
2. ✘ 32
3. ✘ $33\frac{1}{3}$
4. ✘ $40\frac{1}{3}$

Question Number : 108 Question Id : 826662109 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

किसी यात्रा का $33\frac{1}{3}\%$ भाग 20 किमी/घंटा की चाल से, एक-चौथाई भाग 30 किमी/घंटा की चाल से और शेष भाग 50 किमी/घंटा की चाल से तय किया गया। सारी यात्रा की औसत चाल (किमी/घंटा में) थी:

Options :

1. ✔ 30
2. ✘ 32
3. ✘ $33\frac{1}{3}$
4. ✘ $40\frac{1}{3}$

Question Number : 109 Question Id : 826662110 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

To do a certain work, B takes four times as long A and C together and C takes three times as A and B together. If all the three working together complete the work in 11 days, how long would A alone take to complete the work?

Options :

1. ✘ 18 days
2. ✔ 20 days
3. ✘ 44 days
4. ✘ 55 days

Question Number : 109 Question Id : 826662110 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

किसी काम को करने में A और C को एक साथ मिलकर जितना समय लगता है, B को उससे चार गुना समय लगता है और A तथा B को एक साथ मिलकर जितना समय लगता है, C को उससे तीन गुना समय लगता है। यदि तीनों एक साथ मिलकर उस काम को 11 दिनों में पूरा कर सकते हैं, तो A अकेला उसको कितने समय में पूरा कर सकेगा?

Options :

1. ✘ 18 दिन
2. ✔ 20 दिन
3. ✘ 44 दिन
4. ✘ 55 दिन

Question Number : 110 Question Id : 826662111 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A and B undertook to do a piece of work for Rs. 48,000. A could do it alone in 5 days and B could do it alone in 8 days. With the help of C and D, they finished the work in 3 days. If the work done by C was twice that of the work done by D, then the difference between the shares of A and C was:

Options :

1. ✘ Rs. 12960
2. ✘ Rs. 20640
3. ✔ Rs 28000
4. ✘ Rs. 34080

Question Number : 110 Question Id : 826662111 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A और B ने मिलकर एक काम को करने का ठेका रु 48000 में लिया। A अकेला उसे 5 दिनों में तथा B अकेला उसे 8 दिनों में पूरा कर सकते हैं। C और D की सहायता से उन्होंने इस काम को 3 दिनों में पूरा कर दिया। यदि C द्वारा किया गया काम D द्वारा किए काम का दुगुना था, तो A और C को मिले हिस्सों में अन्तर था:

Options :

1. ✘ रु 12960
2. ✘ रु 20640

3. ✓ ₹ 28000

4. ✘ ₹ 34080

General Knowledge/Awareness

Section Id :	8266625
Section Number :	5
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	10
Number of Questions to be attempted:	10
Section Marks:	10
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	8266625
Question Shuffling Allowed :	Yes

Question Number : 111 Question Id : 826662112 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The ancient Indian literature regarding herbal medicine is in

Options :

1. ✘ Brighu Samhita
2. ✓ Charak Samhita
3. ✘ Samveda
4. ✘ Maha Parinirvana Suttanta

Question Number : 111 Question Id : 826662112 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

जड़ी बूटी संबंधी चिकित्सा पद्धति से संबंधित प्राचीन भारतीय साहित्य सामग्री _____ में है।

Options :

1. ✘ भृगु संहिता
2. ✓ चरक संहिता
3. ✘ सामवेद
4. ✘ महापरिनिर्वाण सुत्तन्ता

Question Number : 112 Question Id : 826662113 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Which one of the following was NOT a Moghul emperor?

Options :

1. ✓ Safdarjang
2. ✗ Humayun
3. ✗ Bahadur Shah II
4. ✗ Jahangir

Question Number : 112 Question Id : 826662113 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्न में से कौन मुगल सम्राट नहीं था?

Options :

1. ✓ सफदरजंग
2. ✗ हुमायूँ
3. ✗ बहादुर शाह II
4. ✗ जहाँगीर

Question Number : 113 Question Id : 826662114 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The first World War ended in the year:

Options :

1. ✗ 1706
2. ✗ 1857
3. ✓ 1918
4. ✗ 1945

Question Number : 113 Question Id : 826662114 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

पहला विश्व युद्ध कब समाप्त हुआ था?

Options :

1. ✗ 1706
2. ✗ 1857
3. ✓ 1918
4. ✗ 1945

Question Number : 114 Question Id : 826662115 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Which one of the following is NOT a pair of North Eastern states of India?

Options :

1. ✓ Assam and Bhutan
2. ✗ Arunachal Pradesh and Manipur
3. ✗ Meghalaya and Mizoram
4. ✗ Tripura and Assam

Question Number : 114 Question Id : 826662115 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्नलिखित में से कौन सा भारत के उत्तर पूर्वी राज्यों का एक जोड़ा नहीं है?

Options :

1. ✓ असम एवं भूटान
2. ✗ अरुणाचल प्रदेश एवं मणिपुर
3. ✗ मेघालय एवं मिजोरम
4. ✗ त्रिपुरा एवं असम

Question Number : 115 Question Id : 826662116 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Which of the following Indian rivers flows into the Arabian Sea?

Options :

1. ✓ Narmada
2. ✗ Ravi
3. ✗ Subarnarekha
4. ✗ Brahmaputra

Question Number : 115 Question Id : 826662116 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

भारत की कौन सी नदी अरब सागर में मिलती है?

Options :

1. ✓ नर्मदा
2. ✗ रावी
3. ✗ सुवर्णरेखा
4. ✗ ब्रह्मपुत्र

Question Number : 116 Question Id : 826662117 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Novak Djokovic, the winner of multiple Grand Slam Tennis tournaments, is from:

Options :

1. ✘ France
2. ✘ England
3. ✔ Serbia
4. ✘ Croatia

Question Number : 116 Question Id : 826662117 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

नोवाक जोकोविच ने कई टेनिस ग्रैंड स्लैम टूर्नामेंट खिताब जीते हैं। वह कौन से देश से है?

Options :

1. ✘ फ्रांस
2. ✘ इंग्लैंड
3. ✔ सर्बिया
4. ✘ क्रोएशिया

Question Number : 117 Question Id : 826662118 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Zika virus is transmitted by the same species of mosquito whose infected bite causes:

Options :

1. ✘ Malaria
2. ✘ Filaria
3. ✘ Ebola fever
4. ✔ Dengue

Question Number : 117 Question Id : 826662118 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

जीका वायरस मच्छरों की उन्हीं प्रजातियों द्वारा संक्रामित होता है
जिसके काटने से _____ रोग होता है।

Options :

1. ✘ मलेरिया
2. ✘ फलेरिया
3. ✘ इबोला बुखार
4. ✔ डेंगू

Question Number : 118 Question Id : 826662119 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Recently a leopard wandered into a school in Bangalore. Such an unusual event is attributed to:

Options :

1. ✘ Climate change
2. ✘ Global warming
3. ✘ El nino
4. ✔ Loss of habitat

Question Number : 118 Question Id : 826662119 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

हाल ही में बैंगलोर के एक विद्यालय में एक तेन्दुआ घुस आया था। ऐसी असामान्य घटनाओं का कारण क्या है?

Options :

1. ✘ जलवायु परिवर्तन
2. ✘ ग्लोबल वॉर्मिंग
3. ✘ एल नीनो
4. ✔ प्राकृतिक आवास की समाप्ति

Question Number : 119 Question Id : 826662120 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The author of the book "To kill a mocking bird" died recently. She was:

Options :

1. ✘ Jane Austen
2. ✔ Harper Lee
3. ✘ Agatha Christie
4. ✘ Susan Sontag

Question Number : 119 Question Id : 826662120 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

"To kill a mocking bird" नामक पुस्तक की लेखिका का हाल ही में देहांत हो गया। वह थी:

Options :

1. ✘ जेन ऑस्टेन
2. ✔ हार्पर ली
3. ✘ अगाथा क्रिस्टी
4. ✘ सूसन सानटाग

Question Number : 120 Question Id : 826662121 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The flow of displaced people towards European countries is still continuing. The majority of the migrants are from:

Options :

1. ✖ Afghanistan
2. ✖ Iran
3. ✔ Syria
4. ✖ Saudi Arabia

Question Number : 120 Question Id : 826662121 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

विस्थापित लोगों का यूरोपियन देशों की तरफ प्रवाह अभी भी जारी है। अधिकांश प्रवासी कहाँ से हैं?

Options :

1. ✖ अफगानिस्तान
2. ✖ ईरान
3. ✔ सीरिया
4. ✖ सऊदी अरब

Question Paper Preview

Notations :

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

Question Paper Name:	Junior Executive ATC Shift 2
Subject Name:	Junior Executive ATC
Creation Date:	2016-04-24 14:04:00
Duration:	120
Total Marks:	120
Display Marks:	Yes
Calculator:	None
Magnifying Glass Required?:	No
Ruler Required?:	No
Eraser Required?:	No
Scratch Pad Required?:	No
Rough Sketch/Notepad Required?:	No
Protractor Required?:	No

Junior Executive ATC Shift 2

Group Number :	1
Group Id :	8266622
Group Maximum Duration :	0
Group Minimum Duration :	120
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Mandatory Break time:	No
Group Marks:	120

Physics and Mathematics

Section Id :	8266626
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	60
Number of Questions to be attempted:	60
Section Marks:	60
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	8266626
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 826662122 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

According to Einstein's prediction, which of the following happens to the time interval between two events occurring in an inertial frame of reference as the frame's velocity with respect to the observer increases?

Options :

1. ✖ Interval decreases
2. ✔ Interval increases
3. ✖ Interval remains constant
4. ✖ Interval becomes zero as velocity equals half the speed of light

Question Number : 1 Question Id : 826662122 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

आइंस्टीन की भविष्यवाणी के अनुसार, पर्यवेक्षक के संदर्भ में फ्रेम का वेग बढ़ने पर जड़त्वीय फ्रेम में होने वाली दो घटनाओं के बीच समय अंतराल निम्नलिखित में से क्या हो जाता है?

Options :

1. ✖ अंतराल कम होता है
2. ✔ अंतराल बढ़ता है
3. ✖ अंतराल स्थिर रहता है
4. ✖ अंतराल शून्य हो जाता है क्योंकि वेग प्रकाश की गति के आधे के बराबर हो जाता है

Question Number : 2 Question Id : 826662123 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The relativistic mass of a particle moving with a speed of 2.0×10^8 m/s in an accelerator is found to be 2.4×10^{-26} kg. The rest mass of the particle is: ($c = 3.0 \times 10^8$ m/s)

Options :

1. ✖ 0.48×10^{-26} kg
2. ✖ 0.87×10^{-26} kg
3. ✖ 1.21×10^{-26} kg
4. ✔ 1.79×10^{-26} kg

Question Number : 2 Question Id : 826662123 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक त्वरक में 2.4×10^8 मी/से की गति से गतिशील एक कण का सापेक्षवादी द्रव्यमान 2.4×10^{-26} किग्रा पाया जाता है। कण का शेष द्रव्यमान इनमें से क्या है: ($c = 3.0 \times 10^8$ m/s)

Options :

1. ✘ 0.48×10^{-26} किग्रा
2. ✘ 0.87×10^{-26} किग्रा
3. ✘ 1.21×10^{-26} किग्रा
4. ✔ 1.79×10^{-26} किग्रा

Question Number : 3 Question Id : 826662124 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The length of a spaceship is measured to be exactly one-third its length at rest. The speed of the spaceship relative to the ground observer is:

Options :

1. ✘ $0.254 c$
2. ✘ $0.487 c$
3. ✘ $0.764 c$
4. ✔ $0.943 c$

Question Number : 3 Question Id : 826662124 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक अंतरिक्ष यान की लम्बाई, विराम अवस्था में इसकी लम्बाई की यथार्थतः एक तिहाई मापी जाती है। अंतरिक्ष यान की गति ज़मीन पर खड़ा एक व्यक्ति की सापेक्षता में इनमें से कितनी है?

Options :

1. ✘ $0.254 c$
2. ✘ $0.487 c$
3. ✘ $0.764 c$
4. ✔ $0.943 c$

Question Number : 4 Question Id : 826662125 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The time period of a pendulum is 2.0 s in a stationary inertial frame of reference. Its period measured by an observer moving at a speed of $0.6 c$ with respect to the inertial frame of reference will be:

Options :

1. ✔ 2.5 s
2. ✘ 3.3 s
3. ✘ 1.6 s
4. ✘ 1.2 s

Question Number : 4 Question Id : 826662125 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

स्थिर जड़त्वीय फ्रेम में एक लोलक की समय अवधि 2.0 है। जड़त्वीय फ्रेम के संदर्भ में $0.6c$ की गति पर गतिमान ज़मीन पर खड़े एक व्यक्ति द्वारा मापी गई अवधि इनमें से कितनी होगी?

