BHEL 11th 12th April 2025

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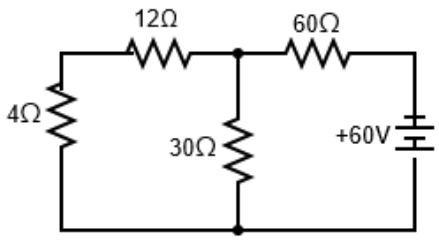
Test Center Name	R K Digital Computer Centre 1
Test Date	12/04/2025
Test Time	9:00 AM - 11:30 AM
Subject	Engineer Trainee Electronics

Section : **Section I Question on Subject Discipline**

Q.1 The Thevenin equivalent resistance seen by a 4 Ω resistor in the circuit is _____.



Ans
✗ A. 32/9 Ω
✗ B. 102 Ω
✗ C. 36 Ω
✓ D. 32 Ω

Question ID : **44100952847**
Option 1 ID : **441009210469**
Option 2 ID : **441009210471**
Option 3 ID : **441009210470**
Option 4 ID : **441009210468**
Status : **Answered**
Chosen Option : **C**

Q.2 If X(Z) is the Z-Transform of x[n], then the Z-Transform of x[kn] (where k is an integer) is:

Ans
✗ A. X(kZ)
✗ B. kX(Z)
✓ C. $X(Z^k)$
✗ D. X(Z)/k

Question ID : **44100972383**
Option 1 ID : **441009287882**
Option 2 ID : **441009287883**
Option 3 ID : **441009287881**
Option 4 ID : **441009287884**
Status : **Answered**
Chosen Option : **D**

Q.3 Evaluate the integral $\iint_R e^{x^2+y^2}\,dx\,dy$, where R is the annular region b

Ans
- ✗ A. $\pi(e^5 - e^4)$
- ✓ B. $\pi(e^9 - e^4)$
- ✗ C. $\pi(e^3 - e^2)$
- ✗ D. $\pi(e^9 - e^2)$

Question ID : **44100975428**
Option 1 ID : **441009299989**
Option 2 ID : **441009299988**
Option 3 ID : **441009299986**
Option 4 ID : **441009299987**
Status : **Answered**
Chosen Option : **B**

Q.4 Which of the following techniques is most effective in reducing Inter-Symbol Interference (ISI)?

Ans
- ✗ A. Decreasing the modulation index
- ✗ B. Using a higher carrier frequency
- ✗ C. Increasing the symbol rate
- ✓ D. Applying a matched filter at the receiver

Question ID : **441009122986**
Option 1 ID : **441009488856**
Option 2 ID : **441009488854**
Option 3 ID : **441009488853**
Option 4 ID : **441009488855**
Status : **Answered**
Chosen Option : **C**

Q.5 What is the decimal equivalent of the two's complement binary number 11111011 in an 8-bit system?

Ans
- ✗ A. −2
- ✗ B. −3
- ✗ C. −4
- ✓ D. −5

Question ID : **441009119022**
Option 1 ID : **441009473206**
Option 2 ID : **441009473205**
Option 3 ID : **441009473204**
Option 4 ID : **441009473203**
Status : **Answered**
Chosen Option : **C**

Q.6 **Identify whether the given statements related to intrinsic semiconductor are true or false.**
Statement I: The resistivity of the intrinsic semi-conductor varies with respect to temperature.
Statement II: As the mobility of the electron charge carrier increases, the resistivity of the semiconductor decreases.

Ans
✗ A. I-False, II-True
✓ B. I-True, II-True
✗ C. I-False, II-False
✗ D. I-True, II-False

Question ID : **44100930075**
Option 1 ID : **441009119746**
Option 2 ID : **441009119748**
Option 3 ID : **441009119745**
Option 4 ID : **441009119747**
Status : **Answered**
Chosen Option : **B**

Q.7 **In an SR Flip-Flop, what is the primary issue when both S = 1 and R = 1 at the same time?**

Ans
✗ A. The flip-flop can only output a constant logic 1
✓ B. The flip-flop enters an indeterminate state, causing a race condition.
✗ C. The flip-flop resets itself back to zero automatically.
✗ D. The flip-flop enters a stable state of 0.

Question ID : **441009119093**
Option 1 ID : **441009473488**
Option 2 ID : **441009473489**
Option 3 ID : **441009473490**
Option 4 ID : **441009473487**
Status : **Answered**
Chosen Option : **B**

Q.8 **A control system's settling time (T_s) is required to be reduced by half. If the damping ratio (ζ) is kept constant, by what factor must the natural frequency (ω_n) be increased?**

Ans
✗ A. 1.5
✓ B. 2
✗ C. 1
✗ D. 0.5

Question ID : **44100950934**
Option 1 ID : **441009202913**
Option 2 ID : **441009202911**
Option 3 ID : **441009202910**
Option 4 ID : **441009202912**
Status : **Answered**
Chosen Option : **B**

Q.9 **Gauss's Law can be derived from the divergence theorem. What does the divergence theorem state?**

Ans

✗ A. The flux through any closed surface is zero.

✗ B. The integral of the divergence of a vector field over a surface is equal to the volume integral of the field.

✓ C. The integral of the divergence of a vector field over a volume is equal to the closed surface integral of the field through the boundary.

✗ D. The divergence of a vector field is zero everywhere.

Question ID : **44100929280**
Option 1 ID : **441009116601**
Option 2 ID : **441009116599**
Option 3 ID : **441009116598**
Option 4 ID : **441009116600**
Status : **Answered**
Chosen Option : **C**

Q.10 **The ROC of a two-sided sequence (which extends both in positive and negative time directions) is:**

Ans

✓ A. $R_1 < |z| < R_2$

✗ B. the entire z-plane

✗ C. $|z| < R_2$

✗ D. $|z| > R_1$

Question ID : **44100972604**
Option 1 ID : **441009288723**
Option 2 ID : **441009288724**
Option 3 ID : **441009288722**
Option 4 ID : **441009288721**
Status : **Answered**
Chosen Option : **B**

Q.11 **Absolute maxima of $f(x) = x^3 + 2x^2 + x - 1$ on $[-1,1]$ occurs at:**

Ans

✗ A. $x = -1$

✓ B. $x = 1$

✗ C. $x = 0$

✗ D. $x = \frac{-1}{3}$

Question ID : **44100986683**
Option 1 ID : **441009344412**
Option 2 ID : **441009344415**
Option 3 ID : **441009344414**
Option 4 ID : **441009344413**
Status : **Answered**
Chosen Option : **A**

Q.12 To effectively reject the image frequency in a superheterodyne receiver, which of the following techniques is commonly used?

Ans
- ✗ A. Using a frequency mixer without any filtering
- ✗ B. Applying a high-pass filter at the RF stage
- ✓ C. Using a band-pass filter at the IF stage
- ✗ D. Increasing the LO (Local Oscillator) power

Question ID : **441009122966**
Option 1 ID : **441009488776**
Option 2 ID : **441009488775**
Option 3 ID : **441009488774**
Option 4 ID : **441009488773**
Status : **Answered**
Chosen Option : **C**

Q.13 For the TM mode in a rectangular waveguide, the electric field is _____.

Ans
- ✓ A. a combination of transverse and longitudinal components
- ✗ B. completely transverse to the direction of propagation
- ✗ C. completely longitudinal to the direction of propagation
- ✗ D. only in the direction of propagation

Question ID : **44100929047**
Option 1 ID : **441009115660**
Option 2 ID : **441009115658**
Option 3 ID : **441009115659**
Option 4 ID : **441009115661**
Status : **Answered**
Chosen Option : **B**

Q.14 What is the role of swamping resistors in a differential amplifier?

Ans
- ✓ A. To increase the stability of the gain by reducing dependence on β
- ✗ B. To provide a direct coupling path for AC signals
- ✗ C. To increase the output voltage swing
- ✗ D. To increase the power dissipation in the transistors

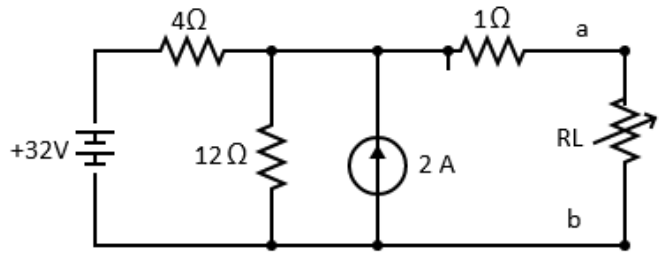
Question ID : **44100986755**
Option 1 ID : **441009344788**
Option 2 ID : **441009344791**
Option 3 ID : **441009344790**
Option 4 ID : **441009344789**
Status : **Answered**
Chosen Option : **C**

Q.15 Gauss's law, when derived using the divergence theorem, states that the net electric flux Φ coming out of any closed surface is _____.

Ans
- ✗ A. inversely proportional to the square of the distance
- ✓ B. directly proportional to the total charge enclosed within the surface
- ✗ C. independent of the charge distribution
- ✗ D. equal to the surface charge density

Question ID : **44100929290**
Option 1 ID : **441009116639**
Option 2 ID : **441009116640**
Option 3 ID : **441009116641**
Option 4 ID : **441009116638**
Status : **Answered**
Chosen Option : **B**

Q.16 For the given DC circuit, the Thevenin equivalent resistance to the left of terminal a-b is _____.



Ans
- ✗ A. 5 ohm
- ✗ B. 17 ohm
- ✓ C. 4 ohm
- ✗ D. 3 ohm

Question ID : **44100953334**
Option 1 ID : **441009212331**
Option 2 ID : **441009212329**
Option 3 ID : **441009212328**
Option 4 ID : **441009212330**
Status : **Answered**
Chosen Option : **C**

Q.17 For an angle modulated signal, which of the following statements is true regarding the bandwidth for large modulation index values (β >> 1)?

Ans
- ✗ A. The bandwidth approaches a constant value independent of the modulation index β.
- ✓ B. The bandwidth increases linearly with the modulation index β.
- ✗ C. The bandwidth increases as β^2.
- ✗ D. The bandwidth increases exponentially with β.