Options :

- ✓ 2.5 s
- ✗ 3.3 s
- ✗ 1.6 s
- ✗ 1.2 s

Question Number : 5 Question Id : 826662126 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Frame S' moves relative to frame S at speed of 2.4×10^8 m/s in the direction of increasing x . An object is fired in frame S' at a speed of 1.8×10^8 m/s in the direction of increasing x' . The speed of the object according to an observer in frame S is

Options :

- ✗ 1.2×10^8 m/s
- ✗ 1.6×10^8 m/s
- ✗ 2.0×10^8 m/s
- ✓ 2.8×10^8 m/s

Question Number : 5 Question Id : 826662126 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

फ्रेम S' फ्रेम S के सापेक्ष, 2.4×10^8 m/s की गति पर बढ़ते हुए x की दिशा में गतिशील है। एक वस्तु फ्रेम S' में 1.8×10^8 m/s की गति से बढ़ते हुए x की दिशा में छोड़ी जाती है। फ्रेम S में ज़मीन पर खड़े एक व्यक्ति के अनुसार वस्तु की गति इनमें से कितनी है?

Options :

- ✗ 1.2×10^8 मी./सै.
- ✗ 1.6×10^8 मी./सै.
- ✗ 2.0×10^8 मी./सै.
- ✓ 2.8×10^8 मी./सै.

Question Number : 6 Question Id : 826662127 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A proton with rest mass of 1.67×10^{-27} kg moves in an accelerator with a speed of $0.6c$. Its total energy is ($c = 3 \times 10^8$ m/s)

Options :

1. ✘ $0.92 \times 10^{-10} \text{ J}$
2. ✔ $1.88 \times 10^{-10} \text{ J}$
3. ✘ $3.42 \times 10^{-10} \text{ J}$
4. ✘ $5.46 \times 10^{-10} \text{ J}$

Question Number : 6 Question Id : 826662127 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक प्रोटॉन जिसका विराम द्रव्यमान 1.67×10^{-27} किग्रा है, एक त्वरक में $0.6 c$ की गति से गतिमान होता है। इसकी कुल ऊर्जा कितनी है?
($c = 3 \times 10^8 \text{ m/s}$)

Options :

1. ✘ $0.92 \times 10^{-10} \text{ J}$
2. ✔ $1.88 \times 10^{-10} \text{ J}$
3. ✘ $3.42 \times 10^{-10} \text{ J}$
4. ✘ $5.46 \times 10^{-10} \text{ J}$

Question Number : 7 Question Id : 826662128 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A satellite is powered by a small nuclear generator that puts out 15W. How much mass is converted into energy in 10 years lifespan of the generator?

Options :

1. ✘ 15.6 g
2. ✘ 15.6 kg
3. ✘ 53 g
4. ✔ $53 \mu \text{g}$

Question Number : 7 Question Id : 826662128 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक उपग्रह में एक छोटा न्यूक्लियर जेनरेटर लगा हुआ है जो 15W उत्पन्न करता है। जेनरेटर के 10 वर्ष के जीवन-काल में ऊर्जा में कितना द्रव्यमान रूपांतरित होता है?

Options :

1. ✘ 15.6 ग्रा
2. ✘ 15.6 किग्रा
3. ✘ 53 ग्रा
4. ✔ $53 \mu \text{ ग्रा}$

Question Number : 8 Question Id : 826662129 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The thickness of a soap film ($n = 1.46$) is 300 nm. What wavelength of light in the visible region can be used to constructively reflect off the film?

Options :

1. ✖ 410 nm
2. ✖ 620 nm
3. ✔ 584 nm
4. ✖ 628 nm

Question Number : 8 Question Id : 826662129 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक सोप फिल्म की मोटाई 300 nm ($n = 1.46$) है। सोप फिल्म पर रचनात्मक प्रभाव डालने के लिए प्रत्यक्ष क्षेत्र में किस तरंग दैर्घ्य (wavelength) का प्रकाश अत्याधिक कुशलता के साथ पारगमित होने के लिए प्रयुक्त किया जा सकता है?

Options :

1. ✖ 410 nm
2. ✖ 620 nm
3. ✔ 584 nm
4. ✖ 628 nm

Question Number : 9 Question Id : 826662130 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

In a Newton's rings experiment, light of wavelength λ and a lens of radius of curvature R are used. The radius of 5th bright ring is n times the radius of the 2nd bright ring. Then n is:

Options :

1. ✖ $\sqrt{2}$
2. ✔ $\sqrt{3}$
3. ✖ $\sqrt{5}$
4. ✖ $\sqrt{7}$

Question Number : 9 Question Id : 826662130 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

न्यूटन के रिंग के प्रयोग में, λ तरंग दैर्घ्य (wavelength) का प्रकाश और R वक्रता त्रिज्या का लेंस प्रयुक्त किया जाता है। 5^{वें} ब्राइट रिंग की त्रिज्या, दूसरे ब्राइट रिंग की त्रिज्या से n गुना है। तो n कितना है?

Options :

1. ✖ $\sqrt{2}$
2. ✔ $\sqrt{3}$
3. ✖ $\sqrt{5}$
4. ✖ $\sqrt{7}$

Question Number : 10 Question Id : 826662131 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Interference fringes are observed with a biprism of refracting angle 2° and refractive index 1.5 on a screen 100 cm away from it. If the distance between the source and the biprism is 20 cm and the fringe width is 0.10 mm, the wavelength of light used is:

Options :

1. ✖ 5630 Å
2. ✖ 5710 Å
3. ✔ 5820 Å
4. ✖ 5900 Å

Question Number : 10 Question Id : 826662131 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

अपवर्तन कोण 2° और अपवर्तनांक 1.5 के बाईप्रिज्म के साथ इससे 100 सेमी दूर स्क्रीन पर व्यतिकरण फ्रिंज देखे जाते हैं। यदि स्रोत और बाईप्रिज्म के बीच की दूरी 20 सेमी है और फ्रिंज की मोटाई 0.10 mm है तो प्रयुक्त प्रकाश की तरंग दैर्घ्य (wavelength) कितनी है?

Options :

1. ✖ 5630 Å
2. ✖ 5710 Å
3. ✔ 5820 Å
4. ✖ 5900 Å

Question Number : 11 Question Id : 826662132 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Light of wavelength 5800 Å is incident normally on a slit of width 0.20 mm. Diffraction pattern is observed on screen 2 m away from the slit. From the central bright fringe, the distance of the first dark fringe on either side is

Options :

1. ✔ 5.8 mm
2. ✖ 2.4 mm
3. ✖ 1.2 mm

4. ✖ 6.4 mm

Question Number : 11 Question Id : 826662132 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

5800 Å तरंग दैर्घ्य (wavelength) का प्रकाश 0.20 mm चौड़ाई की स्लिट पर सामान्यतः आपतित किया जाता है। स्लिट से 2 मीटर दूर रखी गई स्क्रीन से विवर्तन पैटर्न देखा जाता है। केन्द्रीय ब्राइट फ्रिंज से, पहले डार्क फ्रिंज की स्थिति किसी भी छोर की तरफ से ज्ञात कीजिए।

Options :

1. ✔ 5.8 mm

2. ✖ 2.4 mm

3. ✖ 1.2 mm

4. ✖ 6.4 mm

Question Number : 12 Question Id : 826662133 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The intensity of the central maxima in the diffraction pattern due to a double slit is n times that of the central maxima due to diffraction at a single slit. Here n is:

Options :

1. ✖ 1

2. ✖ 2

3. ✖ 3

4. ✔ 4

Question Number : 12 Question Id : 826662133 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

डबल स्लिट के कारण विवर्तन पैटर्न में केन्द्रीय मैक्सिमा की तीव्रता, एकल स्लिट पर विवर्तन में केन्द्रीय मैक्सिमा की n गुना है। यहाँ n क्या है?

Options :

1. ✖ 1

2. ✖ 2

3. ✖ 3

4. ✔ 4

Question Number : 13 Question Id : 826662134 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Light is incident normally on a diffraction grating having 5000 lines/cm. Second order line is observed at an angle of 30° . What is the wavelength of light?

Options :

1. ✖ 4000 Å

2. ✓ 5000 Å

3. ✗ 5800 Å

4. ✗ 6000 Å

Question Number : 13 Question Id : 826662134 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

5000 लाइंस/सेमी की विवर्तन ग्रेटिंग (diffraction grating) पर सामान्यतः प्रकाश आपतित किया जाता है। 30° के कोण पर सैकेण्ड ऑर्डर लाइन पायी जाती है। प्रकाश की तरंग दैर्घ्य (wavelength) कितनी है?

Options :

1. ✗ 4000 Å

2. ✓ 5000 Å

3. ✗ 5800 Å

4. ✗ 6000 Å

Question Number : 14 Question Id : 826662135 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A 20 cm long tube containing 15% sugar solution rotates the plane of polarization of light by 21° . The specific rotation of sugar solution is:

Options :

1. ✗ 49°

2. ✗ 58°

3. ✗ 64°

4. ✓ 70°

Question Number : 14 Question Id : 826662135 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक 20 सेमी लम्बी ट्यूब जिसमें 15% चीनी का घोल भरा है, प्रकाश का ध्रुवण का प्लेन 21° तक आवर्तित करता है। चीनी के घोल का विशिष्ट आवर्तन कितना है?

Options :

1. ✗ 49°

2. ✗ 58°

3. ✗ 64°

4. ✓ 70°

Question Number : 15 Question Id : 826662136 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The blue light from the sky has been polarised by:

Options :

1. ✘ reflection
2. ✘ selective absorption
3. ✘ double refraction
4. ✔ scattering

Question Number : 15 Question Id : 826662136 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

आकाश से नीले प्रकाश का ध्रुवण इनमें से किसके द्वारा किया जाता है?

Options :

1. ✘ परावर्तन
2. ✘ चयनात्मक अवशोषण
3. ✘ दोहरा अपवर्तन
4. ✔ प्रकीर्णन

Question Number : 16 Question Id : 826662137 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The position of a particle is measured with an uncertainty of 6.6×10^{-10} m. What is the minimum uncertainty in any simultaneous measurement of the momentum of the particle? ($h = 6.63 \times 10^{-34}$ J s)

Options :

1. ✘ 5.8×10^{-22} kg m/s
2. ✘ 3.2×10^{-23} kg m/s
3. ✘ 4.6×10^{-24} kg m/s
4. ✔ 1.6×10^{-25} kg m/s

Question Number : 16 Question Id : 826662137 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

6.6×10^{-10} मी की अनिश्चितता के साथ एक कण की स्थिति मापी गई। कण के संवेग के किसी समकालिक माप में न्यूनतम अनिश्चितता कितनी है? ($h = 6.63 \times 10^{-34}$ J s)

Options :

1. ✘ 5.8×10^{-22} किग्रा मी/सै.

2. ✘ 3.2×10^{-23} किग्रा मी/सै.

3. ✘ 4.6×10^{-24} किग्रा मी/सै.

4. ✔ 1.6×10^{-25} किग्रा मी/सै.

Question Number : 17 Question Id : 826662138 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A proton ($m = 1.67 \times 10^{-27}$ kg) is moving at a speed of 6.0×10^5 m/s. What is its de Broglie wavelength?

Options :

1. ✘ 1.14×10^{-13} m

2. ✘ 2.28×10^{-13} m

3. ✔ 6.62×10^{-13} m

4. ✘ 8.93×10^{-13} m

Question Number : 17 Question Id : 826662138 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक प्रोटॉन ($m = 1.67 \times 10^{-27}$ किग्रा) 6.0×10^5 मी/सै. की गति से गतिमान है। डी ब्रोग्ली तरंग दैर्घ्य (wavelength) कितनी है?

Options :

1. ✘ 1.14×10^{-13} मी

2. ✘ 2.28×10^{-13} मी

3. ✔ 6.62×10^{-13} मी

4. ✘ 8.93×10^{-13} मी

Question Number : 18 Question Id : 826662139 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A ruby laser delivers a 10 ns pulse of 1 MW average power. If all the photons are of the same wavelength 694.3 nm, how many photons are contained in the pulse?

Options :

1. ✘ 4.0×10^{14}

2. ✘ 2.6×10^{15}

3. ✔ 3.5×10^{16}

4. ✘ 6.2×10^{16}

Question Number : 18 Question Id : 826662139 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक रूबी लेसर 1 MW औसत शक्ति के 10 ns गुने से अधिक प्रदान करता है। यदि सभी फोटॉन्स एक समान तरंग दैर्घ्य (wavelength) 694.3 nm के हैं, तो पल्स में कितने फोटॉन्स निहित हैं?

Options :

- ✘ 4.0×10^{14}
- ✘ 2.6×10^{15}
- ✔ 3.5×10^{16}
- ✘ 6.2×10^{16}

Question Number : 19 Question Id : 826662140 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A family of planes of spacing 0.2518 nm of NaCl crystal reflects a beam of X-ray in first order at an angle of 30° . The wavelength of X-rays is:

Options :

- ✘ 0.1259 nm
- ✔ 0.2518 nm
- ✘ 0.3778 nm
- ✘ 0.5036 nm

Question Number : 19 Question Id : 826662140 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

NaCl क्रिस्टल के 0.2518 nm अंतराल के प्लेन्स का परिवार फर्स्ट ऑर्डर में 30° के कोण पर एक्स-रे की बीम परावर्तित करता है। एक्सरे की तरंग दैर्घ्य (wavelength) कितनी है?