Question ID : **441009117849**
Option 1 ID : **441009468578**
Option 2 ID : **441009468576**
Option 3 ID : **441009468577**
Option 4 ID : **441009468579**
Status : **Answered**
Chosen Option : **C**

Q.18 For a given matrix $A=\begin{bmatrix}4 & 1 & -1\\ 2 & 5 & -2\\ 1 & 1 & 2\end{bmatrix}$, which of the following statements

Ans

✗ A. $\begin{bmatrix}1\\1\\1\end{bmatrix}$ is an eigen vectors of A corresponding to an eigen value $\lambda=5$

✗ B. $\begin{bmatrix}1\\1\\2\end{bmatrix}$ is an eigen vectors of A corresponding to an eigen value $\lambda=5$

✓ C. $\begin{bmatrix}1\\0\\1\end{bmatrix}$ & $\begin{bmatrix}0\\1\\1\end{bmatrix}$ are two linearly independent eigen vectors of A corresponding to an eigen value $\lambda=3$

✗ D. $\begin{bmatrix}1\\0\\-1\end{bmatrix}$ is an eigen vectors of A corresponding to an eigen value $\lambda=3$

Question ID : **44100989779**
Option 1 ID : **441009357287**
Option 2 ID : **441009357288**
Option 3 ID : **441009357286**
Option 4 ID : **441009357285**
Status : **Answered**
Chosen Option : **C**

Q.19 For a heavily doped n-type semi-conductor the fermi level is close to:

Ans

✗ A. exactly at the centre of bandgap

✓ B. conduction band

✗ C. valence band

✗ D. nowhere as the Fermi level does not exist for doped semi-conductor

Question ID : **44100930020**
Option 1 ID : **441009119527**
Option 2 ID : **441009119525**
Option 3 ID : **441009119526**
Option 4 ID : **441009119528**
Status : **Answered**
Chosen Option : **D**

Q.20 A capacitance value is measured in _____.

Ans

✗ A. coulombs

✓ B. farads

✗ C. henries

✗ D. ohms

Question ID : **44100953108**
Option 1 ID : **441009211509**
Option 2 ID : **441009211508**
Option 3 ID : **441009211510**
Option 4 ID : **441009211511**
Status : **Answered**
Chosen Option : **B**

Q.21 What is the purpose of the capacitive voltage divider in a Colpitts oscillator?

Ans
✗ A. To stabilise the power supply voltage
✗ B. To increase the gain of the amplifier stage
✗ C. To filter unwanted frequencies
✓ D. To provide the necessary feedback for sustained oscillations

Question ID : **44100988896**
Option 1 ID : **441009353582**
Option 2 ID : **441009353581**
Option 3 ID : **441009353580**
Option 4 ID : **441009353579**
Status : **Answered**
Chosen Option : **C**

Q.22 In a (15,11) Hamming Code, the number of parity bits r is:

Ans
✓ A. 4
✗ B. 5
✗ C. 6
✗ D. 7

Question ID : **441009126662**
Option 1 ID : **441009503324**
Option 2 ID : **441009503325**
Option 3 ID : **441009503326**
Option 4 ID : **441009503327**
Status : **Answered**
Chosen Option : **C**

Q.23 Which of the following statements is/are correct?

S1: A source of internal impedance Z_S delivers maximum power to a load impedance Z_L only if $Z_L = Z^*_S$.
S2: A complex network connected to a load can be replaced with an equivalent impedance in parallel with a current source in Norton's Theorem.

Ans
✗ A. Neither S1 nor S2
✗ B. S1 only
✗ C. S2 only
✓ D. S1 and S2 both

Question ID : **44100953279**
Option 1 ID : **441009212175**
Option 2 ID : **441009212172**
Option 3 ID : **441009212173**
Option 4 ID : **441009212174**
Status : **Answered**
Chosen Option : **D**

Q.24 In a dual input, balanced output differential amplifier, what is the main advantage of using a balanced output?

Ans

✗ A. It increases the input capacitance.

✓ B. It improves common-mode noise rejection.

✗ C. It reduces the voltage gain.

✗ D. It eliminates the need for a biasing circuit.

Question ID : **44100986758**
Option 1 ID : **441009344802**
Option 2 ID : **441009344801**
Option 3 ID : **441009344803**
Option 4 ID : **441009344804**
Status : **Answered**
Chosen Option : **C**

Q.25 Which of the following statements are correct for the power factor in an AC circuit?

S1: For a purely resistive load, power factor is zero.
S2: Leading power factor implies a capacitive load.
S3: Lagging power factor implies an inductive load.

Ans

✓ A. Only S2 and S3

✗ B. Only S1 and S2

✗ C. Only S1 and S3

✗ D. S1, S2 and S3

Question ID : **44100952871**
Option 1 ID : **441009210564**
Option 2 ID : **441009210566**
Option 3 ID : **441009210567**
Option 4 ID : **441009210565**
Status : **Answered**
Chosen Option : **C**

Q.26 The ROC for a right-sided sequence in the Z-domain is:

Ans

✗ A. $|z|<R$, where R is the smallest pole magnitude

✗ B. the entire z-plane

✗ C. the unit circle only

✓ D. $|z|>R$, where R is the largest pole magnitude

Question ID : **44100972751**
Option 1 ID : **441009289309**
Option 2 ID : **441009289310**
Option 3 ID : **441009289311**
Option 4 ID : **441009289308**
Status : **Answered**
Chosen Option : **C**

Q.27 Let $f(x)$ and $g(x)$ be two differentiable functions and $g'(x) \neq 0$ such tha and $f'(x) = 10\ g'(x)$. Then the value of $g(1)$ is:

Ans

✗ A. $\frac{5}{12}$

✓ B. $\frac{12}{5}$

✗ C. $\frac{3}{5}$

✗ D. $\frac{3}{12}$

Question ID : **44100975424**
Option 1 ID : **441009299970**
Option 2 ID : **441009299972**
Option 3 ID : **441009299973**
Option 4 ID : **441009299971**
Status : **Answered**
Chosen Option : **C**

Q.28 Identify the correct impact of rise in doping concentration for a semiconductor Zener diode.

Ans

✗ A. Increase in size specification of Zener

✗ B. Rise in Zener potential

✓ C. Fall in Zener potential

✗ D. Decrease in size specification of Zener

Question ID : **44100929993**
Option 1 ID : **441009119418**
Option 2 ID : **441009119416**
Option 3 ID : **441009119417**
Option 4 ID : **441009119419**
Status : **Answered**
Chosen Option : **C**

Q.29 The quarter-wave transformer is often used in microwave engineering because it _____.

Ans

✗ A. blocks high-frequency signals

✓ B. minimises reflection by matching the impedance of different components

✗ C. increases the bandwidth of the transmission line

✗ D. decreases the size of the system

Question ID : **44100928650**
Option 1 ID : **441009114132**
Option 2 ID : **441009114131**
Option 3 ID : **441009114134**
Option 4 ID : **441009114133**
Status : **Answered**
Chosen Option : **C**

Q.30 Gauss's law for electrostatics can be expressed, mathematically, as _____.

Ans

✔ A. $\oint E \cdot dA = q/\varepsilon o$

✘ B. $\oint E \cdot dA = 0$

✘ C. $\oint E \cdot dA = \mu o I$

✘ D. $\oint B \cdot dA = 0$

Question ID : **44100929272**
Option 1 ID : **441009116566**
Option 2 ID : **441009116567**
Option 3 ID : **441009116568**
Option 4 ID : **441009116569**
Status : **Answered**
Chosen Option : **A**

Q.31 The main disadvantage of delta modulation compared to PCM is:

Ans

✘ A. lower bandwidth efficiency

✔ B. susceptibility to slope overload distortion

✘ C. inability to transmit analogue signals

✘ D. higher power consumption

Question ID : **441009126675**
Option 1 ID : **441009503377**
Option 2 ID : **441009503378**
Option 3 ID : **441009503379**
Option 4 ID : **441009503376**
Status : **Answered**
Chosen Option : **C**

Q.32 Consider the system defined by:

$$A=\begin{bmatrix}1&0&0\\0&2&0\\0&0&3\end{bmatrix}, B=\begin{bmatrix}1\\0\\1\end{bmatrix}$$

What is the controllability matrix C?

Ans

✔ A. $C=\begin{bmatrix}1&1&1\\0&0&0\\1&3&9\end{bmatrix}$

✘ B. $C=\begin{bmatrix}1&0&1\\0&0&0\\1&2&3\end{bmatrix}$

✘ C. $C=\begin{bmatrix}1&1&1\\0&0&0\\1&3&5\end{bmatrix}$

✘ D. $C=\begin{bmatrix}1&0&1\\0&1&1\\1&2&3\end{bmatrix}$

Question ID : **44100950529**
Option 1 ID : **441009201319**
Option 2 ID : **441009201321**
Option 3 ID : **441009201320**
Option 4 ID : **441009201322**
Status : **Answered**
Chosen Option : **C**

Q.33 The complement of the expression A + B is:

Ans
✗ A. A' + B'
✗ B. A . B
✓ C. A' . B'
✗ D. A' + B

Question ID : **441009118745**
Option 1 ID : **441009472107**
Option 2 ID : **441009472108**
Option 3 ID : **441009472106**
Option 4 ID : **441009472109**
Status : **Answered**
Chosen Option : **A**

Q.34 In a single input, balanced output differential amplifier, what happens when the input signal increases?

Ans
✗ A. The amplifier enters saturation mode
✓ B. One output voltage increases while the other decreases
✗ C. Both output voltages decrease together
✗ D. Both output voltages increase together

Question ID : **44100986760**
Option 1 ID : **441009344812**
Option 2 ID : **441009344809**
Option 3 ID : **441009344811**
Option 4 ID : **441009344810**
Status : **Answered**
Chosen Option : **C**

Q.35 A continuous-time linear time-invariant (LTI) system is stable if which of the following conditions holds for its impulse response h(t)?

Ans
✗ A. h(t) is always non-negative
✓ B. $\int_{-\infty}^{\infty} |h(t)| dt < \infty$
✗ C. h(t) = 0 for all t
✗ D. h(t) is always bounded

Question ID : **44100972876**
Option 1 ID : **441009289830**
Option 2 ID : **441009289828**
Option 3 ID : **441009289829**
Option 4 ID : **441009289831**
Status : **Answered**
Chosen Option : **D**

Q.36 An RC series circuit has a resistance of R = 1 kΩ and a capacitance of C = 100 nF. A sinusoidal voltage source, $v(t) = V_m * \cos(\omega t)$, is applied to the circuit. At what frequency (in Hz) will the magnitude of the voltage across the capacitor be equal to the magnitude of the voltage across the resistor?

Ans
- ✗ A. 500 Hz
- ✗ B. 2250 Hz
- ✓ C. 1592 Hz
- ✗ D. 1000 Hz

Question ID : **44100948932**
Option 1 ID : **441009195027**
Option 2 ID : **441009195026**
Option 3 ID : **441009195024**
Option 4 ID : **441009195025**
Status : **Answered**
Chosen Option : **C**

Q.37 What is the approximate input impedance of a Darlington transistor pair?

Ans
- ✓ A. Very high
- ✗ B. Very low
- ✗ C. Depends on the output impedance
- ✗ D. Equal to that of a single transistor

Question ID : **44100988861**
Option 1 ID : **441009353439**
Option 2 ID : **441009353440**
Option 3 ID : **441009353442**
Option 4 ID : **441009353441**
Status : **Answered**
Chosen Option : **C**

Q.38 Identify the correct relation for resistivity of n type semi-conductor.