Options :

- ✘ 0.1259 nm
- ✔ 0.2518 nm
- ✘ 0.3778 nm
- ✘ 0.5036 nm

Question Number : 20 Question Id : 826662141 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

X-rays of wavelength of 0.0650 nm undergo Compton scattering from free electrons in a target. What is the wavelength of photons scattered at 90° relative to the incident rays? ($h = 6.63 \times 10^{-34}$ J s,

$m_e = 9.11 \times 10^{-31}$ kg, $c = 3 \times 10^8$ m/s)

Options :

- ✔ 0.0674 nm
- ✘ 0.0687 nm
- ✘ 0.0024 nm

4. ✖ 0.0626 nm

Question Number : 20 Question Id : 826662141 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

0.0650 nm तरंग दैर्घ्य (wavelength) की एक्स-रेज मुक्त इलेक्ट्रॉन्स से एक लक्ष्य में कॉम्पटन प्रकीर्णन से गुजरती है। आपतित किरणों के सापेक्ष 90° पर प्रकीर्ण फोटॉन्स की तरंग दैर्घ्य (wavelength) इनमें से कितनी है?

($h = 6.63 \times 10^{-34}$ J s, $m_e = 9.11 \times 10^{-31}$ kg, $c = 3 \times 10^8$ m/s)

Options :

1. ✔ 0.0674 nm

2. ✖ 0.0687 nm

3. ✖ 0.0024 nm

4. ✖ 0.0626 nm

Question Number : 21 Question Id : 826662142 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

X-rays of wavelength of 0.4500 nm undergo Compton scattering from free electrons in carbon. If photons are scattered at 60° relative to the incident rays, what percentage of initial X-ray photon energy is transferred to an electron in such a scattering?

Options :

1. ✖ 1.2 %

2. ✖ 0.81 %

3. ✖ 0.56 %

4. ✔ 0.27 %

Question Number : 21 Question Id : 826662142 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

0.4500 nm तरंग दैर्घ्य (wavelength) की एक्स-रेज कार्बन में मुक्त इलेक्ट्रॉन में कॉम्पटन प्रकीर्णन से गुजरती है। यदि आपतित किरणों के सापेक्ष, 60° पर फोटॉन्स प्रकीर्ण होते हैं तो इस प्रकीर्णन में एक इलेक्ट्रॉन को प्रारम्भिक एक्स-रेज फोटॉन्स ऊर्जा का कितने प्रतिशत अंतरित होता है?

Options :

1. ✖ 1.2 %

2. ✖ 0.81 %

3. ✖ 0.56 %

4. ✔ 0.27 %

Question Number : 22 Question Id : 826662143 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The electric field between the two plates of a parallel plate (area = $5.0 \times 10^{-2} \text{ m}^2$) capacitor is given by $E = (2.0 \times 10^5 - 4.0 \times 10^4 t) \text{ V/m}$, where t is in seconds. What is the magnitude of the displacement current between the plates? ($\epsilon_0 = 8.85 \times 10^{-12} \text{ F/m}$)

Options :

1. ✖ $4.54 \times 10^{-6} \text{ A}$
2. ✖ $5.95 \times 10^{-7} \text{ A}$
3. ✔ $1.77 \times 10^{-8} \text{ A}$
4. ✖ $8.46 \times 10^{-9} \text{ A}$

Question Number : 22 Question Id : 826662143 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

दो प्लेटों में से एक समानांतर प्लेट की (क्षेत्रफल = $5.0 \times 10^{-2} \text{ m}^2$) इलेक्ट्रिक फील्ड कैपेसिटर $E = (2.0 \times 10^5 - 4.0 \times 10^4 t) \text{ V/m}$ द्वारा दिया जाता है, t सैकेण्ड्स में है। दो प्लेटों के बीच विस्थापित करंट का परिमाण क्या है? ($\epsilon_0 = 8.85 \times 10^{-12} \text{ F/m}$)

Options :

1. ✖ $4.54 \times 10^{-6} \text{ A}$
2. ✖ $5.95 \times 10^{-7} \text{ A}$
3. ✔ $1.77 \times 10^{-8} \text{ A}$
4. ✖ $8.46 \times 10^{-9} \text{ A}$

Question Number : 23 Question Id : 826662144 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The Poynting vector of an electromagnetic wave in vacuum is

$$S = \{(120 \text{ W/m}^2) \sin^2 [(8.0 \text{ rad/m}) z + (2.4 \times 10^9 \text{ rad/s}) t]\} \mathbf{k}.$$

What is the frequency of the wave?

Options :

1. ✔ 382 MHz
2. ✖ 54.6 MHz
3. ✖ 172 MHz
4. ✖ 241 MHz

Question Number : 23 Question Id : 826662144 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निर्वात में एक विद्युत चुम्बकीय तरंग का पॉइंटिंग वेक्टर (Poynting vector)

$$S = \{(120 \text{ W/m}^2) \sin^2 [(8.0 \text{ rad/m}) z + (2.4 \times 10^9 \text{ rad/s}) t]\} \mathbf{k}$$

तरंग की आवृत्ति क्या है?

Options :

1. ✓ 382 MHz
2. ✗ 54.6 MHz
3. ✗ 172 MHz
4. ✗ 241 MHz

Question Number : 24 Question Id : 826662145 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A plane polarized electromagnetic wave is travelling in free space along + x direction. The amplitude of its electric field is $E_0 = 240 \text{ N/C}$ and its frequency is 150 MHz. The magnetic field of the wave can be written as:

Options :

1. ✗ $B = \{(800 \text{ nT}) \sin [(3.14 \text{ rad/m}) x + (9.42 \times 10^8 \text{ rad/s}) t]\} \mathbf{k}$
2. ✓ $B = \{(800 \text{ nT}) \sin [(3.14 \text{ rad/m}) x - (9.42 \times 10^8 \text{ rad/s}) t]\} \mathbf{k}$
3. ✗ $B = \{(240 \text{ nT}) \sin [(2.09 \text{ rad/m}) x + (6.27 \times 10^8 \text{ rad/s}) t]\} \mathbf{k}$
4. ✗ $B = \{(240 \text{ nT}) \sin [(2.09 \text{ rad/m}) x - (6.27 \times 10^8 \text{ rad/s}) t]\} \mathbf{k}$

Question Number : 24 Question Id : 826662145 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक समतल ध्रुवीकृत विद्युत चुम्बकीय तरंग + x के साथ मुक्त स्पेस में जा रही है। इसके विद्युत क्षेत्र का आयाम $E_0 = 240 \text{ N/C}$ और इसकी आवृत्ति 150 MHz है। तरंग का चुम्बकीय क्षेत्र इसमें से किस प्रकार लिखा जा सकता है?

Options :

1. ✗ $B = \{(800 \text{ nT}) \sin [(3.14 \text{ rad/m}) x + (9.42 \times 10^8 \text{ rad/s}) t]\} \mathbf{k}$
2. ✓ $B = \{(800 \text{ nT}) \sin [(3.14 \text{ rad/m}) x - (9.42 \times 10^8 \text{ rad/s}) t]\} \mathbf{k}$
3. ✗ $B = \{(240 \text{ nT}) \sin [(2.09 \text{ rad/m}) x + (6.27 \times 10^8 \text{ rad/s}) t]\} \mathbf{k}$
4. ✗ $B = \{(240 \text{ nT}) \sin [(2.09 \text{ rad/m}) x - (6.27 \times 10^8 \text{ rad/s}) t]\} \mathbf{k}$

Question Number : 25 Question Id : 826662146 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Two parallel plates (each of area 200 cm^2) of a capacitor are given equal and opposite charges of magnitude $1.78 \text{ } \mu\text{C}$. The space between the plates is filled with a dielectric. If the electric field in the dielectric is $1.5 \times 10^6 \text{ V/m}$, what will be the magnitude of charge induced on each dielectric plate?
($\epsilon_0 = 8.85 \times 10^{-12} \text{ F/m}$)

Options :

1. ✘ $0.52 \text{ } \mu\text{C}$
2. ✘ $0.84 \text{ } \mu\text{C}$
3. ✘ $1.28 \text{ } \mu\text{C}$
4. ✔ $1.51 \text{ } \mu\text{C}$

Question Number : 25 Question Id : 826662146 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक कैपेसिटर की दो समानांतर प्लेटें (जिनमें से प्रत्येक का क्षेत्रफल 200 वर्ग सेमी है) को $1.78 \text{ } \mu\text{C}$ परिमाण का बराबर और विवपरीत आवेश दिया गया है। प्लेटों के बीच का अंतराल एक परावैद्युत से भरा गया है। यदि परावैद्युत में विद्युत क्षेत्र $1.5 \times 10^6 \text{ V/m}$ है तो प्रत्येक परावैद्युत प्लेट पर प्रेरित आवेश का परिमाण कितना है?

($\epsilon_0 = 8.85 \times 10^{-12} \text{ F/m}$)

Options :

1. ✘ $0.52 \text{ } \mu\text{C}$
2. ✘ $0.84 \text{ } \mu\text{C}$
3. ✘ $1.28 \text{ } \mu\text{C}$
4. ✔ $1.51 \text{ } \mu\text{C}$

Question Number : 26 Question Id : 826662147 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A magnetic field of 3.6 T is applied to a paramagnetic gas. The atoms of the gas have magnetic dipole moment of $4.5 \times 10^{-23} \text{ J/T}$. At what temperature, will the mean translational kinetic energy of an atom of the gas be equal to the energy required to change the alignment of atom's magnetic dipole from anti-parallel to parallel (to the magnetic field) (Boltzmann constant = $1.38 \times 10^{-23} \text{ J/K}$)?

Options :

1. ✘ 0.82 K
2. ✘ 1.74 K
3. ✔ 15.7 K
4. ✘ 300 K

Question Number : 26 Question Id : 826662147 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

3.6 T का एक चुम्बकीय क्षेत्र एक अनुचुम्बकीय गैस पर लगाया जाता है। गैस के परमाणुओं का $4.5 \times 10^{-23} \text{ J/T}$ का चुम्बकीय द्विध्रुवीय आघूर्ण है। किस तापमान पर, गैस के एक परमाणु की माध्य स्थानांतरीय गतिज ऊर्जा उस ऊर्जा के बराबर होगी, जो परमाणु के चुम्बकीय द्विध्रुव के संरेखण को असमानांतर से समानांतर (चुम्बकीय क्षेत्र को) में बदलने के लिए आवश्यक है?
(बोल्ट्जमान स्थिरांक = $1.38 \times 10^{-23} \text{ J/K}$)

Options :

1. ✖ 0.82 K
2. ✖ 1.74 K
3. ✔ 15.7 K
4. ✖ 300 K

Question Number : 27 Question Id : 826662148 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The Curie temperature for cobalt is:

Options :

1. ✖ 3862 K
2. ✖ 627 K
3. ✔ 1388 K
4. ✖ 1043 K

Question Number : 27 Question Id : 826662148 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

कोबाल्ट के लिए क्यूरी तापमान इनमें से क्या है?

Options :

1. ✖ 3862 K
2. ✖ 627 K
3. ✔ 1388 K
4. ✖ 1043 K

Question Number : 28 Question Id : 826662149 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Light of wavelength 450 nm is incident on a metal target (work function = 1.8 eV) in a phototube. What is the value of stopping potential in this case?

($h = 6.63 \times 10^{-34} \text{ J s}$, $c = 3 \times 10^8 \text{ m/s}$, $1 \text{ eV} = 1.6 \times 10^{-19} \text{ J}$)

Options :

1. ✖ 2.76 V
2. ✖ 4.56 V
3. ✔ 0.96 V

4. ✖ 0.56 V

Question Number : 28 Question Id : 826662149 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक फोटोट्यूब में धातु के एक लक्ष्य पर (work function = 1.8 eV)

450 nm तरंग दैर्घ्य (wavelength) पर प्रकाश आपतित होता है। इस

स्थिति में अपेक्षित स्टॉपिंग विभव का मान क्या है?

($h = 6.63 \times 10^{-34}$ J s, $c = 3 \times 10^8$ m/s, $1 \text{ eV} = 1.6 \times 10^{-19}$ J)

Options :

1. ✖ 2.76 V

2. ✖ 4.56 V

3. ✔ 0.96 V

4. ✖ 0.56 V

Question Number : 29 Question Id : 826662150 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The minimum X-ray wavelength produced in a tube is 13.5×10^{-12} m. Through what potential electrons are accelerated in order to generate these rays?

($h = 6.63 \times 10^{-34}$ J s, $c = 3 \times 10^8$ m/s, $1 \text{ eV} = 1.6 \times 10^{-19}$ J)

Options :

1. ✖ 33000 V

2. ✖ 46000 V

3. ✖ 75000 V

4. ✔ 92080 V

Question Number : 29 Question Id : 826662150 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक ट्यूब में निर्मित न्यूनतम एक्स - रे तरंग दैर्घ्य (wavelength)

13.5×10^{-12} है। इन किरणों को उत्पन्न करने के लिए कितने विभव

के इलेक्ट्रॉन्स त्वरित किए जाते हैं?