Ans
- ✓ A. Resistivity of insulator > resistivity of n-type semiconductor > resistivity of metal
- ✗ B. Resistivity of insulator = resistivity of metal = resistivity of n-type semiconductor
- ✗ C. Resistivity of insulator > resistivity of metal > resistivity of n-type semiconductor
- ✗ D. Resistivity of insulator < resistivity of metal < resistivity of n-type semiconductor

Question ID : **44100930044**
Option 1 ID : **441009119624**
Option 2 ID : **441009119621**
Option 3 ID : **441009119623**
Option 4 ID : **441009119622**
Status : **Answered**
Chosen Option : **C**

Q.39 Which of the following is true about the autocorrelation function (ACF) of a wide-sense stationary (WSS) random process?

Ans
✗ A. The ACF is always zero for a WSS process.
✗ B. The ACF depends on the mean of the process at each point in time.
✗ C. The ACF is time-dependent and varies with the time shift.
✓ D. The ACF depends only on the time difference (lag) and not on the specific time.

Question ID : **441009130679**
Option 1 ID : **441009519252**
Option 2 ID : **441009519251**
Option 3 ID : **441009519250**
Option 4 ID : **441009519249**
Status : **Answered**
Chosen Option : **C**

Q.40 What type of energy interconversion occurs in oscillators?

Ans
✓ A. DC energy is converted into AC energy.
✗ B. Electrical energy is converted into mechanical energy.
✗ C. AC energy is converted into DC energy.
✗ D. Electrical energy is converted into thermal energy.

Question ID : **44100988889**
Option 1 ID : **441009353552**
Option 2 ID : **441009353553**
Option 3 ID : **441009353554**
Option 4 ID : **441009353551**
Status : **Answered**
Chosen Option : **C**

Q.41 According to Poisson equation for semiconductor, $\nabla.E$ is:

Ans
✓ A. net charge density / permittivity
✗ B. permittivity / Net charge density
✗ C. permittivity * Net charge density
✗ D. net charge density + permittivity

Question ID : **44100930006**
Option 1 ID : **441009119469**
Option 2 ID : **441009119471**
Option 3 ID : **441009119470**
Option 4 ID : **441009119468**
Status : **Answered**
Chosen Option : **C**

Q.42 In an N-channel enhancement MOSFET, what must occur for current conduction between the drain and source?

Ans
✗ A. The gate-to-source voltage (V_{GS}) must be negative.
✓ B. A conductive channel must form due to induced inversion charges.
✗ C. The substrate must be forward biased.
✗ D. The threshold voltage (V_{th}) must be zero.

Question ID : **44100986775**
Option 1 ID : **441009344903**
Option 2 ID : **441009344905**
Option 3 ID : **441009344906**
Option 4 ID : **441009344904**
Status : **Answered**
Chosen Option : **C**

Q.43 If a 20V voltage source is in series with a 4Ω resistor, which of the following represents the equivalent circuit using source transformation?

Ans
- ✔ A. A 5A current source in parallel with a 4Ω resistor
- ✘ B. A 5A current source in series with a 4Ω resistor
- ✘ C. A 20A current source in series with a 4Ω resistor
- ✘ D. A 20A current source in parallel with a 4Ω resistor

Question ID : **44100953206**
Option 1 ID : **441009211889**
Option 2 ID : **441009211888**
Option 3 ID : **441009211890**
Option 4 ID : **441009211891**
Status : **Answered**
Chosen Option : **B**

Q.44 For a P-type semi-conductor, the _____ impurity fermi level is near the _____.

Ans
- ✔ A. acceptor; valence band
- ✘ B. donor; valence band
- ✘ C. acceptor; conduction band
- ✘ D. donor; conduction band

Question ID : **44100930034**
Option 1 ID : **441009119582**
Option 2 ID : **441009119584**
Option 3 ID : **441009119581**
Option 4 ID : **441009119583**
Status : **Answered**
Chosen Option : **C**

Q.45 In a PCM system, if the sampling rate is reduced below the Nyquist rate, what is the result?

Ans
- ✘ A. Increase in signal bandwidth
- ✘ B. Reduction in quantisation noise
- ✔ C. Introduction of spectral aliasing
- ✘ D. Improved signal clarity

Question ID : **441009126725**
Option 1 ID : **441009503577**
Option 2 ID : **441009503579**
Option 3 ID : **441009503578**
Option 4 ID : **441009503576**
Status : **Answered**
Chosen Option : **C**

Q.46 What is the sum of the octal numbers 24 and 37?

Ans
- ✔ A. 63
- ✘ B. 64
- ✘ C. 61
- ✘ D. 62

Question ID : **441009119001**
Option 1 ID : **441009473125**
Option 2 ID : **441009473126**
Option 3 ID : **441009473123**
Option 4 ID : **441009473124**
Status : **Answered**
Chosen Option : **B**

Q.47 The cut-off frequency for the dominant mode of a circular waveguide is determined by _____.

Ans
- ✔ A. the radius of the waveguide
- ✘ B. the length of the waveguide
- ✘ C. the power level in the waveguide
- ✘ D. the wavelength of the signal

Question ID : **44100928663**
Option 1 ID : **441009114179**
Option 2 ID : **441009114181**
Option 3 ID : **441009114182**
Option 4 ID : **441009114180**
Status : **Answered**
Chosen Option : **C**

Q.48 In an astable multivibrator using an op-amp, how is the oscillation frequency primarily determined?

Ans
- ✘ A. By the temperature coefficient of the circuit
- ✘ B. By the supply voltage magnitude
- ✔ C. By the values of resistors and a capacitor in the feedback loop
- ✘ D. By the type of op-amp used

Question ID : **44100988884**
Option 1 ID : **441009353534**
Option 2 ID : **441009353532**
Option 3 ID : **441009353531**
Option 4 ID : **441009353533**
Status : **Answered**
Chosen Option : **C**

Q.49 The complement of the expression A + B is:

Ans
- ✘ A. A' + B'
- ✘ B. A . B
- ✔ C. A' . B'
- ✘ D. A' + B

Question ID : **441009114487**
Option 1 ID : **441009455391**
Option 2 ID : **441009455392**
Option 3 ID : **441009455390**
Option 4 ID : **441009455393**
Status : **Answered**
Chosen Option : **C**

Q.50 There is a 10V voltage source in series with a 5Ω resistor. There is also a 2A current source in parallel with the series combination. The equivalent circuit after applying source transformation will consist of _____.

Ans
✗ A. a 2A current source in series with a 5Ω resistor
✓ B. a 4A current source in parallel with a 5Ω resistor
✗ C. a 2A current source in parallel with a 5Ω resistor
✗ D. a 4A current source in series with a 5Ω resistor

Question ID : **44100953244**
Option 1 ID : **441009212039**
Option 2 ID : **441009212036**
Option 3 ID : **441009212038**
Option 4 ID : **441009212037**
Status : **Answered**
Chosen Option : **B**

Q.51 In the TE mode of a rectangular waveguide, the magnetic field is:

Ans
✓ A. along the direction as well as transverse to the direction of propagation
✗ B. along the direction of propagation
✗ C. transverse to the direction of propagation
✗ D. zero along the direction of propagation

Question ID : **44100928782**
Option 1 ID : **441009114635**
Option 2 ID : **441009114634**
Option 3 ID : **441009114637**
Option 4 ID : **441009114636**
Status : **Answered**
Chosen Option : **C**

Q.52 What happens when a discrete-time signal x(n) undergoes time reversal?

Ans
✓ A. Its Z-transform is replaced by $X(1/z)$.
✗ B. It loses all its frequency components.
✗ C. Its Z-transform remains unchanged.
✗ D. Its Z-transform is replaced by −X(z).

Question ID : **44100970781**
Option 1 ID : **441009281732**
Option 2 ID : **441009281734**
Option 3 ID : **441009281731**
Option 4 ID : **441009281733**
Status : **Not Answered**
Chosen Option : **--**

Q.53 A system is said to be causal if its impulse response satisfies which of the following conditions?

Ans
✓ A. $h(t) = 0, \quad \forall t < 0$
✗ B. h(t) is symmetric around t = 0
✗ C. $h(t) = 0, \quad \forall t > 0$
✗ D. h(t) is an even function

Question ID : **44100972857**
Option 1 ID : **441009289744**
Option 2 ID : **441009289746**
Option 3 ID : **441009289745**
Option 4 ID : **441009289747**
Status : **Answered**
Chosen Option : **C**

Q.54 Which of the following statements is/are correct for a single port network?

S1: Two terminal devices result in one-port network.
S2: A port is a pair of terminals through which current may enter or leave a network.

Ans
✗ A. Neither S1 nor S2
✗ B. Only S1
✓ C. Both S1 and S2
✗ D. Only S2

Question ID : **44100953354**
Option 1 ID : **441009212411**
Option 2 ID : **441009212408**
Option 3 ID : **441009212410**
Option 4 ID : **441009212409**
Status : **Answered**
Chosen Option : **C**

Q.55 Which of the following statements are correct?

S1: Inductors in parallel can be combined just like resistors in parallel.
S2: The total capacitance of two 4-mF capacitors connected in parallel is 8 mF.
S3: Resistance is an example of an active element.

Ans
✗ A. Only S1 and S3
✗ B. Only S2 and S3
✓ C. Only S1 and S2
✗ D. S1, S2 and S3

Question ID : **44100953152**
Option 1 ID : **441009211682**
Option 2 ID : **441009211681**
Option 3 ID : **441009211680**
Option 4 ID : **441009211683**
Status : **Answered**
Chosen Option : **B**

Q.56 If the reverse biased voltage for the Zener diode is less than its reverse breakdown voltage Vz, then the equivalent model of the Zener diode can be represented by _____.

Ans
✓ A. very large resistance
✗ B. short circuit
✗ C. constant DC voltage of value Vz
✗ D. very small resistance

Question ID : **44100929977**
Option 1 ID : **441009119354**
Option 2 ID : **441009119355**
Option 3 ID : **441009119356**
Option 4 ID : **441009119353**
Status : **Answered**
Chosen Option : **C**

Q.57 The total drift current density for a semiconductor is a function of:

Ans
- ✔ A. all of them i.e. charge mobility, applied electric field, charge concentration
- ✘ B. applied electric field only
- ✘ C. charge concentration only
- ✘ D. charge mobility only

Question ID : **44100930001**
Option 1 ID : **441009119451**
Option 2 ID : **441009119449**
Option 3 ID : **441009119450**
Option 4 ID : **441009119448**
Status : **Answered**
Chosen Option : **C**

Q.58 The resistivity of a p-type semiconductor is _____ proportional to the conductivity and the conductivity of the p-type semiconductor is _____ proportional to the doping concentration.

Ans
- ✘ A. directly, directly
- ✘ B. directly, inversely
- ✘ C. inversely, inversely
- ✔ D. inversely, directly

Question ID : **44100930051**
Option 1 ID : **441009119652**
Option 2 ID : **441009119651**
Option 3 ID : **441009119650**
Option 4 ID : **441009119649**
Status : **Answered**
Chosen Option : **C**

Q.59 For an intrinsic semiconductor, the conductivity is function of:

Ans
- ✘ A. hole mobility only
- ✘ B. neither electron mobility nor hole mobility
- ✔ C. both electron mobility and hole mobility
- ✘ D. electron mobility only

Question ID : **44100930070**
Option 1 ID : **441009119726**
Option 2 ID : **441009119728**
Option 3 ID : **441009119727**
Option 4 ID : **441009119725**
Status : **Answered**
Chosen Option : **C**

Q.60 For the TE_{10} mode in a rectangular waveguide, the propagation constant β is related to the cutoff frequency f_c by _____.

Ans

✗ A. $\beta = \frac{2\pi fc}{c}$

✗ B. $\beta = \frac{\omega}{Z_0}$

✗ C. $\beta = \frac{2\pi f}{c}$

✓ D. $\beta = \frac{2\pi}{\lambda}\sqrt{1-\left(\frac{fc}{f}\right)^2}$

Question ID : **44100929339**
Option 1 ID : **441009116837**
Option 2 ID : **441009116836**
Option 3 ID : **441009116834**
Option 4 ID : **441009116835**
Status : **Answered**
Chosen Option : **C**

Q.61 The Z-transform of x[n−k] (delayed signal) is given by:

Ans

✗ A. $X(z)z^k$

✗ B. $X(z-k)$

✗ C. $X(kz)$

✓ D. $X(z)z^{-k}$

Question ID : **44100972736**
Option 1 ID : **441009289240**
Option 2 ID : **441009289242**
Option 3 ID : **441009289243**
Option 4 ID : **441009289241**
Status : **Answered**
Chosen Option : **D**

Q.62 According to Coulomb's law, the force between two point charges is _____.

Ans

✗ A. inversely proportional to the product of the charges

✓ B. directly proportional to the product of the charges and inversely proportional to the square of the distance between them

✗ C. inversely proportional to the distance between them

✗ D. directly proportional to the charges and distance between them

Question ID : **44100929259**
Option 1 ID : **441009116516**
Option 2 ID : **441009116514**
Option 3 ID : **441009116517**
Option 4 ID : **441009116515**
Status : **Answered**
Chosen Option : **B**

Q.63 In a basic MOSFET current mirror, why must both transistors be identical and have the same V_{DS}?

Ans
- ✗ A. To prevent short circuits
- ✗ B. To reduce frequency distortion
- ✗ C. To achieve equal power dissipation
- ✓ D. To ensure matching drain currents

Question ID : **44100986776**
Option 1 ID : **441009344909**
Option 2 ID : **441009344910**
Option 3 ID : **441009344907**
Option 4 ID : **441009344908**
Status : **Answered**
Chosen Option : **C**

Q.64 The lower limit of entropy for a discrete random variable is achieved when:

Ans
- ✗ A. the random variable has maximum variance
- ✓ B. the random variable has a deterministic value with probability 1
- ✗ C. the random variable has a large number of possible outcomes
- ✗ D. the random variable has equal probabilities for all outcomes

Question ID : **441009126790**
Option 1 ID : **441009503839**
Option 2 ID : **441009503838**
Option 3 ID : **441009503836**
Option 4 ID : **441009503837**
Status : **Answered**
Chosen Option : **C**

Q.65 For a stationary random process X(t), if the power spectral density $S_X(f)$ is given by $S_X(f) = 1/(1+f^2)$, what is the total power of the process?

Ans
- ✗ A. ∞
- ✗ B. 1
- ✓ C. π
- ✗ D. 2

Question ID : **441009130722**
Option 1 ID : **441009519423**
Option 2 ID : **441009519421**
Option 3 ID : **441009519424**
Option 4 ID : **441009519422**
Status : **Answered**
Chosen Option : **B**

Q.66 The complement of the expression A + B is:

Ans
- ✗ A. A . B
- ✗ B. A' + B'
- ✗ C. A' + B
- ✓ D. A' . B'

Question ID : **441009114481**
Option 1 ID : **441009455380**
Option 2 ID : **441009455379**
Option 3 ID : **441009455381**
Option 4 ID : **441009455378**
Status : **Answered**
Chosen Option : **B**

Q.67 Which of the following is a key characteristic of narrowband frequency modulation (FM) in comparison to wideband FM?

Ans

✔ A. In narrowband FM, the frequency deviation Δf is small relative to the modulating frequency f_m, leading to a simpler mathematical model.

✘ B. In narrowband FM, the instantaneous frequency of the modulated signal remains nearly constant.

✘ C. Narrowband FM signals are primarily used for broadcasting due to their larger bandwidth efficiency.

✘ D. Narrowband FM has a higher bandwidth because it includes more sidebands.

Question ID : **441009117866**
Option 1 ID : **441009468643**
Option 2 ID : **441009468642**
Option 3 ID : **441009468641**
Option 4 ID : **441009468640**
Status : **Answered**
Chosen Option : **C**

Q.68 A mass-spring-damper system is modeled by the following differential equation.

$$m\ddot{x}(t) + c\,\dot{x}(t) + k\,x(t) = F(t)$$

where,
m is the mass,
c is the damping coefficient,
k is the spring constant,
F(t) is the external force applied to the system,
x(t) is the displacement of the mass.
The system is subjected to a unit step input F(t) = 1 for t ≥ 0. If the damping ratio ζ = 0.5 and the natural frequency ω_n = 2 rad/s, what is the peak time T_p of the system's response?

Ans

✘ A. $\frac{\pi}{4}$ seconds

✔ B. $\frac{\pi}{\sqrt{3}}$ seconds

✘ C. $\frac{\pi}{2}$ seconds

✘ D. $\frac{\pi}{3}$ seconds

Question ID : **44100948349**
Option 1 ID : **441009192599**
Option 2 ID : **441009192598**
Option 3 ID : **441009192596**
Option 4 ID : **441009192597**
Status : **Answered**
Chosen Option : **B**

Q.69 As per the charge continuity equation, the current equation for a semiconductor is directly dependent on _____.

Ans

✘ A. material used as case of the semiconductor

✘ B. fabrication method

✔ C. net charge density

✘ D. permittivity of silicon di oxide layer

Question ID : **44100929995**
Option 1 ID : **441009119425**
Option 2 ID : **441009119424**
Option 3 ID : **441009119426**
Option 4 ID : **441009119427**
Status : **Answered**
Chosen Option : **C**

Q.70 If the system matrix 'A' in the state-space representation is modified by multiplying it by a scalar positive constant, what happens to the system's controllability?

Ans
✔ A. Controllability remains unchanged
✘ B. Controllability may be affected
✘ C. Controllability becomes negative
✘ D. Controllability becomes zero

Question ID : **44100950567**
Option 1 ID : **441009201477**
Option 2 ID : **441009201476**
Option 3 ID : **441009201478**
Option 4 ID : **441009201475**
Status : **Answered**
Chosen Option : **C**

Q.71 What is the problem associated with using SR Flip-Flops in a Synchronous Counter?

Ans
✔ A. SR flip-flops can enter an invalid state if both the Set and Reset inputs are active at the same time.
✘ B. SR flip-flops are not suitable for synchronous operation.
✘ C. SR flip-flops are too slow for counting applications.
✘ D. The flip-flops do not respond to clock signals.

Question ID : **441009119071**
Option 1 ID : **441009473400**
Option 2 ID : **441009473402**
Option 3 ID : **441009473401**
Option 4 ID : **441009473399**
Status : **Answered**
Chosen Option : **C**

Q.72 If the voltage across 10-μF capacitor is v(t) = 10 cos 5000t V, the current through the capacitor is _____.

Ans
✘ A. −5 sin 5000t A
✘ B. 0.5 sin 5000t A
✘ C. 0.5 cos 5000t A
✔ D. −0.5 sin 5000t A

Question ID : **44100948702**
Option 1 ID : **441009194119**
Option 2 ID : **441009194117**
Option 3 ID : **441009194118**
Option 4 ID : **441009194116**
Status : **Answered**
Chosen Option : **C**

Q.73 In a series RLC circuit, if R = 10 Ω, inductance and capacitance with equal magnitude of inductive and capacitive impedance are connected across an AC supply of 200 V rms. The current in the circuit is _____.

Ans

✗ A. 0 A

✓ B. 20 A

✗ C. 28.2 A

✗ D. 10 A

Question ID : **44100952916**
Option 1 ID : **441009210745**
Option 2 ID : **441009210744**
Option 3 ID : **441009210747**
Option 4 ID : **441009210746**
Status : **Answered**
Chosen Option : **C**

Q.74 In a fixed biasing circuit for a MOSFET, what is the main disadvantage?

Ans

✓ A. Poor stability due to high dependency on device parameters

✗ B. High power dissipation

✗ C. High cost compared to other biasing techniques

✗ D. Requirement of large number of components

Question ID : **44100988840**
Option 1 ID : **441009353355**
Option 2 ID : **441009353356**
Option 3 ID : **441009353358**
Option 4 ID : **441009353357**
Status : **Answered**
Chosen Option : **C**

Q.75 Find the coefficient of x^4 in the Taylor series of $f(x) = e^x \cos(x)$ at $x =$

Ans

✗ A. $\frac{1}{2}$

✗ B. $\frac{1}{5}$

✓ C. $\frac{-1}{6}$

✗ D. $\frac{-1}{3}$

Question ID : **44100975427**
Option 1 ID : **441009299982**
Option 2 ID : **441009299984**
Option 3 ID : **441009299985**
Option 4 ID : **441009299983**
Status : **Answered**
Chosen Option : **C**

Q.76 If A & B are two $n \times n$ invertible matrices, then what is rank (AB)?

Ans
- ✗ A. $\text{rank}(A) + \text{rank}(B)$
- ✗ B. $\text{rank}(A) \times \text{rank}(B)$
- ✓ C. n
- ✗ D. 0

Question ID : **44100989827**
Option 1 ID : **441009357474**
Option 2 ID : **441009357475**
Option 3 ID : **441009357476**
Option 4 ID : **441009357477**
Status : **Answered**
Chosen Option : **A**

Q.77 The capacity of a binary symmetric channel (BSC) with crossover probability p is given by:

Ans
- ✓ A. C = 1−H(p)
- ✗ B. C = p(1−p)
- ✗ C. C = 2p
- ✗ D. C = 1 − 2p

Question ID : **441009126736**
Option 1 ID : **441009503620**
Option 2 ID : **441009503623**
Option 3 ID : **441009503622**
Option 4 ID : **441009503621**
Status : **Answered**
Chosen Option : **C**

Q.78 What is the ROC for a right-sided sequence x[n], where x[n] = 0 for n < N?