($h = 6.63 \times 10^{-34}$ J s, $c = 3 \times 10^8$ m/s, $1 \text{ eV} = 1.6 \times 10^{-19}$ J)

Options :

1. ✖ 33000 V

2. ✖ 46000 V

3. ✖ 75000 V

4. ✔ 92080 V

Question Number : 30 Question Id : 826662151 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The quantum mechanical model of the hydrogen atom requires that if the orbital quantum number is 4, the number of different permitted orbital magnetic quantum numbers will be:

Options :

1. ✓ nine
2. ✗ seven
3. ✗ four
4. ✗ three

Question Number : 30 Question Id : 826662151 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

हाइड्रोजन परमाणु के क्वांटम यांत्रिक मॉडल हेतु अपेक्षित है कि यदि कक्षीय क्वांटम संख्या 4 है तो विभिन्न अनुमत कक्षीय चुम्बकीय क्वांटम संख्याएं इनमें से कौन सी होगी?

Options :

1. ✓ नौ
2. ✗ सात
3. ✗ चार
4. ✗ तीन

Question Number : 31 Question Id : 826662152 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If $f(x) = x^m \sin(1/x)$, $x \neq 0$, $f(0) = 0$ then the minimum value of m for which f is derivable at $x=0$ and also $\frac{df}{dx}$ is continuous at $x=0$ is

Options :

1. ✗ $m=4$
2. ✗ $m=2$
3. ✓ $m=3$
4. ✗ $m=1$

Question Number : 31 Question Id : 826662152 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि $f(x) = x^m \sin(1/x)$, $x \neq 0$, $f(0) = 0$ है तो m का न्यूनतम मान क्या है जिसके लिए f, $x=0$ पर अवकलज है और $\frac{df}{dx}$, $x=0$ पर संतत भी है।

Options :

1. ✗ $m=4$
2. ✗ $m=2$

3. ✓ $m=3$

4. ✗ $m=1$

Question Number : 32 Question Id : 826662153 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The tangent and normal at any point of the curve

$$x = ae^{\theta}(\sin \theta - \cos \theta), y = ae^{\theta}(\sin \theta + \cos \theta) \text{ are}$$

Options :

1. ✗ at a distance of $\sin \theta$ from origin

2. ✓ equidistant from the origin

3. ✗ at a distance of $\cos \theta$ from origin

4. ✗ at a distance of $\frac{\pi}{2}$ from origin

Question Number : 32 Question Id : 826662153 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

वक्र $x = ae^{\theta}(\sin \theta - \cos \theta), y = ae^{\theta}(\sin \theta + \cos \theta)$ के किसी बिंदु पर स्पर्श रेखा तथा अभिलंब

Options :

1. ✗ मूल बिंदु से $\sin \theta$ के अंतर पर होते हैं।

2. ✓ मूल बिंदु से समदूरस्थ होते हैं।

3. ✗ मूल बिंदु से $\cos \theta$ के अंतर पर होते हैं।

4. ✗ मूल बिंदु से $\frac{\pi}{2}$ के अंतर पर होते हैं।

Question Number : 33 Question Id : 826662154 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If $u = \sin^{-1}(x/y) + \tan^{-1}(y/x)$ then $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y}$ is equal to

Options :

1. ✓ Zero

2. ✗ u

3. ✗ $2u$

4. ✗ $u/2$

Question Number : 33 Question Id : 826662154 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि $u = \sin^{-1}(x/y) + \tan^{-1}(y/x)$ तो $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y}$ किसके बराबर है?

Options :

1. ✓ शून्य
2. ✗ u
3. ✗ 2u
4. ✗ u/2

Question Number : 34 Question Id : 826662155 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct : 1 Wrong : 0

The asymptotes of the curve $x^2y^2 = a^2(x^2 + y^2)$

Options :

1. ✗ forms a square of side a
2. ✗ forms a square of side a/2
3. ✗ forms a square of side 3a/2
4. ✓ forms a square of side 2a

Question Number : 34 Question Id : 826662155 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct : 1 Wrong : 0

वक्र $x^2y^2 = a^2(x^2 - y^2)$ के अनंतस्पर्शी _____

Options :

1. ✗ a भुजा के वर्ग का निर्माण करते हैं।
2. ✗ a/2 भुजा के वर्ग का निर्माण करते हैं।
3. ✗ 3a/2 भुजा के वर्ग का निर्माण करते हैं।
4. ✓ 2a भुजा के वर्ग का निर्माण करते हैं।

Question Number : 35 Question Id : 826662156 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct : 1 Wrong : 0

The value of $\lim_{x \rightarrow \pi/2} \frac{\log \sin x}{(\pi/2 - x)^2}$ is

Options :

1. ✗ 0
2. ✗ 1/2
3. ✓ -1/2
4. ✗ -2

Question Number : 35 Question Id : 826662156 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct : 1 Wrong : 0

$\lim_{x \rightarrow \pi/2} \frac{\log \sin x}{(\pi/2 - x)^2}$ का मान है :

Options :

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

Question Number : 36 Question Id : 826662157 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The integrating factor of the differential equation

$$(y \log y) dx + (x - \log y) dy = 0 \text{ is}$$

Options :

1. ✖ $1/x$
2. ✔ $1/y$
3. ✖ $-1/x$
4. ✖ $-1/y$

Question Number : 36 Question Id : 826662157 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

अवकल समीकरण $(y \log y) dx + (x - \log y) dy = 0$ का समाकलन गुणक है:

Options :

1. ✖ $1/x$
2. ✔ $1/y$
3. ✖ $-1/x$
4. ✖ $-1/y$

Question Number : 37 Question Id : 826662158 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Solution of differential equation $p = \sin(y - x p)$ is

Options :

1. ✖ $y = \frac{c}{x} + \sin^{-1} c$
2. ✖ $y = cx + \sin c$
3. ✔ $y = cx + \sin^{-1} c$
4. ✖ $y = x + \sin^{-1} c$

Question Number : 37 Question Id : 826662158 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

अवकल समीकरण $p = \sin(y - x p)$ का हल है:

Options :

1. ✘ $y = \frac{c}{x} + \sin^{-1} c$
2. ✘ $y = cx + \sin c$
3. ✔ $y = cx + \sin^{-1} c$
4. ✘ $y = x + \sin^{-1} c$

Question Number : 38 Question Id : 826662159 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The solution of the differential equation $\frac{d^2y}{dx^2} - 3\frac{dy}{dx} + 2y = e^{3x}$ is given by

Options :

1. ✔ $y = c_1 e^x + c_2 e^{2x} + \frac{1}{2} e^{3x}$
2. ✘ $y = c_1 e^{-x} + c_2 e^{-2x} + \frac{1}{2} e^{3x}$
3. ✘ $y = c_1 e^x + c_2 e^{-2x} + \frac{1}{2} e^{3x}$
4. ✘ $y = c_1 e^{-x} + c_2 e^{2x} + \frac{1}{2} e^{3x}$

Question Number : 38 Question Id : 826662159 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

अवकल समीकरण $\frac{d^2y}{dx^2} - 3\frac{dy}{dx} + 2y = e^{3x}$ का हल किसके द्वारा दिया जाता है:

Options :

1. ✔ $y = c_1 e^x + c_2 e^{2x} + \frac{1}{2} e^{3x}$
2. ✘ $y = c_1 e^{-x} + c_2 e^{-2x} + \frac{1}{2} e^{3x}$
3. ✘ $y = c_1 e^x + c_2 e^{-2x} + \frac{1}{2} e^{3x}$
4. ✘ $y = c_1 e^{-x} + c_2 e^{2x} + \frac{1}{2} e^{3x}$

Question Number : 39 Question Id : 826662160 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The solution of $xp + yq = z$ is

Options :

1. ✘ $f(x^2, y^2) = 0$

2. ✘ $f(xy, yz) = 0$

3. ✘ $f(x, y) = 0$

4. ✔ $f\left(\frac{x}{y}, \frac{y}{z}\right) = 0$

Question Number : 39 Question Id : 826662160 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$xp + yq = z$ का हल है :

Options :

1. ✘ $f(x^2, y^2) = 0$

2. ✘ $f(xy, yz) = 0$

3. ✘ $f(x, y) = 0$

4. ✔ $f\left(\frac{x}{y}, \frac{y}{z}\right) = 0$

Question Number : 40 Question Id : 826662161 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Every open set of real numbers is the union of

Options :

1. ✔ countable collection of disjoint open intervals

2. ✘ uncountable collection of disjoint open intervals

3. ✘ countable collection of disjoint closed intervals

4. ✘ uncountable collection of disjoint closed intervals

Question Number : 40 Question Id : 826662161 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

वास्तविक संख्याओं का प्रत्येक खुला समुच्चय _____ सम्मिलन होता है?

Options :

1. ✔ असंयुक्त खुले अंतराल का गणनीय संग्रह

2. ✘ असंयुक्त खुले अंतराल का अगणनीय संग्रह

3. ✘ असंयुक्त बंद अंतराल का गणनीय संग्रह

4. ✘ असंयुक्त बंद अंतराल का अगणनीय संग्रह

Question Number : 41 Question Id : 826662162 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$\lim_{n \rightarrow \infty} \frac{1+2+3+\dots+n}{n^2}$ is equivalent to

Options :

1. ✘ 1
2. ✘ 0
3. ✔ $\frac{1}{2}$
4. ✘ ∞

Question Number : 41 Question Id : 826662162 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$\lim_{n \rightarrow \infty} \frac{1+2+3+\dots+n}{n^2}$ बराबर है :

Options :

1. ✘ 1
2. ✘ 0
3. ✔ $\frac{1}{2}$
4. ✘ ∞

Question Number : 42 Question Id : 826662163 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A necessary condition for a series $\sum u_n$ to converge is that

Options :

1. ✘ $u_n \rightarrow \infty$ as $n \rightarrow \infty$
2. ✔ $u_n \rightarrow 0$ as $n \rightarrow \infty$
3. ✘ $u_n \rightarrow 1$ as $n \rightarrow \infty$
4. ✘ $u_n \rightarrow 2$ as $n \rightarrow \infty$

Question Number : 42 Question Id : 826662163 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक श्रेणी $\sum u_n$ के अभिसरित होने के लिए आवश्यक शर्त है कि :

Options :

1. ✘ $u_n \rightarrow \infty$ as $n \rightarrow \infty$
2. ✔ $u_n \rightarrow 0$ as $n \rightarrow \infty$
3. ✘ $u_n \rightarrow 1$ as $n \rightarrow \infty$
4. ✘ $u_n \rightarrow 2$ as $n \rightarrow \infty$

Question Number : 43 Question Id : 826662164 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The series $\sum_{n=0}^{\infty} (2x)^n$ converges if:

Options :

1. ✘ $-1 \leq x \leq 1$
2. ✔ $-\frac{1}{2} < x < \frac{1}{2}$
3. ✘ $-2 < x < 2$
4. ✘ $-\frac{1}{2} \leq x \leq \frac{1}{2}$

Question Number : 43 Question Id : 826662164 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

श्रेणी $\sum_{n=0}^{\infty} (2x)^n$ अभिसरित है यदि:

Options :

1. ✘ $-1 \leq x \leq 1$
2. ✔ $-\frac{1}{2} < x < \frac{1}{2}$
3. ✘ $-2 < x < 2$
4. ✘ $-\frac{1}{2} \leq x \leq \frac{1}{2}$

Question Number : 44 Question Id : 826662165 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If A and B are symmetric matrices, then AB are symmetric if:

Options :

1. ✘ $AB \neq BA$
2. ✔ $AB = BA$
3. ✘ $AB > BA$
4. ✘ $AB < BA$

Question Number : 44 Question Id : 826662165 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि A और B सममित आव्यूह हैं, तो AB सममित हैं यदि:

Options :

1. ✘ $AB \neq BA$
2. ✔ $AB = BA$
3. ✘ $AB > BA$
4. ✘ $AB < BA$

Question Number : 45 Question Id : 826662166 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Let A be a matrix of order $m \times n$ and R is non-singular matrix of order n, then:

Options :

1. ✖ Rank (RA) \neq Rank (A)
2. ✖ Rank (RA) \geq Rank (A)
3. ✖ Rank (RA) \leq Rank (A)
4. ✔ Rank (RA) = Rank (A)

Question Number : 45 Question Id : 826662166 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

मान लीजिए A एक $m \times n$ कोटि का आव्यूह है तथा R एक n कोटि का व्युत्क्रमणीय आव्यूह (non-singular matrix) है, तो:

Options :

1. ✖ Rank (RA) \neq Rank (A)
2. ✖ Rank (RA) \geq Rank (A)
3. ✖ Rank (RA) \leq Rank (A)
4. ✔ Rank (RA) = Rank (A)

Question Number : 46 Question Id : 826662167 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Given $-x + y = 0$
 $-x - 2y + 3z = 0$
 $2x + y - 3z = 0$

then:

Options :