Ans
- ✗ A. |z| < R
- ✗ B. The unit circle |z| = 1
- ✓ C. |z| > R
- ✗ D. The entire z-plane

Question ID : **44100972586**
Option 1 ID : **441009288657**
Option 2 ID : **441009288660**
Option 3 ID : **441009288658**
Option 4 ID : **441009288659**
Status : **Answered**
Chosen Option : **B**

Q.79 What is the result of adding the unsigned binary numbers 1101 and 1011?

Ans
- ✗ A. 11100
- ✗ B. 01011
- ✗ C. 10101
- ✓ D. 11000

Question ID : **441009119029**
Option 1 ID : **441009473233**
Option 2 ID : **441009473234**
Option 3 ID : **441009473232**
Option 4 ID : **441009473231**
Status : **Answered**
Chosen Option : **D**

Q.80 Which of the following is true for a first-order stationary random process X(t)?

Ans
✔ A. The mean and variance of X(t) must both be constant over time.

✘ B. The mean of X(t) must be constant, but the autocorrelation function is a function of time.

✘ C. The mean of X(t) is constant, but the variance of X(t) can vary with time.

✘ D. The mean and variance of X(t) can vary with time, but the autocorrelation function is constant.

Question ID : **441009130705**
Option 1 ID : **441009519355**
Option 2 ID : **441009519356**
Option 3 ID : **441009519354**
Option 4 ID : **441009519353**
Status : **Answered**
Chosen Option : **C**

Q.81 How do you identify an essential prime implicant from the K-map?

Ans
✘ A. By finding the group with the smallest number of cells

✘ B. By finding groups that cover cells with a '0' value

✘ C. By covering the largest number of cells with one group

✔ D. By identifying groups that cover cells with '1's that are not covered by any other group

Question ID : **441009118776**
Option 1 ID : **441009472222**
Option 2 ID : **441009472223**
Option 3 ID : **441009472225**
Option 4 ID : **441009472224**
Status : **Answered**
Chosen Option : **C**

Q.82 Consider a continuous-time linear time-invariant (LTI) system with the following differential equation,

$$\frac{d^2y(t)}{dt^2} + 3\frac{dy(t)}{dt} + 2y(t) = x(t)$$

where y(t) is the output, x(t) is the input, and the system is initially at rest.
What is the zero-state response of the system if the input $x(t) = e^{-t}u(t)$, where u(t) is the unit step function?

Ans
✘ A. $y(t) = -e^{-t} + e^{-2t}$

✔ B. $y(t) = -e^{-t} + te^{-t} + e^{-2t}$

✘ C. $y(t) = -e^{t} + te^{t} + e^{2t}$

✘ D. $y(t) = -e^{t} + te^{-t} + e^{-2t}$

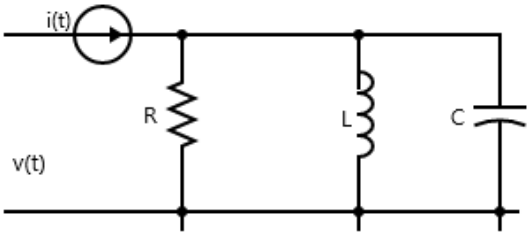
Question ID : **44100950386**
Option 1 ID : **441009200774**
Option 2 ID : **441009200771**
Option 3 ID : **441009200772**
Option 4 ID : **441009200773**
Status : **Answered**
Chosen Option : **C**

Q.83 Germanium is basically a/an _____.

Ans
- ✔ A. indirect bandgap semiconductor
- ✘ B. direct bandgap semiconductor
- ✘ C. insulator
- ✘ D. conductor

Question ID : **44100930063**
Option 1 ID : **441009119697**
Option 2 ID : **441009119698**
Option 3 ID : **441009119700**
Option 4 ID : **441009119699**
Status : **Answered**
Chosen Option : **C**

Q.84 In the following circuit, the resulting current i(t) is _____, if R = 1/3 Ω, L = 1/4 H, C = 3 F and v(t) = sin 2t.



Ans
- ✘ A. 25 sin(2t + $\tan^{-1}$ 4/3)
- ✘ B. 25 sin(2t + $\tan^{-1}$ 3/4)
- ✘ C. 5 sin(2t + $\tan^{-1}$ 3/4)
- ✔ D. 5 sin(2t + $\tan^{-1}$ 4/3)

Question ID : **44100952913**
Option 1 ID : **441009210733**
Option 2 ID : **441009210734**
Option 3 ID : **441009210735**
Option 4 ID : **441009210732**
Status : **Answered**
Chosen Option : **C**

Q.85 If X(z) is the Z-Transform of x[n], then the Z-Transform of x[n − k] is:

Ans
- ✘ A. $X(z) + z^{-k}$
- ✔ B. $X(z)z^{-k}$
- ✘ C. $X(z) / z^{-k}$
- ✘ D. $X(z) - z^{-k}$

Question ID : **44100972390**
Option 1 ID : **441009287906**
Option 2 ID : **441009287905**
Option 3 ID : **441009287908**
Option 4 ID : **441009287907**
Status : **Not Answered**
Chosen Option : **--**

Q.86 What is the 1's complement of the binary number 1011?

Ans
✗ A. 0011
✗ B. 1010
✗ C. 0101
✓ D. 0100

Question ID : **441009119010**
Option 1 ID : **441009473162**
Option 2 ID : **441009473160**
Option 3 ID : **441009473161**
Option 4 ID : **441009473159**
Status : **Not Answered**
Chosen Option : **--**

Q.87 For a given natural frequency, increasing the damping ratio of a second-order system _____.

Ans
✗ A. decreases the overshoot and the rise time
✗ B. increases the overshoot and the rise time
✗ C. increases the overshoot and decreases the rise time
✓ D. decreases the overshoot but increases the rise time

Question ID : **44100950835**
Option 1 ID : **441009202539**
Option 2 ID : **441009202541**
Option 3 ID : **441009202540**
Option 4 ID : **441009202538**
Status : **Not Answered**
Chosen Option : **--**

Q.88 Let $A=\begin{bmatrix}1 & 2\\ 2 & 4\end{bmatrix}$ be a given matrix. For which of the following matrices $P^{-1}AP=\begin{bmatrix}0 & 0\\ 0 & 5\end{bmatrix}$?

Ans
✗ A. $P=\begin{bmatrix}1 & -1\\ -1 & 2\end{bmatrix}$
✗ B. $P=\begin{bmatrix}1 & 1\\ 1 & 2\end{bmatrix}$
✓ C. $P=\begin{bmatrix}-2 & 1\\ 1 & 2\end{bmatrix}$
✗ D. $P=\begin{bmatrix}0 & -1\\ 1 & 2\end{bmatrix}$

Question ID : **44100989825**
Option 1 ID : **441009357467**
Option 2 ID : **441009357466**
Option 3 ID : **441009357469**
Option 4 ID : **441009357468**
Status : **Not Answered**
Chosen Option : **--**

Q.89 Which of the following is the correct statement related to Zener diode used as a simple shunt voltage regulator?

Ans

✔ A. The output voltage increases linearly till the time Zener enters the reverse breakdown region for rise in the input voltage and after that the voltage across the Zener becomes constant.

✘ B. The output voltage is always constant for entire range of operation.

✘ C. The output voltage always increases linearly with rise in input voltage for entire range of operation.

✘ D. The output voltage always decreases linearly with rise in input voltage for entire range of operation.

Question ID : **44100929986**
Option 1 ID : **441009119391**
Option 2 ID : **441009119390**
Option 3 ID : **441009119388**
Option 4 ID : **441009119389**
Status : **Not Answered**
Chosen Option : **--**

Q.90 The total charge Q, within a region of space with volume V and volume charge density ρ is given by _____.

Ans

✘ A. $Q = \rho \cdot v^2$

✔ B. $Q = \rho \cdot v$

✘ C. $Q = \rho / v$

✘ D. $Q = \rho \cdot \sqrt{v}$

Question ID : **44100929170**
Option 1 ID : **441009116152**
Option 2 ID : **441009116150**
Option 3 ID : **441009116151**
Option 4 ID : **441009116153**
Status : **Not Answered**
Chosen Option : **--**

Q.91 The temporal output h(t), corresponding to the unit impulse excitation, of a second order closed-loop control system, characterised by a damping coefficient ζ = 1 (indicating critical damping) and an undamped natural frequency ω_n=6 rad/s, is analytically derived from the canonical representation of the system's transfer function. Find the value of the output h(t).

Ans

✔ A. 36 e^(−6t) * t

✘ B. 6 e^(-3t) * t

✘ C. 6 e^(-6t)

✘ D. 6 e^(-6t) * t

Question ID : **44100950780**
Option 1 ID : **441009202325**
Option 2 ID : **441009202324**
Option 3 ID : **441009202323**
Option 4 ID : **441009202322**
Status : **Not Answered**
Chosen Option : **--**

Q.92 The ROC of a left-sided sequence x[n] (where x[n] = 0 for n > N) is:

Ans
- ✔ A. |z|<R
- ✘ B. |z|>R
- ✘ C. the entire z-plane
- ✘ D. the unit circle |z| = 1

Question ID : **44100972573**
Option 1 ID : **441009288609**
Option 2 ID : **441009288610**
Option 3 ID : **441009288611**
Option 4 ID : **441009288612**
Status : **Not Answered**
Chosen Option : **--**

Q.93 What is the ROC for a two-sided sequence?

Ans
- ✘ A. Outside the unit circle
- ✘ B. The entire z-plane
- ✔ C. Between two poles
- ✘ D. Inside the innermost pole

Question ID : **44100970797**
Option 1 ID : **441009281798**
Option 2 ID : **441009281795**
Option 3 ID : **441009281797**
Option 4 ID : **441009281796**
Status : **Not Answered**
Chosen Option : **--**

Q.94 In a Schmitt trigger comparator, why is hysteresis introduced?

Ans
- ✘ A. To increase the gain of the comparator
- ✘ B. To improve linearity in signal processing
- ✔ C. To prevent noise-induced false triggering
- ✘ D. To make the comparator faster

Question ID : **44100986777**
Option 1 ID : **441009344914**
Option 2 ID : **441009344912**
Option 3 ID : **441009344913**
Option 4 ID : **441009344911**
Status : **Not Answered**
Chosen Option : **--**

Q.95 For the system formulated in state-space representation format as,
$\dot{x} = Ax + Bu$
where A is the system matrix and B is the input matrix. What does matrix B determine?

Ans
- ✘ A. The relationship between the state and output variables.
- ✘ B. The direct feedthrough of the input to the output.
- ✔ C. How the inputs affect the rate of change of the state variables.
- ✘ D. The stability of the system.

Question ID : **44100950464**
Option 1 ID : **441009201069**
Option 2 ID : **441009201070**
Option 3 ID : **441009201068**
Option 4 ID : **441009201067**
Status : **Not Answered**
Chosen Option : **--**

Q.96 Which of the following is a primary characteristic of CMOS logic?

Ans
✗ A. High power consumption
✓ B. Low power consumption
✗ C. Slow switching speeds
✗ D. High noise immunity

Question ID : **441009118917**
Option 1 ID : **441009472793**
Option 2 ID : **441009472794**
Option 3 ID : **441009472796**
Option 4 ID : **441009472795**
Status : **Not Answered**
Chosen Option : **--**

Q.97 A voltage tripler circuit using diodes and capacitors provides an output voltage approximately equal to:

Ans
✓ A. three times the peak input voltage
✗ B. the input voltage
✗ C. half of the input voltage
✗ D. twice the input voltage

Question ID : **44100988828**
Option 1 ID : **441009353307**
Option 2 ID : **441009353309**
Option 3 ID : **441009353310**
Option 4 ID : **441009353308**
Status : **Not Answered**
Chosen Option : **--**

Q.98 What is the minimum number of NOR gates required to implement the Boolean function F = A' + B?

Ans
✗ A. FOUR
✗ B. TWO
✓ C. THREE
✗ D. FIVE

Question ID : **441009118976**
Option 1 ID : **441009473025**
Option 2 ID : **441009473023**
Option 3 ID : **441009473024**
Option 4 ID : **441009473026**
Status : **Not Answered**
Chosen Option : **--**

Q.99 A waveguide resonator is a type of cavity that _____.

Ans
✗ A. absorbs electromagnetic waves
✗ B. reflects electromagnetic waves
✗ C. transmits electromagnetic waves without reflection
✓ D. resonates at specific frequencies

Question ID : **44100929090**
Option 1 ID : **441009115832**
Option 2 ID : **441009115830**
Option 3 ID : **441009115833**
Option 4 ID : **441009115831**
Status : **Not Answered**
Chosen Option : **--**

Q.10 0 For an asynchronous ripple BCD counter, which of the following statements is true?

Ans
- ✗ A. The counter operates without any delays.
- ✗ B. The counter resets after every clock pulse.
- ✗ C. All flip-flops are triggered simultaneously.
- ✓ D. The flip-flops are triggered one after the other.

Question ID : **441009119036**
Option 1 ID : **441009473260**
Option 2 ID : **441009473262**
Option 3 ID : **441009473259**
Option 4 ID : **441009473261**
Status : **Not Answered**
Chosen Option : **--**

Q.10 1 An RC series circuit has a transfer function G(s) = (1 + sRC). If R = 10 kΩ and C = 1 μF, what is the frequency (in rad/s) at which the magnitude of G(jω) is √2 times its DC gain?

Ans
- ✗ A. 1000
- ✗ B. 10000
- ✓ C. 100
- ✗ D. 10

Question ID : **44100950611**
Option 1 ID : **441009201653**
Option 2 ID : **441009201654**
Option 3 ID : **441009201652**
Option 4 ID : **441009201651**
Status : **Not Answered**
Chosen Option : **--**

Q.10 2 If the current through an RL series circuit having 5 Ω resistor is i(t) = 3 + 4sin (200t + 45°) + 4 sin (300t + 60°) A, the RMS value of this current and the power dissipated in the circuit are _____, respectively.

Ans
- ✓ A. 5A and 125 W
- ✗ B. 11 A and 250 W
- ✗ C. $\sqrt{41}$ A and 125 W
- ✗ D. $\sqrt{41}$ A and 250 W

Question ID : **44100952901**
Option 1 ID : **441009210684**
Option 2 ID : **441009210686**
Option 3 ID : **441009210687**
Option 4 ID : **441009210685**
Status : **Not Answered**
Chosen Option : **--**

Q.10 Which of the following statements is/are correct?
3

S1: An ideal independent current source provides a specified current that is completely independent of other circuit elements.
S2: Internal resistance of the ideal current source is infinite.
S3: Internal resistance of the ideal voltage source is infinite.

Ans
✗ A. Only S1 and S3
✗ B. Only S3
✗ C. S1, S2 and S3
✓ D. Only S1 and S2

Question ID : **44100952857**
Option 1 ID : **441009210510**
Option 2 ID : **441009210508**
Option 3 ID : **441009210511**
Option 4 ID : **441009210509**
Status : **Not Answered**
Chosen Option : **--**

Q.10 The propagation constant β in a waveguide is _____.
4

Ans
✗ A. the speed at which the wave travels through the waveguide
✗ B. the same as the free-space wave number
✓ C. a measure of the phase change per unit length along the waveguide
✗ D. the attenuation constant of the wave

Question ID : **44100929073**
Option 1 ID : **441009115762**
Option 2 ID : **441009115763**
Option 3 ID : **441009115764**
Option 4 ID : **441009115765**
Status : **Not Answered**
Chosen Option : **--**

Q.10 The maximum entropy for a discrete random variable with n equally likely outcomes is:
5

Ans
✗ A. 0
✗ B. 1
✓ C. $\log_2(n)$
✗ D. $n\log_2(n)$

Question ID : **441009126780**
Option 1 ID : **441009503799**
Option 2 ID : **441009503798**
Option 3 ID : **441009503796**
Option 4 ID : **441009503797**
Status : **Not Answered**
Chosen Option : **--**

Q.10 6 Which of the following sets of dimensions will minimise the material r
with an open top having a volume of 32 cm^3?

Ans
✗ A. $8cm \times 4cm \times 1cm$
✗ B. $8cm \times 2cm \times 2cm$
✗ C. $16cm \times 2cm \times 1cm$
✓ D. $4cm \times 4cm \times 2cm$

Question ID : **44100975341**
Option 1 ID : **441009299641**
Option 2 ID : **441009299638**
Option 3 ID : **441009299640**
Option 4 ID : **441009299639**
Status : **Not Answered**
Chosen Option : **--**

Q.10 7 If X(z) is the Z-transform of x[n], then the Z-transform of the time-scaled signal x[an], where *a* is a positive integer, is given by:

Ans
✗ A. $X(az)$
✗ B. $aX(z)$
✗ C. $X(z)/a$
✓ D. $X(z^a)$

Question ID : **44100972903**
Option 1 ID : **441009289939**
Option 2 ID : **441009289938**
Option 3 ID : **441009289937**
Option 4 ID : **441009289936**
Status : **Not Answered**
Chosen Option : **--**

Q.10 8 In the conversion of a JK flip-flop to a D flip-flop, which of the following configurations is correct for the J and K inputs?

Ans
✗ A. Connect the J and K inputs to a logic high and the clock signal to the flip-flop.
✓ B. Connect J to D and K to the inverse of D to make the output follow the input.
✗ C. The J input should be connected to the Q output and the K input to the Q' output.
✗ D. The J and K inputs should both be connected to the clock signal.

Question ID : **441009119087**
Option 1 ID : **441009473463**
Option 2 ID : **441009473464**
Option 3 ID : **441009473465**
Option 4 ID : **441009473466**
Status : **Not Answered**
Chosen Option : **--**

Q.109 **Consider a linear time-invariant (LTI) system with transfer function, $G(s) = \frac{10}{s^2 + 6s + 10}$.**
The system is analysed for open-loop stability. Which of the following statements is correct regarding the open-loop stability of the system?

Ans
✗ A. The system is marginally stable because the poles are on the imaginary axis.
✓ B. The system is stable because all poles lie in the left half of the s-plane.
✗ C. The system is stable, but the damping ratio is less than 0.5.
✗ D. The system is unstable because one of the poles is at the origin.

Question ID : **44100950156**
Option 1 ID : **441009199869**
Option 2 ID : **441009199867**
Option 3 ID : **441009199870**
Option 4 ID : **441009199868**
Status : **Not Answered**
Chosen Option : **--**

Q.110 **What is the main advantage of using a logarithmic amplifier in signal processing?**

Ans
✗ A. It eliminates phase shift in signal transmission.
✗ B. It provides constant gain regardless of input variations.
✗ C. It amplifies high-frequency signals better than a linear amplifier.
✓ D. It compresses a wide range of input signals into a smaller range.

Question ID : **44100988880**
Option 1 ID : **441009353518**
Option 2 ID : **441009353517**
Option 3 ID : **441009353516**
Option 4 ID : **441009353515**
Status : **Not Answered**
Chosen Option : **--**

Q.111 **The bandwidth requirement for Frequency Modulation (FM) is approximately:**

Ans
✗ A. independent of the message signal's frequency
✗ B. equal to the carrier frequency
✗ C. equal to the baseband frequency
✓ D. proportional to the frequency deviation and message bandwidth

Question ID : **441009122979**
Option 1 ID : **441009488827**
Option 2 ID : **441009488828**
Option 3 ID : **441009488825**
Option 4 ID : **441009488826**
Status : **Not Answered**
Chosen Option : **--**

Q.11 In a circular waveguide, which of the following modes has the lowest cut-off frequency?
2

Ans
✔ A. TE_{11}
✘ B. TE_{01}
✘ C. TM_{01}
✘ D. TM_{11}

Question ID : **44100928658**
Option 1 ID : **441009114159**
Option 2 ID : **441009114160**
Option 3 ID : **441009114162**
Option 4 ID : **441009114161**
Status : **Not Answered**
Chosen Option : **--**

Q.11 What is the primary and sole purpose of the controllability matrix in control systems?
3

Ans
✔ A. To assess if the system's states can be influenced by the input
✘ B. To calculate the system's output response
✘ C. To find the system's transfer function
✘ D. To determine system stability

Question ID : **44100950223**
Option 1 ID : **441009200136**
Option 2 ID : **441009200137**
Option 3 ID : **441009200138**
Option 4 ID : **441009200135**
Status : **Not Answered**
Chosen Option : **--**

Q.11 What is the primary function of a Schmitt trigger in a circuit?
4

Ans
✘ A. To store data in digital circuits
✘ B. To filter high-frequency noise from a signal
✘ C. To amplify weak signals
✔ D. To convert an analog signal into a clean digital signal

Question ID : **44100988872**
Option 1 ID : **441009353486**
Option 2 ID : **441009353485**
Option 3 ID : **441009353484**
Option 4 ID : **441009353483**
Status : **Not Answered**
Chosen Option : **--**

Q.115 A closed loop control system has a variable gain, that when changed, alters the damping ratio of the closed loop system. If the gain is increased and the peak overshoot decreases, what can be said about the damping ratio?