1. ✔ $x = y = z$
2. ✖ $x = y, 0 = z$
3. ✖ $x = z, y = 0$
4. ✖ $y = z, x = 0$

Question Number : 46 Question Id : 826662167 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

दिया गया है $-x + y = 0$
 $-x - 2y + 3z = 0$
 $2x + y - 3z = 0$

तो :

Options :

1. ✔ $x = y = z$
2. ✖ $x = y, 0 = z$
3. ✖ $x = z, y = 0$
4. ✖ $Y = z, x = 0$

Question Number : 47 Question Id : 826662168 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If vector space V have dimension $\dim V = n$ and let B and B' are two basis of V then:

Options :

1. ✓ B and B' have same number of elements n
2. ✗ B and B' will have distinct number of elements
3. ✗ B and B' have more than n elements
4. ✗ B and B' have less than n elements

Question Number : 47 Question Id : 826662168 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि सदिश समष्टि V का विमीय $\dim V = n$ है और मान लीजिए B और B' V के दो आधार हैं तो:

Options :

1. ✓ B और B' के अवयवों की संख्या समान होती है।
2. ✗ B और B' के अवयवों की संख्या भिन्न होती है।
3. ✗ B और B' के अवयवों की संख्या n होती है।
4. ✗ B और B' के अवयवों की संख्या n से कम होती है।

Question Number : 48 Question Id : 826662169 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

As soon as a new variable is found by iteration, it is used immediately in the linear equations, this method is called:

Options :

1. ✗ Gauss Jordan Method
2. ✓ Gauss Seidal Method
3. ✗ Jacobi Method
4. ✗ Relaxation Method

Question Number : 48 Question Id : 826662169 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

जैसे ही एक नया चर पुनरावृत्ति द्वारा पाया जाता है, यह रेखीय समीकरणों में तुरंत उपयोग किया जाता है, इस विधि को कहा जाता है:

Options :

1. ✗ गॉस जोर्डन विधि
2. ✓ गॉस साइडेल विधि

3. ✖ जैकोबी विधि

4. ✖ रिलेक्शन विधि

Question Number : 49 Question Id : 826662170 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Considering four subintervals, the value of $\int_0^1 \frac{1}{1+x} dx$ by Trapezoidal rule is:

Options :

1. ✖ 0.6870

2. ✖ 0.6677

3. ✔ 0.6970

4. ✖ 0.3597

Question Number : 49 Question Id : 826662170 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

चार उप-अंतरालो को ध्यान में रखते, समलम्बाकार नियम द्वारा $\int_0^1 \frac{1}{1+x} dx$ का मान है:

Options :

1. ✖ 0.6870

2. ✖ 0.6677

3. ✔ 0.6970

4. ✖ 0.3597

Question Number : 50 Question Id : 826662171 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If one root of the equation $f(x) = 0$ is near to x_0 , then the first approximation of this root as calculated by Newton Raphson method is the abscissa of the point, where the following straight line intersects the x-axis:

Options :

1. ✖ normal to the curve $y = f(x)$ at the point $(x_0, y = f(x_0))$

2. ✔ tangent to the curve $y = f(x)$ at the point $(x_0, y = f(x_0))$

3. ✖ the straight line through the point $(x_0, y = f(x_0))$ having the gradient $\frac{1}{f'(x_0)}$

4. ✖ Passing through the point $(x_0, y = f(x_0))$

Question Number : 50 Question Id : 826662171 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि समीकरण $f(x) = 0$ का एक मूल लगभग x_0 है, तो न्यूटन-रैप्सन विधि के द्वारा गणना करने पर इस मूल का प्रथम सन्निकटन बिंदु का भुज है, जहां निम्नलिखित सरल रेखा x -अक्ष पर प्रतिच्छेद करती है।

Options :

1. ✘ वक्र $y = f(x)$ के बिंदु $(x_0, y = f(x_0))$ पर अभिलंब
2. ✔ वक्र $y = f(x)$ के बिंदु $(x_0, y = f(x_0))$ पर स्पर्श रेखा
3. ✘ बिंदु $(x_0, y = f(x_0))$ से सीधी रेखा की ढाल $\frac{1}{f'(x_0)}$ होती है।
4. ✘ $(x_0, y = f(x_0))$ बिंदुओं से होकर जाती है।

Question Number : 51 Question Id : 826662172 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

In solving ordinary differential equation $y' = 2x, y(0) = 0$ using Euler's method, the iterates $y_n, n \in N$ satisfy:

Options :

1. ✘ $y_n = x_n^2$
2. ✘ $y_n = 2x_n$
3. ✔ $y_n = x_n x_{n-1}$
4. ✘ $y_n = x_n + x_{n-1}$

Question Number : 51 Question Id : 826662172 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यूलर की विधि प्रयोग करके सामान्य अवकलनीय समीकरण $y' = 2x, y(0) = 0$ को हल करने पर, इटरेट $y_n, n \in N$ स्पष्ट करता है:

Options :

1. ✘ $y_n = x_n^2$
2. ✘ $y_n = 2x_n$
3. ✔ $y_n = x_n x_{n-1}$
4. ✘ $y_n = x_n + x_{n-1}$

Question Number : 52 Question Id : 826662173 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The only function among the following, that is analytic, is:

Options :

1. ✘ $f(z) = \text{Re}(z)$
2. ✘ $f(z) = \text{Im}(z)$
3. ✘ $f(z) = \bar{z}$

4. ✓ $f(z) = \sin(z)$

Question Number : 52 Question Id : 826662173 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्नलिखित में से केवल फलन कौन सा है जो विश्लेषणात्मक है?

Options :

1. ✗ $f(z) = \operatorname{Re}(z)$

2. ✗ $f(z) = \operatorname{Im}(z)$

3. ✗ $f(z) = \bar{z}$

4. ✓ $f(z) = \sin(z)$

Question Number : 53 Question Id : 826662174 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The points which represents the root of the equation $(z+1)^n - z^n = 0$ lie on:

Options :

1. ✗ a circle

2. ✓ a pair of straight lines

3. ✗ a straight line

4. ✗ a parabola

Question Number : 53 Question Id : 826662174 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

बिंदु जो समीकरण $(z+1)^n - z^n = 0$ के मूल को प्रदर्शित करता है, कहाँ पर होता है?

Options :

1. ✗ एक वृत्त,

2. ✓ सीधी रेखाओं की एक जोड़ी

3. ✗ एक सीधी रेखा

4. ✗ एक परवलय

Question Number : 54 Question Id : 826662175 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The value of $\int_C \frac{3z+1}{z(2z+1)} dz$, where C is the circle $|z|=1$ is:

Options :

1. ✗ $2\pi i$

2. ✓ $3\pi i$

3. ✗ 4

4. ✘ -4

Question Number : 54 Question Id : 826662175 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$\int_C \frac{3z-1}{z(2z+1)} dz$, का मान क्या है, जहाँ C एक वृत्त $|z|=1$ है:

Options :

1. ✘ $2\pi i$

2. ✔ $3\pi i$

3. ✘ 4

4. ✘ -4

Question Number : 55 Question Id : 826662176 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

For the function $f(z) = \sin\left(\frac{1}{z}\right)$, $z = 0$ is a:

Options :

1. ✘ removable singularity

2. ✘ simple pole

3. ✘ branch point

4. ✔ essential singularity

Question Number : 55 Question Id : 826662176 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

फलन $f(z) = \sin\left(\frac{1}{z}\right)$, $z = 0$ के लिए है:

Options :

1. ✘ अपनेय विचित्रता

2. ✘ सामान्य अनन्तक

3. ✘ कुल अनन्तक

4. ✔ अनिवार्य विचित्रता

Question Number : 56 Question Id : 826662177 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The value of $\int_{-1}^1 \int_0^{x+z} \int_{x-z}^{x+z} (x+y+z) dx dy dz$ is:

Options :

1. ✔ 0

2. ✘ -1

3. ✖ 1

4. ✖ 2

Question Number : 56 Question Id : 826662177 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$\int_{-1}^1 \int_0^{x+z} \int_{x-z}^{x+z} (x+y+z) dx dy dz$ का मान है:

Options :

1. ✔ 0

2. ✖ -1

3. ✖ 1

4. ✖ 2

Question Number : 57 Question Id : 826662178 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The volume formed by revolution of loop of curve $y^2(a+x) = x^2(3a-x)$ about the x axis is:

Options :

1. ✖ $\pi a^3(8\log 2 + 3)$

2. ✔ $\pi a^3(8\log 2 - 3)$

3. ✖ $\pi a^3(-8\log 2 + 3)$

4. ✖ 0

Question Number : 57 Question Id : 826662178 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

वक्र $y^2(a-x) = x^2(3a-x)$ की कुंडली के x-अक्ष पर परिक्रमण द्वारा निर्मित आयतन है:

Options :

1. ✖ $\pi a^3(8\log 2 + 3)$

2. ✔ $\pi a^3(8\log 2 - 3)$

3. ✖ $\pi a^3(-8\log 2 + 3)$

4. ✖ 0

Question Number : 58 Question Id : 826662179 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The value of integral $\int_0^{\pi/2} \log(\tan x) dx$ is:

Options :

1. ✖ $-\pi \log 2$

2. ✖ $\pi \log 2$

3. ✓ 0

4. ✗ $\frac{\pi}{2} \log 2$

Question Number : 58 Question Id : 826662179 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

समाकलन $\int_0^{\pi/2} \log(\tan x) dx$ का मान है:

Options :

1. ✗ $-\pi \log 2$

2. ✗ $\pi \log 2$

3. ✓ 0

4. ✗ $\frac{\pi}{2} \log 2$

Question Number : 59 Question Id : 826662180 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If $I_n = \int_0^{\pi/4} \tan^n \theta d\theta$ then the following reduction formula exists:

Options :

1. ✗ $I_n - I_{n-2} = \frac{1}{n+1}$

2. ✓ $I_n + I_{n-2} = \frac{1}{n+1}$

3. ✗ $I_n + I_{n-2} + \frac{1}{n+1} = 0$

4. ✗ $I_n - I_{n-2} + \frac{1}{n+1} = 0$

Question Number : 59 Question Id : 826662180 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि $I_n = \int_0^{\pi/4} \tan^n \theta d\theta$ है, तो निम्नलिखित समानयन सूत्र होता है:

Options :

1. ✗ $I_n - I_{n-2} = \frac{1}{n+1}$

2. ✓ $I_n + I_{n-2} = \frac{1}{n+1}$

3. ✗ $I_n + I_{n-2} + \frac{1}{n+1} = 0$

4. ✗ $I_n - I_{n-2} + \frac{1}{n+1} = 0$

Question Number : 60 Question Id : 826662181 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The value of $\int \frac{dx}{(1+e^x)(1+e^{-x})}$ is equal to:

Options :

1. ✓ $-\frac{1}{(1+e^x)} + c$

2. ✗ $\frac{1}{(1+e^x)} + c$

3. ✗ $-\frac{1}{(1+e^{-x})} + c$

4. ✗ $\frac{1}{(1+e^{-x})} + c$

Question Number : 60 Question Id : 826662181 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

$\int \frac{dx}{(1-e^x)(1-e^{-x})}$ का मान किसके बराबर है?

Options :

1. ✓ $-\frac{1}{(1+e^x)} + c$

2. ✗ $\frac{1}{(1+e^x)} + c$

3. ✗ $-\frac{1}{(1+e^{-x})} + c$

4. ✗ $\frac{1}{(1+e^{-x})} + c$

English Language

Section Id :	8266627
Section Number :	2
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	17
Number of Questions to be attempted:	17
Section Marks:	20
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number: 1
Sub-Section Id: 8266627
Question Shuffling Allowed : Yes

Question Number : 61 Question Id : 826662182 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the word that is closest in meaning to the word in capitals.

BRIEF

Options :

1. ✖ Small
2. ✖ Little
3. ✔ Short
4. ✖ Limited

Question Number : 61 Question Id : 826662182 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the word that is closest in meaning to the word in capitals.

BRIEF

Options :

1. ✖ Small
2. ✖ Little
3. ✔ Short
4. ✖ Limited

Question Number : 62 Question Id : 826662183 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the word that is opposite in meaning to the word in capitals.

VANITY

Options :

1. ✖ Pride
2. ✔ Humility
3. ✖ Generosity
4. ✖ Hostility

Question Number : 62 Question Id : 826662183 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the word that is opposite in meaning to the word in capitals.

VANITY

Options :

1. ✘ Pride
2. ✔ Humility
3. ✘ Generosity
4. ✘ Hostility

Question Number : 63 Question Id : 826662184 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase that best defines the phrase in bold.

A **prima facie** case is such

Options :

1. ✔ as it seems at first sight
2. ✘ as it is made to seem at first sight
3. ✘ as it turns out to be at the end
4. ✘ as it seems to be after investigations

Question Number : 63 Question Id : 826662184 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase that best defines the phrase in bold.

A **prima facie** case is such

Options :

1. ✔ as it seems at first sight
2. ✘ as it is made to seem at first sight
3. ✘ as it turns out to be at the end
4. ✘ as it seems to be after investigations

Question Number : 64 Question Id : 826662185 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the correct spelling of the word to complete the sentence.