Ans
- ✗ A. The damping ratio remains constant.
- ✗ B. The damping ratio decreases.
- ✗ C. The damping ratio is not related to the gain.
- ✓ D. The damping ratio increases.

Question ID : **44100950919**
Option 1 ID : **441009202856**
Option 2 ID : **441009202854**
Option 3 ID : **441009202857**
Option 4 ID : **441009202855**
Status : **Not Answered**
Chosen Option : **--**

Q.116 What is a material with a completely empty conduction band called?

Ans
- ✗ A. Conductor
- ✓ B. Insulator
- ✗ C. Extrinsic semiconductor
- ✗ D. Intrinsic semiconductor

Question ID : **44100930059**
Option 1 ID : **441009119683**
Option 2 ID : **441009119684**
Option 3 ID : **441009119682**
Option 4 ID : **441009119681**
Status : **Not Answered**
Chosen Option : **--**

Q.117 For a finite-duration signal, the region of convergence (ROC) of its Z-transform is:

Ans
- ✓ A. the entire z-plane, except possibly at z = 0 or z = ∞
- ✗ B. a ring around the unit circle
- ✗ C. only outside the unit circle |z| > 1
- ✗ D. only inside the unit circle |z| < 1

Question ID : **44100972744**
Option 1 ID : **441009289280**
Option 2 ID : **441009289283**
Option 3 ID : **441009289282**
Option 4 ID : **441009289281**
Status : **Not Answered**
Chosen Option : **--**

Q.11 What is the Region of Convergence (ROC) for a right-sided sequence in Z-transform?
8

Ans
✔ A. Outside the outermost pole
✘ B. Inside the unit circle
✘ C. It does not exist
✘ D. Along the unit circle

Question ID : **44100970790**
Option 1 ID : **441009281768**
Option 2 ID : **441009281767**
Option 3 ID : **441009281770**
Option 4 ID : **441009281769**
Status : **Not Answered**
Chosen Option : **--**

Q.11 Consider the following transfer function.
9

$$G(s) = \frac{5s+3}{s^2+6s+8}$$

Using the Final Value Theorem, calculate the final value of the time-domain response for a unit step input u(t).

Ans
✘ A. 1
✘ B. 0.2
✘ C. 0.5
✔ D. 0.375

Question ID : **44100950895**
Option 1 ID : **441009202768**
Option 2 ID : **441009202769**
Option 3 ID : **441009202767**
Option 4 ID : **441009202766**
Status : **Answered**
Chosen Option : **C**

Q.12 Which of the following is the integral form of Gauss's law for magnetism?
0

Ans
✔ A. $\oint_S B \cdot dA = 0$
✘ B. $\oint_s E \cdot dA = \frac{Qenc}{\varepsilon o}$
✘ C. $\nabla * B = \mu oJ$
✘ D. $\nabla \cdot B = 0$

Question ID : **44100929314**
Option 1 ID : **441009116735**
Option 2 ID : **441009116737**
Option 3 ID : **441009116736**
Option 4 ID : **441009116734**
Status : **Answered**
Chosen Option : **A**

Section : **Section II Test on Reasoning**

Q.1 **Three fair dice are rolled simultaneously. What is the probability that the product of the three numbers shown is divisible by 6, provided the sum of the three numbers is at the most 6?**

Ans

✗ A. $\frac{2}{5}$

✓ B. $\frac{3}{10}$

✗ C. $\frac{1}{4}$

✗ D. $\frac{7}{20}$

Question ID : **44100942862**
Option 1 ID : **441009170930**
Option 2 ID : **441009170928**
Option 3 ID : **441009170927**
Option 4 ID : **441009170929**
Status : **Answered**
Chosen Option : **C**

Q.2 **Harish bought two items at a total cost of ₹4,800. He sold one item at 34% profit and the other at 10% loss. If Harish sold both the items together for ₹5,442, then what is the difference between the cost price (in ₹) of both the items?**

Ans

✗ A. 250

✓ B. 300

✗ C. 200

✗ D. 150

Question ID : **44100947605**
Option 1 ID : **441009189514**
Option 2 ID : **441009189515**
Option 3 ID : **441009189513**
Option 4 ID : **441009189512**
Status : **Answered**
Chosen Option : **C**

Q.3 **Read the given statement(s) and conclusions carefully. Assuming that the information given in the statement(s) is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).**

Statements:
Some pins are trucks.
Some engines are pins.

Conclusions:
(I) All engines are trucks.
(II) Some trucks are engines.

Ans

✗ A. Only conclusion (II) follows.

✓ B. Neither conclusion (I) nor (II) follows.

✗ C. Both conclusions (I) and (II) follow.

✗ D. Only conclusion (I) follows.

Question ID : **44100919608**
Option 1 ID : **44100978160**
Option 2 ID : **44100978161**
Option 3 ID : **44100978162**
Option 4 ID : **44100978159**
Status : **Answered**
Chosen Option : **A**

Q.4 **Refer to the following letter, number and symbol series and answer the question that follows. Counting to be done from left to right only.**

(Left) T % S = 9 # T @ B L & 6 R 5 E * M & > C 4 D G (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

Ans
✗ A. Three
✗ B. Four
✗ C. One
✓ D. Two

Question ID : **44100915621**
Option 1 ID : **44100962373**
Option 2 ID : **44100962374**
Option 3 ID : **44100962376**
Option 4 ID : **44100962375**
Status : **Answered**
Chosen Option : **D**

Q.5 **Rajiv spends 20% of his monthly income on food and 20% of the remaining on rent. If he is left with ₹4,800, what is his monthly income (in ₹)?**

Ans
✗ A. 9,000
✓ B. 7,500
✗ C. 10,000
✗ D. 8,500

Question ID : **44100945101**
Option 1 ID : **441009179614**
Option 2 ID : **441009179616**
Option 3 ID : **441009179613**
Option 4 ID : **441009179615**
Status : **Answered**
Chosen Option : **B**

Q.6 **Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?**
 # : RKH :: TOK : %

Ans
✗ A. # =XWQ, % = ZAT
✗ B. # = VSN, % = XWQ
✓ C. # = PGE, % = VSN
✗ D. # = ZAT, % = PGE

Question ID : **44100919467**
Option 1 ID : **44100977600**
Option 2 ID : **44100977599**
Option 3 ID : **44100977602**
Option 4 ID : **44100977601**
Status : **Not Answered**
Chosen Option : **--**

Q.7 **Three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the letter-cluster pair that does NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their positions in the letter-cluster.)**

Ans
✗ A. NO – KR
✗ B. TE – QH
✗ C. ZY – WB
✓ D. KS – HW

Question ID : **44100919577**
Option 1 ID : **44100978038**
Option 2 ID : **44100978036**
Option 3 ID : **44100978035**
Option 4 ID : **44100978037**
Status : **Not Answered**
Chosen Option : **--**

Q.8 **Two pipes A and B can fill an empty tank in 50 minutes and 40 minutes, respectively. Pipe C alone can empty the completely filled tank in 1 hour and 40 minutes. Firstly, both the pipes A and B are opened and after 16 minutes, pipe C is also opened. What will be the total time (in minutes) to completely fill the tank?**

Ans
✗ A. 16
✗ B. 28
✓ C. 24
✗ D. 20

Question ID : **44100951198**
Option 1 ID : **441009203942**
Option 2 ID : **441009203945**
Option 3 ID : **441009203944**
Option 4 ID : **441009203943**
Status : **Not Answered**
Chosen Option : **--**

Q.9 **Consider the set S of all positive integers less than 40 that are coprime to 40. How many elements are there in S?**

Ans
✗ A. 14
✗ B. 15
✗ C. 17
✓ D. 16

Question ID : **44100964836**
Option 1 ID : **441009258303**
Option 2 ID : **441009258304**
Option 3 ID : **441009258306**
Option 4 ID : **441009258305**
Status : **Not Answered**
Chosen Option : **--**

Q.10 In △LMN, LO, NQ and MP are the medians. T is the point of intersection of the medians. R and S are the points on the sides LN and LM, respectively, such that RS is parallel to NM and is passing through T. If MS = 20 cm, what is the length (in cm) of the side LM?

Ans
- ✔ A. 60
- ✘ B. 50
- ✘ C. 40
- ✘ D. 30

Question ID : **44100967898**
Option 1 ID : **441009270359**
Option 2 ID : **441009270358**
Option 3 ID : **441009270357**
Option 4 ID : **441009270356**
Status : **Not Answered**
Chosen Option : **--**

Q.11 Aparna invested ₹10,000 in a bank at simple interest for 4 years and received an interest of ₹4,000. What is the annual rate of interest?

Ans
- ✘ A. 12%
- ✔ B. 10%
- ✘ C. 14%
- ✘ D. 8%

Question ID : **44100944330**
Option 1 ID : **441009176677**
Option 2 ID : **441009176676**
Option 3 ID : **441009176678**
Option 4 ID : **441009176675**
Status : **Not Answered**
Chosen Option : **--**

Q.12 A, B, C, D, E, F and G are sitting around a circular table facing the centre. E sits second to the right of F. B sits third to the right of E. D is the immediate neighbour of B and F. C sits to the immediate left of A. How many people sit between G and A when counted from the left of G?

Ans
- ✘ A. Two
- ✘ B. One
- ✔ C. Three
- ✘ D. Four

Question ID : **44100915574**
Option 1 ID : **44100962188**
Option 2 ID : **44100962186**
Option 3 ID : **44100962187**
Option 4 ID : **44100962185**
Status : **Not Answered**
Chosen Option : **--**

Q.13 Simplify the following.

$$23.5 + 6.5 - 3\frac{1}{4} - 6\frac{3}{4}$$

Ans
✗ A. 22
✗ B. 19
✓ C. 20
✗ D. 21

Question ID : **44100945086**
Option 1 ID : **441009179560**
Option 2 ID : **441009179557**
Option 3 ID : **441009179558**
Option 4 ID : **441009179559**
Status : **Answered**
Chosen Option : **C**

Q.14 Sarita plans to buy a car in the next four years that will cost her around ₹10,00,000. She decides to invest a certain amount today in a fixed deposit that offers annual compounding at 20% per annum so that she has exactly ₹10,00,000 at the end of 4 years. How much (in ₹) should Sarita invest today to ensure she reaches her goal? (Round off to the nearest rupee.)