_____ is a synonym for graveyard.

Options :

1. ✘ cemetary
2. ✘ sematary
3. ✘ cematerly
4. ✔ cemetery

Question Number : 64 Question Id : 826662185 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the correct spelling of the word to complete the sentence.

_____ is a synonym for graveyard.

Options :

1. ✘ cemetary
2. ✘ sematary
3. ✘ cematerly
4. ✔ cemetery

Question Number : 65 Question Id : 826662186 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase that best expresses the meaning of the underlined idiom.

I tried to be pleasant to her but she gave me the cold shoulder.

Options :

1. ✘ insulted me
2. ✘ slapped me
3. ✘ knocked me down
4. ✔ ignored me

Question Number : 65 Question Id : 826662186 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase that best expresses the meaning of the underlined idiom.

I tried to be pleasant to her but she gave me the cold shoulder.

Options :

1. ✘ insulted me
2. ✘ slapped me
3. ✘ knocked me down
4. ✔ ignored me

Question Number : 66 Question Id : 826662187 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrasal verb that best completes the sentence.

The firefighters fought the blaze while the crowd _____

Options :

1. ✘ looked out
2. ✔ looked on
3. ✘ looked in
4. ✘ looked away.

Question Number : 66 Question Id : 826662187 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrasal verb that best completes the sentence.

The firefighters fought the blaze while the crowd _____

Options :

1. ✘ looked out
2. ✔ looked on
3. ✘ looked in
4. ✘ looked away

Question Id : 826662188 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension
Questions : No

Question Numbers : (67 to 70)

Question Label : Comprehension

Given below is a passage with four blanks. For each blank, four alternatives are provided. Select one of them to fill each blank.

In the 1870s, William Herschel, a British official in India, began _____ (1) with fingerprints as a hobby. He realized that no two people had exactly _____ (2) fingerprint and this fact _____ (3) used for identification. In 1901, Edward Henry _____ (4) fingerprints records for all the criminals serving a sentence of more than one month's imprisonment.

Sub questions

Question Number : 67 Question Id : 826662189 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (1) by choosing the best option.

Options :

1. ✘ investigating
2. ✘ examining
3. ✔ experimenting
4. ✘ testing

Question Number : 68 Question Id : 826662190 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (2) by choosing the best option.

Options :

1. ✘ similar
2. ✘ uniform
3. ✘ alike
4. ✔ identical

Question Number : 69 Question Id : 826662191 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (3) by choosing the best option.

Options :

1. ✘ was
2. ✔ could be
3. ✘ can be
4. ✘ must to be

Question Number : 70 Question Id : 826662192 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (4) by choosing the best option.

Options :

1. ✔ set up
2. ✘ built up
3. ✘ lined up
4. ✘ took up

Question Id : 826662188 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension
Questions : No

Question Numbers : (67 to 70)

Question Label : Comprehension

Given below is a passage with four blanks. For each blank, four alternatives are provided. Select one of them to fill each blank.

In the 1870s, William Herschel, a British official in India, began _____(1) with fingerprints as a hobby. He realized that no two people had exactly _____(2) fingerprint and this fact _____(3) used for identification. In 1901, Edward Henry _____(4) fingerprints records for all the criminals serving a sentence of more than one month's imprisonment.

Sub questions

Question Number : 67 Question Id : 826662189 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (1) by choosing the best option.

Options :

1. ✘ investigating
2. ✘ examining
3. ✔ experimenting
4. ✘ testing

Question Number : 68 Question Id : 826662190 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (2) by choosing the best option.

Options :

1. ✘ similar
2. ✘ uniform
3. ✘ alike
4. ✔ identical

Question Number : 69 Question Id : 826662191 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (3) by choosing the best option.

Options :

1. ✘ was
2. ✔ could be
3. ✘ can be
4. ✘ must to be

Question Number : 70 Question Id : 826662192 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Read the passage and fill in the blanks of (4) by choosing the best option.

Options :

1. ✔ set up
2. ✘ built up
3. ✘ lined up
4. ✘ took up

Question Number : 71 Question Id : 826662193 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Fill in the blanks with the word that best completes the sentence.

Attacks by the enemy planes forced the British army to _____.

Options :

1. ✘ retract
2. ✔ retreat
3. ✘ retrace
4. ✘ revoke

Question Number : 71 Question Id : 826662193 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Fill in the blanks with the word that best completes the sentence.

Attacks by the enemy planes forced the British army to _____.

Options :

1. ✘ retract
2. ✔ retreat
3. ✘ retrace
4. ✘ revoke

Question Number : 72 Question Id : 826662194 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Choose the word which is closest to the meaning of the underlined word.

Her instinctive reaction was to deny all that she had said earlier.

Options :

1. ✘ deliberate
2. ✔ automatic
3. ✘ initial
4. ✘ subconscious

Question Number : 72 Question Id : 826662194 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Choose the word which is closest to the meaning of the underlined word.

Her instinctive reaction was to deny all that she had said earlier.

Options :

1. ✘ deliberate
2. ✔ automatic
3. ✘ initial
4. ✘ subconscious

Question Number : 73 Question Id : 826662195 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Given below are four-sentence paragraphs (S1-S4), S1 and S4 are given. From the options (P, Q, R) choose two sentences which can be S2 and S3.

S1: Joe stepped onto the aeroplane and was met by one of the cabin crew.

S2: _____

S3: _____

S4: Sitting next to him was an 8 year-old-boy who also appeared to be quite nervous.

P. This was his first flight and he was feeling quite nervous.

Q. He looked out of the window and saw the red golden sun.

R. He walked along the aisle of the plane and found his seat.

Options :

1. ✘ QR
2. ✘ PQ
3. ✔ PR
4. ✘ QP

Question Number : 73 Question Id : 826662195 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Given below are four-sentence paragraphs (S1-S4), S1 and S4 are given. From the options (P, Q, R) choose two sentences which can be S2 and S3.

S1: Joe stepped onto the aeroplane and was met by one of the cabin crew.

S2: _____

S3: _____

S4: Sitting next to him was an 8 year-old-boy who also appeared to be quite nervous.

P. This was his first flight and he was feeling quite nervous.

Q. He looked out of the window and saw the red golden sun.

R. He walked along the aisle of the plane and found his seat.

Options :

1. ✘ QR
2. ✘ PQ
3. ✔ PR
4. ✘ QP

Question Number : 74 Question Id : 826662196 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Given below are four-sentence paragraphs (S1-S4). S1 and S4 are given. From the options (P, Q, R) choose two sentences which can be S2 and S3.

S1: Dodo bird is one of the first things we think of when we hear the word 'extinct.'

S2: _____

S3: _____

S4: This might have led to their early extinction.

P. This grey flightless bird belonged to the pigeon and the dove family.

Q. Dodo's lack of flight forced them to nest on ground.

R. Often stray dogs and wild pigs would trample on and eat Dodo eggs.

Options :

1. ✘ PQ

2. ✔ QR

3. ✘ RQ

4. ✘ PR

Question Number : 74 Question Id : 826662196 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Given below are four-sentence paragraphs (S1-S4). S1 and S4 are given. From the options (P, Q, R) choose two sentences which can be S2 and S3.

S1: Dodo bird is one of the first things we think of when we hear the word 'extinct.'

S2: _____

S3: _____

S4: This might have led to their early extinction.

P. This grey flightless bird belonged to the pigeon and the dove family.

Q. Dodo's lack of flight forced them to nest on ground.

R. Often stray dogs and wild pigs would trample on and eat Dodo eggs.

Options :

1. ✘ PQ

2. ✔ QR

3. ✘ RQ

4. ✘ PR

Question Number : 75 Question Id : 826662197 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that best completes the sentence.

Please vote for the member _____ has done the most for our village.

Options :

1. ✘ whom you believe

2. ✘ who's you believe

3. ✔ who you believe

4. ✖ which you believe

Question Number : 75 Question Id : 826662197 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that best completes the sentence.

Please vote for the member _____ has done the most for our village.

Options :

1. ✖ whom you believe
2. ✖ who's you believe
3. ✔ who you believe
4. ✖ which you believe

Question Number : 76 Question Id : 826662198 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that best completes the sentence.

Vipul: We all know the man is a thief. don't we?

Vishal: Yes, _____

Options :

1. ✖ but someone dares to say so publicly.
2. ✖ but everyone dares to say so publicly.
3. ✖ but some one dares to say so publicly.
4. ✔ but no one dares to say so publicly.

Question Number : 76 Question Id : 826662198 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that best completes the sentence.

Vipul: We all know the man is a thief. don't we?

Vishal: Yes, _____

Options :

1. ✖ but someone dares to say so publicly.
2. ✖ but everyone dares to say so publicly.
3. ✖ but some one dares to say so publicly.
4. ✔ but no one dares to say so publicly.

Question Number : 77 Question Id : 826662199 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that best completes the sentence.

_____ bad weather. the trip will be postponed to next week.

Options :

1. ✘ In case
2. ✔ In case of
3. ✘ In the case
4. ✘ In the case of

Question Number : 77 Question Id : 826662199 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that best completes the sentence.
_____ bad weather, the trip will be postponed to next week.

Options :

1. ✘ In case
2. ✔ In case of
3. ✘ In the case
4. ✘ In the case of

Question Number : 78 Question Id : 826662200 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that best completes the sentence.
I stopped on my way _____ some money from the ATM.

Options :

1. ✔ to withdraw
2. ✘ for withdrawing
3. ✘ to be withdrawing
4. ✘ withdrew

Question Number : 78 Question Id : 826662200 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that best completes the sentence.
I stopped on my way _____ some money from the ATM.

Options :

1. ✔ to withdraw
2. ✘ for withdrawing
3. ✘ to be withdrawing
4. ✘ withdrew

Question Number : 79 Question Id : 826662201 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that could replace the underlined section.

World War II proved to be the deadliest conflict in human history, claiming nearly twice as many lives than were killed in World War I.

Options :

1. ✘ than would have been killed in World War I.
2. ✘ as were killed in World War I.
3. ✔ as in World War I.
4. ✘ than in World War I.

Question Number : 79 Question Id : 826662201 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that could replace the underlined section.

World War II proved to be the deadliest conflict in human history, claiming nearly twice as many lives than were killed in World War I.

Options :

1. ✘ than would have been killed in World War I.
2. ✘ as were killed in World War I.
3. ✔ as in World War I.
4. ✘ than in World War I.

Question Number : 80 Question Id : 826662202 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that could replace the underlined section.

There was so much of anger in his voice that I had no choice but to hang up.

Options :

1. ✘ as much
2. ✔ so much
3. ✘ a lot of
4. ✘ such a lot of

Question Number : 80 Question Id : 826662202 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the phrase/clause that could replace the underlined section.

There was so much of anger in his voice that I had no choice but to hang up.

Options :

1. ✘ as much
2. ✔ so much
3. ✘ a lot of
4. ✘ such a lot of

General Intelligence / Reasoning

Section Id :	8266628
Section Number :	3
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	15
Number of Questions to be attempted:	15
Section Marks:	15
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	8266628
Question Shuffling Allowed :	Yes

Question Number : 81 Question Id : 826662203 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

What is related to 'Skin' is the same way as 'Taste' is related to 'Tongue'?

Options :

- ✘ Itching
- ✔ Feel
- ✘ wound
- ✘ Colour

Question Number : 81 Question Id : 826662203 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

जिस प्रकार 'जीभ' से 'स्वाद' संबंधित है उसी प्रकार 'त्वचा' से क्या संबंधित है?

Options :

- ✘ खुजलाहट
- ✔ संवेदना
- ✘ घाव
- ✘ रंग

Question Number : 82 Question Id : 826662204 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the related word from the given alternatives.

Cow : Calf :: Sheep : ?

Options :

- ✘ Cub

2. ✘ Puppy

3. ✔ Lamb

4. ✘ Fawn

Question Number : 82 Question Id : 826662204 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

दिए गए विकल्पों में से संबंधित शब्द का चयन करें।

गाय : बछड़ा :: भेड़ : ?

Options :

1. ✘ शावक

2. ✘ पिल्ला

3. ✔ मेमना

4. ✘ मृग छौना

Question Number : 83 Question Id : 826662205 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the related number from the given alternatives.

32 : 17 :: 104 : ?

Options :

1. ✔ 53

2. ✘ 55

3. ✘ 57

4. ✘ 60

Question Number : 83 Question Id : 826662205 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

दिए गए विकल्पों में से संबंधित संख्या का चयन करें।

32 : 17 :: 104 : ?

Options :

1. ✔ 53

2. ✘ 55

3. ✘ 57

4. ✘ 60

Question Number : 84 Question Id : 826662206 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the one which is different from the other three alternatives.

Options :

1. ✘ Laugh
2. ✘ Play
3. ✘ Walk
4. ✔ Sleep

Question Number : 84 Question Id : 826662206 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

किसी एक का चयन करें जो अन्य तीन विकल्पों से अलग है।

Options :

1. ✘ हंसना
2. ✘ खेलना
3. ✘ चलना
4. ✔ सोना

Question Number : 85 Question Id : 826662207 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Manoj ranks sixteenth in a class of 40 students. What is his rank from the last?

Options :

1. ✘ 24th
2. ✔ 25th
3. ✘ 26th
4. ✘ 27th

Question Number : 85 Question Id : 826662207 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

40 विद्यार्थियों की कक्षा में मनोज का स्थान 16वाँ है। अंत से उसका स्थान कौन सा है?

Options :

1. ✘ 24 वाँ
2. ✔ 25 वाँ
3. ✘ 26 वाँ
4. ✘ 27 वाँ

Question Number : 86 Question Id : 826662208 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Pointing towards a girl, Veena said, "Her mother is the only daughter of my mother." How is that girl related to Veena?

Options :

1. ✖ Sister
2. ✖ Mother
3. ✔ Daughter
4. ✖ Niece

Question Number : 86 Question Id : 826662208 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक लड़की की ओर इशारा करते हुए वीना कहती है, "उसकी माँ मेरी माँ की इकलौती पुत्री है" वीना उस लड़की से किस प्रकार संबंधित है ?

Options :

1. ✖ बहन
2. ✖ माँ
3. ✔ पुत्री
4. ✖ भांजी

Question Number : 87 Question Id : 826662209 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

In a certain code language, JUNGLE is written as ITMFKD. How will SUGAR be written in the same code?

Options :

1. ✔ RTFZQ
2. ✖ RTFBS
3. ✖ RTHAQ
4. ✖ TVHBS

Question Number : 87 Question Id : 826662209 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक विशेष कोड में, JUNGLE को ITMFKD लिखा जाता है। SUGAR को उसी कोड में कैसे लिखा हो जाएगा ?

Options :

1. ✔ RTFZQ
2. ✖ RTFBS
3. ✖ RTHAQ
4. ✖ TVHBS

Question Number : 88 Question Id : 826662210 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

From the alternatives, select the word which cannot be formed using the letters of the given word.

Given word: RECREATION

Options :

1. ✘ ACTION
2. ✘ RATION
3. ✘ CREATE
4. ✔ NATION

Question Number : 88 Question Id : 826662210 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्न विकल्पों में उस शब्द का चुनाव करें जो दिये गए शब्द के अक्षरों से नहीं बन सकता है।

दिया गया शब्द RECREATION :

Options :

1. ✘ ACTION
2. ✘ RATION
3. ✘ CREATE
4. ✔ NATION

Question Number : 89 Question Id : 826662211 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Five products, P, Q, R, S and T are priced differently in a general store. Value of 'R' is Rs 500/-. 'P' is cheaper than 'R' but Costlier than 'Q'. T is costlier than 'R' but cheaper than 'S'. Which one of the product is costliest?

Options :

1. ✘ T
2. ✔ S
3. ✘ R
4. ✘ P

Question Number : 89 Question Id : 826662211 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक सामान्य भंडार में पाँच उत्पादों P, Q, R, S और T का मूल्य अलग-अलग है। 'R' का मूल्य 500/- रुपये है। 'P' 'R' से सस्ता है परंतु 'Q' से महंगा है। 'T', 'R' से महंगा है परंतु S से सस्ता है। कौन सा उत्पाद सबसे महंगा है?

Options :

1. ✘ T
2. ✔ S
3. ✘ R

4. ✖ P

Question Number : 90 Question Id : 826662212 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Arrange the following words in a meaningful order.

1. Hut
2. Bungalow
3. Palace
4. Flat

Options :

1. ✖ 2, 1, 3, 4
2. ✖ 3, 1, 2, 4
3. ✔ 1, 4, 3, 2
4. ✖ 4, 2, 3, 1

Question Number : 90 Question Id : 826662212 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्नलिखित शब्दों की एक सार्थक क्रम में व्यवस्था करें।

1. झोपड़ी
2. बंगला
3. महल
4. फ्लैट

Options :

1. ✖ 2, 1, 3, 4
2. ✖ 3, 1, 2, 4
3. ✔ 1, 4, 3, 2
4. ✖ 4, 2, 3, 1

Question Number : 91 Question Id : 826662213 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Choose the correct alternative that will complete the given series.

11, 32, 53, 74, 95, ?

Options :

1. ✖ 106
2. ✖ 111
3. ✖ 113
4. ✔ 116

Question Number : 91 Question Id : 826662213 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्न में से सही विकल्प को चुनें जो दी गई श्रृंखला को पूरा करेगा।

11, 32, 53, 74, 95, ?

Options :

1. ✘ 106
2. ✘ 111
3. ✘ 113
4. ✔ 116

Question Number : 92 Question Id : 826662214 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Choose the correct alternative that will complete the given series.

BDF, HJL, NPR, ?

Options :

1. ✘ TRP
2. ✔ TVX
3. ✘ TVY
4. ✘ UWX

Question Number : 92 Question Id : 826662214 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

निम्न में से सही विकल्प को चुनें जो दी गई श्रृंखला को पूरा करेगा।

BDF, HJL, NPR, ?

Options :

1. ✘ TRP
2. ✔ TVX
3. ✘ TVY
4. ✘ UWX

Question Number : 93 Question Id : 826662215 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Select the one which is different from the other three alternatives.

Options :

1. ✘ Butter
2. ✘ Cheese
3. ✘ Ghee
4. ✔ Milk

Question Number : 93 Question Id : 826662215 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

किसी एक का चयन करें जो अन्य तीन विकल्पों से अलग है ।

Options :

1. ✘ मक्खन
2. ✘ पनीर
3. ✘ घी
4. ✔ दूध

Question Number : 94 Question Id : 826662216 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

In a row of boys, Atul is seventh from the start and twenty second from end. How many boys are there in the row?

Options :

1. ✘ 27
2. ✔ 28
3. ✘ 29
4. ✘ 30

Question Number : 94 Question Id : 826662216 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

लड़को की एक पंक्ति में, अतुल का स्थान प्रारंभ से 7 वाँ और अंतिम से 22 वाँ है। पंक्ति में कितने लड़के हैं?

Options :

1. ✘ 27
2. ✔ 28
3. ✘ 29
4. ✘ 30

Question Number : 95 Question Id : 826662217 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Introducing a man, Shilpa said, "His brother's father is the only child of my grandfather." How is the man related to Shilpa?

Options :

1. ✘ Son
2. ✘ Uncle
3. ✔ Brother
4. ✘ Cousin

Question Number : 95 Question Id : 826662217 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक आदमी का परिचय कराते हुए शिल्पा कहती है कि, "इसके भाई के पिता मेरे दादा के इकलौते बच्चे हैं।" शिल्पा उस आदमी से किस प्रकार संबंधित है ?

Options :

1. ✖ बेटा
2. ✖ चाचा
3. ✔ भाई
4. ✖ कज़न

General Aptitude / Numerical Ability

Section Id :	8266629
Section Number :	4
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	15
Number of Questions to be attempted:	15
Section Marks:	15
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	8266629
Question Shuffling Allowed :	Yes

Question Number : 96 Question Id : 826662218 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The sum of first 15 terms of the series $2^2 + 5^2 + 8^2 + \dots$ is :

Options :

1. ✖ 10415
2. ✖ 10425
3. ✖ 10440
4. ✔ 10455

Question Number : 96 Question Id : 826662218 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

श्रेणी $2^2 + 5^2 + 8^2 + \dots$ के पहले 15 पदों का योग है।

Options :

1. ✖ 10415
2. ✖ 10425
3. ✖ 10440

4. ✓ 10455

Question Number : 97 Question Id : 826662219 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If the ratio of the sums of first p terms and q terms of an arithmetic progression is $p^2 : q^2$, then the ratio of its p th and q th terms is:

Options :

1. ✓ $(2p - 1) : (2q - 1)$
2. ✗ $(2p + 1) : (2q + 1)$
3. ✗ $p : q$
4. ✗ $(p + 1) : (q + 1)$

Question Number : 97 Question Id : 826662219 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

किसी समांतर श्रेणी के पहले p पदों तथा पहले q पदों के योग में अनुपात $p^2 : q^2$ है, तब इसके p वें पदों तथा q वें पद में अनुपात है:

Options :

1. ✓ $(2p - 1) : (2q - 1)$
2. ✗ $(2p + 1) : (2q + 1)$
3. ✗ $p : q$
4. ✗ $(p + 1) : (q + 1)$

Question Number : 98 Question Id : 826662220 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The sum of a certain infinite geometric series is 20. When all the terms in the series are squared, the sum of the resulting series is 80. The sum of first three terms of the original series is:

Options :

1. ✗ $6\frac{2}{3}$
2. ✗ $11\frac{1}{9}$
3. ✓ $14\frac{2}{27}$
4. ✗ $16\frac{4}{81}$

Question Number : 98 Question Id : 826662220 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

किसी अनन्त गुणोत्तर श्रेणी का योग 20 है। यदि श्रेणी के सभी पदों का वर्ग कर दिया जाए, तो नयी श्रेणी का योग 80 हो जाता है। वास्तविक श्रेणी के पहले तीन पदों का योग है:

Options :

1. ✖ $6\frac{2}{3}$
2. ✖ $11\frac{1}{9}$
3. ✔ $14\frac{2}{27}$
4. ✖ $16\frac{4}{81}$

Question Number : 99 Question Id : 826662221 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The product of the values of x for which $2^{2x+3} - 65(2^x - 1) = 57$ is:

Options :

1. ✖ -3
2. ✖ 3
3. ✔ -9
4. ✖ 9

Question Number : 99 Question Id : 826662221 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

X के उन सभी मानों का गुणनफल जिसके लिए $2^{2x+3} - 65(2^x - 1) = 57$ है, निम्न है:

Options :

1. ✖ -3
2. ✖ 3
3. ✔ -9
4. ✖ 9

Question Number : 100 Question Id : 826662222 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The expression $\left[\frac{2x-7}{(x-2)(x-3)(x-4)} - \frac{1}{x^2-6x+8} \right] \div \frac{1}{x^2-5x+6}$, where $x > 4$, is equal to:

Options :

1. ✖ -1
2. ✔ 1
3. ✖ $(x-2)(x-3)$

4. ✖ $\frac{1}{x-3}$

Question Number : 100 Question Id : 826662222 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

व्यंजक $\left[\frac{2x-7}{(x-2)(x-3)(x-4)} - \frac{1}{x^2-6x+8} \right] \div \frac{1}{x^2-5x+6}$, जहाँ $x > 4$, बराबर है:

Options :

1. ✖ -1

2. ✔ 1

3. ✖ $(x-2)(x-3)$

4. ✖ $\frac{1}{x-3}$

Question Number : 101 Question Id : 826662223 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

If $a + b + c = 8$, $a^2 + b^2 + c^2 = 30$ and $a^3 + b^3 + c^3 = 134$, then the value of $(abc)^{-1}$ is:

Options :

1. ✖ 10

2. ✔ $\frac{1}{10}$

3. ✖ 6

4. ✖ $\frac{1}{6}$

Question Number : 101 Question Id : 826662223 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि $a + b + c = 8$, $a^2 + b^2 + c^2 = 30$ और $a^3 + b^3 + c^3 = 134$ है, तो $(abc)^{-1}$

का मान है:

Options :

1. ✖ 10

2. ✔ $\frac{1}{10}$

3. ✖ 6

4. ✖ $\frac{1}{6}$

Question Number : 102 Question Id : 826662224 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The angle of elevation and depression of the top and bottom of a lighthouse from the top of a building 60 m high are 30° and 60° respectively. If x meters is the difference between the heights of the light house and the building and y meters is the distance between them, then the approximate value of $(x - y)$ is:

Options :

1. ✖ 69.3
2. ✖ 34.6
3. ✖ 48.3
4. ✔ 54.6

Question Number : 102 Question Id : 826662224 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

60 मीटर की ऊँचाई वाले एक भवन के शिखर से देखने पर एक प्रकाशस्तंभ के शिखर और तल के उन्नयन और अवनमन कोण क्रमशः 30° तथा 60° के हैं। यदि स्तंभ और भवन की ऊँचाइयों का अंतर x मीटर और उनके बीच की दूरी y मीटर है, तो $(x + y)$ का मान लगभग है:

Options :

1. ✖ 69.3
2. ✖ 34.6
3. ✖ 48.3
4. ✔ 54.6

Question Number : 103 Question Id : 826662225 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Fresh grapes contain 80% water by weight, whereas dried grapes contain 15% water by weight. How many kilograms of dried grapes can be obtained from 13.6 kg of fresh grapes?

Options :

1. ✖ 2.72
2. ✖ 2.95
3. ✔ 3.2
4. ✖ 3.6

Question Number : 103 Question Id : 826662225 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

ताजा अंगूरों में भार के अनुसार 80% पानी होता है जब कि शुष्क अंगूरों में भार के अनुसार 15% पानी होता है। 13.6 किग्रा ताजा अंगूरों से कितने किग्रा शुष्क अंगूर प्राप्त हो सकते हैं?

Options :

1. ✖ 2.72
2. ✖ 2.95
3. ✔ 3.2

4. ✖ 3.6

Question Number : 104 Question Id : 826662226 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A, B, C and D are four employees working in a company. In 2003 and 2004, each of them got hike in his salary respectively in the following way:

A : $p\%$ and $(p + 1)\%$

B : $(p + 1)\%$ and $p\%$

C : $(p + 2)\%$ and $(p - 1)\%$

D : $(p + 4)\%$ and $(p - 3)\%$

Initially, all of them had equal salaries. Who got the least hike?

Options :

1. ✖ A

2. ✖ B

3. ✖ C

4. ✔ D

Question Number : 104 Question Id : 826662226 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A, B, C और D चारों एक ही कंपनी के कर्मचारी हैं। 2003 और 2004 में उनमें से प्रत्येक के वेतन में वृद्धि क्रमशः निम्न प्रकार हुई:

A : $p\%$ और $(p+1)\%$

B : $(p+1)\%$ और $p\%$

C : $(p+2)\%$ और $(p-1)\%$ तथा

D : $(p+4)\%$ और $(p-3)\%$

आरम्भ में सभी का वेतन समान था। किसके वेतन में सबसे कम वृद्धि हुई?

Options :

1. ✖ A

2. ✖ B

3. ✖ C

4. ✔ D

Question Number : 105 Question Id : 826662227 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

By how much above the cost should goods be marked for sale so that after allowing a trade discount of 25% and a cash discount of 4%, a net gain of 8% on the cost is made?

Options :

1. ✖ 29%

2. ✖ 32%

3. ✔ 50%

4. ✖ 60%

Question Number : 105 Question Id : 826662227 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

बिक्री के लिए वस्तुओं का अंकित मूल्य क्रय मूल्य से कितना अधिक अंकित किया जाए कि 25% का व्यापारिक बट्टा तथा 4% का नकद बट्टा देने के पश्चात भी 80% का शुद्ध लाभ लिया जा सके?

Options :

1. ✖ 29%

2. ✖ 32%

3. ✔ 50%

4. ✖ 60%

Question Number : 106 Question Id : 826662228 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A person sells an article on the price that is obtained after reducing its marked price by Rs. 640, and gains 15%. If the cost price of the article is Rs. 4800, what percentage of profit will he get if he sells it at the marked price?

Options :

1. ✖ $26\frac{1}{4}$

2. ✔ $28\frac{1}{3}$

3. ✖ $30\frac{5}{12}$

4. ✖ $30\frac{7}{16}$

Question Number : 106 Question Id : 826662228 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

कोई व्यक्ति एक वस्तु को उस मूल्य पर बेचता है जो उसके अंकित मूल्य में से ₹ 640 कम करने पर प्राप्त होता है, और 15% का लाभ प्राप्त करता है। यदि वस्तु का क्रय मूल्य ₹ 4800 है, तो उसे अंकित मूल्य पर बेचने से उसे कितने प्रतिशत लाभ होगा?

Options :

1. ✖ $26\frac{1}{4}$

2. ✔ $28\frac{1}{3}$

3. ✖ $30\frac{5}{12}$

4. ✖ $30\frac{7}{16}$

Question Number : 107 Question Id : 826662229 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A train takes $1\frac{1}{3}$ hours less for a journey of 528 km, if its speed is increased by $5\frac{1}{2}$ km/hour from its usual speed. The usual speed of the train, in km/hour, is:

Options :

1. ✓ 44
2. ✗ 48
3. ✗ 52
4. ✗ 55

Question Number : 107 Question Id : 826662229 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

यदि किसी रेलगाड़ी की सामान्य चाल में $5\frac{1}{2}$ किमी/घंटा की वृद्धि की जाए, तो उसे 528 किमी की यात्रा तय करने में $1\frac{1}{3}$ घंटे कम लगते हैं। रेलगाड़ी की सामान्य चाल (किमी/घंटा में) है:

Options :

1. ✓ 44
2. ✗ 48
3. ✗ 52
4. ✗ 55

Question Number : 108 Question Id : 826662230 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A person X sets out to walk from A to B and at the same time another person Y starts to walk from B to A. After passing each other, X and Y complete their journeys in 3 hours 20 minutes and 4 hours 48 minutes respectively. If X walks at the speed of $4\frac{1}{2}$ km/hour, what is the speed (in km/hour) of Y?

Options :

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

Question Number : 108 Question Id : 826662230 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

एक व्यक्ति X, स्थान A से B की ओर चलता है और उसी समय एक दूसरा व्यक्ति Y, B से A की ओर चलता है। रास्ते में एक दूसरे से मिलने के पश्चात, X और Y अपनी यात्राओं को क्रमशः 3 घंटे 20 मिनट तथा 4 घंटे 48 मिनट में पूरा कर लेते हैं। यदि X, $4\frac{1}{2}$ किमी/घंटा की चाल से चलता है, तो Y की चाल (किमी/घंटा में) क्या है?

Options :

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

Question Number : 109 Question Id : 826662231 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A and B can do a piece of work in 12 days while B and C can do it in 24 days, and C and A in 20 days. They all work together on it for 10 days and then B and C leave. How many days more A will take to complete the work?

Options :

1. ✔ $2\frac{8}{11}$ days
2. ✘ $3\frac{1}{3}$ days
3. ✘ $3\frac{2}{3}$ days
4. ✘ $4\frac{5}{11}$ days

Question Number : 109 Question Id : 826662231 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

A और B एक साथ मिलकर एक काम को 12 दिनों में कर सकते हैं, जबकि B और C मिलकर उसे 24 दिनों में और C तथा A मिलकर 20 दिनों में कर सकते हैं। वे सब एक साथ मिलकर 10 दिन उस काम को करते हैं और तब B और C काम छोड़कर चले जाते हैं। A को काम पूरा करने में और कितने दिन और लगेंगे?

Options :

1. ✔ $2\frac{8}{11}$ दिन
2. ✘ $3\frac{1}{3}$ दिन

3. ✘ $3\frac{2}{3}$ दिन

4. ✘ $4\frac{5}{11}$ दिन

Question Number : 110 Question Id : 826662232 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Seven persons working for 8 hours a day can complete a work in 13 days. When they work $6\frac{1}{2}$ hours a day and 9 more persons are brought to work, then in how many days will the work be completed?

Options :

1. ✘ 6

2. ✔ 7

3. ✘ 8

4. ✘ 9

Question Number : 110 Question Id : 826662232 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

सात व्यक्ति प्रतिदिन 8 घंटे काम करके एक काम को 13 दिनों में पूरा कर सकते हैं। जब वे प्रतिदिन $6\frac{1}{2}$ घंटे काम करें और 9 और व्यक्ति काम पर लगाए जाएँ, तो कितने दिनों में काम पूरा हो जाएगा?

Options :

1. ✘ 6

2. ✔ 7

3. ✘ 8

4. ✘ 9

General Knowledge / Awareness

Section Id :	82666210
Section Number :	5
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	10
Number of Questions to be attempted:	10
Section Marks:	10
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	82666210
Question Shuffling Allowed :	Yes

Question Number : 111 Question Id : 826662233 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Who founded the "Brahmo Samaj"?

Options :

1. ✘ Rabindranath Tagore
2. ✘ MN Roy
3. ✔ Raja Ram Mohun Roy
4. ✘ Swami Dayanand Saraswati

Question Number : 111 Question Id : 826662233 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

"ब्रह्म समाज" की स्थापना किसने की थी?

Options :

1. ✘ रविंद्रनाथ टैगोर
2. ✘ एमएन रॉय
3. ✔ राजा राम मोहन राय
4. ✘ स्वामी दयानंद सरस्वती

Question Number : 112 Question Id : 826662234 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The Grand Trunk Road was built by:

Options :

1. ✔ Sher Shah Suri
2. ✘ Alexander the Great
3. ✘ Emperor Ashoka
4. ✘ Moghul King Akbar

Question Number : 112 Question Id : 826662234 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

ग्रांड ट्रंक रोड किसके द्वारा बनवाया गया था?

Options :

1. ✔ शेर शाह सूरी
2. ✘ सिकंदर महान
3. ✘ सम्राट अशोक
4. ✘ मुगल राजा अकबर

Question Number : 113 Question Id : 826662235 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The correct chronological sequence of some of the Moghul Emperors who ruled India in the 16th and 17th Century is:

Options :

1. ✖ Babur, Akbar, Humayun, Jahangir
2. ✖ Akbar, Humayun, Jahangir, Shah Jahan
3. ✔ Babur, Humayun, Akbar, Shah Jahan
4. ✖ Jahangir, Akbar, Humayun, Bahadur Shah Zafar

Question Number : 113 Question Id : 826662235 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

कुछ मुगल राजाओं जिन्होंने 16वीं तथा 17वीं शताब्दी में भारत पर शासन किया था, का सही कालानुक्रमिक क्रम है:

Options :

1. ✖ बाबर, अकबर, हुमायूँ, जहांगीर
2. ✖ अकबर, हुमायूँ, जहांगीर, शाहजहां
3. ✔ बाबर, हुमायूँ, अकबर, शाहजहां
4. ✖ जहांगीर, अकबर, हुमायूँ, बहादुर शाह जफर

Question Number : 114 Question Id : 826662236 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The capital of Syria, where unrest is going on, is:

Options :

1. ✖ Doha
2. ✖ Baghdad
3. ✔ Damascus
4. ✖ Kabul

Question Number : 114 Question Id : 826662236 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

सीरिया की राजधानी, जहाँ अभी अशांति चल रही है:

Options :

1. ✖ दोहा
2. ✖ बगदाद

3. ✓ दमिश्क

4. ✘ काबुल

Question Number : 115 Question Id : 826662237 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The mountain range, NOT in India, is:

Options :

1. ✘ Satpura

2. ✘ Shivalik

3. ✓ Rocky

4. ✘ Karakoram

Question Number : 115 Question Id : 826662237 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

पर्वत श्रृंखला जो भारत में नहीं है:

Options :

1. ✘ सतपुड़ा

2. ✘ शिवालिक

3. ✓ राँकी

4. ✘ काराकोरम

Question Number : 116 Question Id : 826662238 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The award given to the coaches of sports and games in India is:

Options :

1. ✘ Arjuna Award

2. ✘ Golden Boot

3. ✓ Dronacharya Award

4. ✘ Vir Chakra

Question Number : 116 Question Id : 826662238 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

खेलकूद और क्रीड़ा के प्रशिक्षकों को दिया जाने वाला पुरस्कार है।

Options :

1. ✘ अर्जुन पुरस्कार

2. ✘ गोल्डन बूट

3. ✓ द्रोणाचार्य पुरस्कार

4. ✘ वीर चक्र

Question Number : 117 Question Id : 826662239 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The slogan "Make in India" is likely to have the following outcome:

Options :

1. ✘ Build great sportsmen

2. ✓ Cause economic growth in the country

3. ✘ Improve education sector

4. ✘ Make judiciary efficient

Question Number : 117 Question Id : 826662239 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

"मेक इन इंडिया" नारे से निम्नलिखित परिणाम संभावित है:

Options :

1. ✘ महान खिलाड़ियों को तैयार करना

2. ✓ देश के आर्थिक विकास में वृद्धि

3. ✘ शिक्षा क्षेत्र में सुधार

4. ✘ न्यायपालिका को प्रभावशाली बनाना।

Question Number : 118 Question Id : 826662240 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

Some soldiers recently lost their lives in the Siachen glacier due to:

Options :

1. ✘ A blizzard

2. ✘ An iceberg

3. ✓ An avalanche

4. ✘ A cyclone

Question Number : 118 Question Id : 826662240 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

कुछ सैनिकों की हाल ही में सियाचिन ग्लेशियर किस कारण जान चली गयी?

Options :

1. ✘ एक बर्फीला तूफान

2. ✘ एक हिमखंड
3. ✔ हिमस्खलन
4. ✘ एक चक्रवात

Question Number : 119 Question Id : 826662241 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The recently released movie "Airlift", based on a true world event, is directed by:

Options :

1. ✘ Aditya Chopra
2. ✘ Karan Johar
3. ✘ Sanjay Leela Bhansali
4. ✔ Raja Krishna Menon

Question Number : 119 Question Id : 826662241 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

अभी हाल ही में विश्व की एक सच्ची घटना पर आधारित फिल्म "एयरलिफ्ट" रिलीज़ हुई है, किसके द्वारा निर्देशित है?

Options :

1. ✘ आदित्य चोपड़ा
2. ✘ करण जौहर
3. ✘ संजय लीला भंसाली
4. ✔ राजा कृष्णा मेनन

Question Number : 120 Question Id : 826662242 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

The virus causing microcephaly in new born infants of infected mothers is:

Options :

1. ✘ Zoster
2. ✘ HIV
3. ✔ Zika
4. ✘ H1N1

Question Number : 120 Question Id : 826662242 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0

संक्रमित माँ से हुए नवजात शिशु में माइक्रोसेफाली का कारण कौन सा वायरस होता है?

Options :

1. ✖ जोस्टर
2. ✖ HIV
3. ✔ जीका
4. ✖ H1N1