Ans
✗ A. 4,82,532
✗ B. 4,22,853
✗ C. 4,23,852
✓ D. 4,82,253

Question ID : **44100944439**
Option 1 ID : **441009177006**
Option 2 ID : **441009177003**
Option 3 ID : **441009177004**
Option 4 ID : **441009177005**
Status : **Not Answered**
Chosen Option : **--**

Q.15 The cost of painting the total surface area of a cylindrical vessel at the rate of ₹0.5 per cm^2 is ₹36,738. If its height is 6 cm less than its base radius, what is the capacity (in litres) of the cylindrical vessel (correct up to two decimal places)? (Take π = 3.14)

Ans
✗ A. 1357.57
✗ B. 1275.74
✓ C. 1375.47
✗ D. 1157.75

Question ID : **44100943699**
Option 1 ID : **441009174245**
Option 2 ID : **441009174244**
Option 3 ID : **441009174246**
Option 4 ID : **441009174243**
Status : **Not Answered**
Chosen Option : **--**

Q.16 In a certain code language,

'A + B' means 'A is the mother of B',
'A – B' means 'A is the brother of B',
'A x B' means 'A is the wife of B',
'A % B' means ' A is the father of B' and
'A # B' means 'A is the daughter of B'.

How is R related to N if 'N # G % L # K + P x R'?

Ans
✔ A. Sister's husband
✘ B. Wife's father
✘ C. Mother's brother
✘ D. Brother's wife

Question ID : **44100915651**
Option 1 ID : **44100962495**
Option 2 ID : **44100962496**
Option 3 ID : **44100962494**
Option 4 ID : **44100962493**
Status : **Answered**
Chosen Option : **A**

Q.17 Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

 # : XOH :: CQM : %

Ans
✘ A. # = RWB, % = SMC
✘ B. # = MUW, % = RWB
✘ C. # = HSR, % = MUW
✔ D. # = SMC, % = HSR

Question ID : **44100919475**
Option 1 ID : **44100977633**
Option 2 ID : **44100977632**
Option 3 ID : **44100977631**
Option 4 ID : **44100977634**
Status : **Not Answered**
Chosen Option : **--**

Q.18 Read the given statement(s) and conclusions carefully. Assuming that the information given in the statement(s) is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).

Statements:
Some engines are doors.
No trains are doors.

Conclusions:
(I) Some engines are not trains.
(II) No trains are engines.

Ans
✘ A. Both conclusions (I) and (II) follow.
✘ B. Only conclusion (II) follows.
✔ C. Only conclusion (I) follows.
✘ D. Neither conclusion (I) nor (II) follows.

Question ID : **44100919617**
Option 1 ID : **44100978198**
Option 2 ID : **44100978196**
Option 3 ID : **44100978195**
Option 4 ID : **44100978197**
Status : **Answered**
Chosen Option : **D**

Q.19 Select the term from among the given options that can replace the question mark (?) in the following series.

UMD 75, ZQG 68, EUJ 61, JYM 54, OCP 47, ?

Ans
- ✗ A. UFR 38
- ✗ B. SHT 38
- ✓ C. TGS 40
- ✗ D. THU 40

Question ID : **44100919494**
Option 1 ID : **44100977705**
Option 2 ID : **44100977703**
Option 3 ID : **44100977704**
Option 4 ID : **44100977706**
Status : **Answered**
Chosen Option : **C**

Q.20 Refer to the following letter, number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) Z 4 5 E * S @ 6 K C % 7 L & 2 R H & T Y # 3 (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

Ans
- ✗ A. Three
- ✗ B. One
- ✓ C. Four
- ✗ D. Two

Question ID : **44100915620**
Option 1 ID : **44100962369**
Option 2 ID : **44100962372**
Option 3 ID : **44100962370**
Option 4 ID : **44100962371**
Status : **Answered**
Chosen Option : **C**

Q.21 The sum of the reciprocals of the roots of the equation $5x^4 - 6x^3 + 11$:

Ans
- ✗ A. -9
- ✗ B. 3
- ✓ C. 9
- ✗ D. -3

Question ID : **44100957222**
Option 1 ID : **441009227666**
Option 2 ID : **441009227665**
Option 3 ID : **441009227667**
Option 4 ID : **441009227664**
Status : **Not Answered**
Chosen Option : **--**

Q.22 The marks obtained by 70 students in a mathematics examination are grouped into the following frequency distribution.

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	10	5	5	25	10	6	4	2

What is the modal marks of the students (correct up to two decimal places)?

Ans
✔ A. 35.71
✘ B. 35.17
✘ C. 33.13
✘ D. 34.17

Question ID : **44100942900**
Option 1 ID : **441009171082**
Option 2 ID : **441009171081**
Option 3 ID : **441009171079**
Option 4 ID : **441009171080**
Status : **Not Answered**
Chosen Option : **--**

Q.23 Select the number from among the given options that can replace the question mark (?) in the following series.
293 258 227 200 177 ?

Ans
✘ A. 146
✘ B. 171
✔ C. 158
✘ D. 165

Question ID : **44100919692**
Option 1 ID : **44100978495**
Option 2 ID : **44100978498**
Option 3 ID : **44100978496**
Option 4 ID : **44100978497**
Status : **Answered**
Chosen Option : **C**

Q.24 Three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the letter-cluster pair that does NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their positions in the letter-cluster.)

Ans
✔ A. QH – NK
✘ B. HY – ED
✘ C. NO – KT
✘ D. TE – QJ

Question ID : **44100919578**
Option 1 ID : **44100978042**
Option 2 ID : **44100978041**
Option 3 ID : **44100978040**
Option 4 ID : **44100978039**
Status : **Not Answered**
Chosen Option : **--**

Q.25 XY is a vertical tower. The end X is on the ground. Z is the middle p
The portion YZ subtends an angle η at Q. If XQ = 6 XY, then what

Ans

✔ A. $\frac{6}{73}$

✘ B. $\frac{18}{73}$

✘ C. $\frac{18}{71}$

✘ D. $\frac{6}{71}$

Question ID : **44100942844**
Option 1 ID : **441009170857**
Option 2 ID : **441009170858**
Option 3 ID : **441009170856**
Option 4 ID : **441009170855**
Status : **Not Answered**
Chosen Option : **--**

Q.26 A boat takes 5 hours 30 minutes to travel 36 km upstream and 4 hours 45 minutes to travel 54 km downstream in a river. If the boat travels 144 km upstream and then 144 km downstream, how much total time (in hours) will it take? What is the boat's speed (in km/hr) in still water?

Ans

✘ A. $22\frac{1}{3}; 8\frac{200}{209}$

✘ B. $22\frac{1}{3}; 2\frac{86}{209}$

✔ C. $34\frac{2}{3}; 8\frac{200}{209}$

✘ D. $34\frac{2}{3}; 2\frac{86}{209}$

Question ID : **44100953462**
Option 1 ID : **441009212840**
Option 2 ID : **441009212841**
Option 3 ID : **441009212838**
Option 4 ID : **441009212839**
Status : **Not Answered**
Chosen Option : **--**

Q.27 The ratio of length to breadth of a rectangular garden is 7 : 4. If the area, in square metres, of the garden is numerically equal to 16 times the mean proportional between its length and breadth, then what is the perimeter (in metres) of the garden?

Ans

✗ A. $\frac{8\sqrt{7}}{7}$

✗ B. $\frac{88\sqrt{7}}{7}$

✓ C. $\frac{176\sqrt{7}}{7}$

✗ D. 256

Question ID : **44100951174**
Option 1 ID : **441009203846**
Option 2 ID : **441009203847**
Option 3 ID : **441009203848**
Option 4 ID : **441009203849**
Status : **Not Answered**
Chosen Option : **--**

Q.28 A, B, C, D, E, F and G are sitting around a circular table facing the centre. F sits second to the right of E. B is the immediate neighbour of C and F. G sits third to the right of B. A is not an immediate neighbour of F. How many people sit between D and A when counted from the left of A?

Ans

✗ A. Two

✗ B. One

✓ C. Three

✗ D. Four

Question ID : **44100915583**
Option 1 ID : **44100962223**
Option 2 ID : **44100962222**
Option 3 ID : **44100962224**
Option 4 ID : **44100962221**
Status : **Not Answered**
Chosen Option : **--**

Q.29 In a certain code language, 'you can leave' is coded as 'yd bt gp' and 'can they wait' is coded as 'nb hv yd'. How is 'can' coded in the given language?

Ans

✗ A. bt

✗ B. nb

✗ C. hv

✓ D. yd

Question ID : **44100915671**
Option 1 ID : **44100962573**
Option 2 ID : **44100962575**
Option 3 ID : **44100962576**
Option 4 ID : **44100962574**
Status : **Answered**
Chosen Option : **D**

Q.30 Seven boxes, A, B, C, D, E, F and G, are kept one over the other but not necessarily in the same order. Only three boxes are kept below B. E is kept fifth from the bottom. Only two boxes are kept between E and A. D is kept immediately below C. F is not kept below G. How many boxes are kept between G and D?

Ans
- ✗ A. Two
- ✗ B. One
- ✓ C. Four
- ✗ D. Three

Question ID : **44100915595**
Option 1 ID : **44100962272**
Option 2 ID : **44100962271**
Option 3 ID : **44100962270**
Option 4 ID : **44100962269**
Status : **Not Answered**
Chosen Option : **--**

Q.31 Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?
 # : ZKH :: DNL : %

Ans
- ✗ A. # = HQP, % = LTT
- ✓ B. # = VHD, % = HQP
- ✗ C. # = LTT, % = PWX
- ✗ D. # = PWX, % = VHD

Question ID : **44100919468**
Option 1 ID : **44100977604**
Option 2 ID : **44100977605**
Option 3 ID : **44100977603**
Option 4 ID : **44100977606**
Status : **Not Answered**
Chosen Option : **--**

Q.32 In a certain code language, ‘make or break’ is coded as ‘mo kx sb’ and ‘break the lock’ is coded as ‘gp rw kx’. How is ‘break’ coded in the given language?

Ans
- ✗ A. rw
- ✗ B. gp
- ✗ C. sb
- ✓ D. kx

Question ID : **44100915673**
Option 1 ID : **44100962582**
Option 2 ID : **44100962581**
Option 3 ID : **44100962584**
Option 4 ID : **44100962583**
Status : **Answered**
Chosen Option : **D**

Q.33 If + means −, − means ×, × means ÷, ÷ means +, then what will come in place of the question mark (?) in the following equation?
189 ÷ 85 × 5 − 4 + 43 = ?

Ans
✗ A. 199
✗ B. 210
✓ C. 214
✗ D. 194

Question ID : **44100919634**
Option 1 ID : **44100978264**
Option 2 ID : **44100978263**
Option 3 ID : **44100978266**
Option 4 ID : **44100978265**
Status : **Answered**
Chosen Option : **C**

Q.34 Nivedita invested ₹1,60,000 in a stock. In the first year, the stock value increased by 40%. In the second year, due to a market crash, the value dropped by 25%. In the third year, the stock recovered and increased by 30%. What is the final value (in ₹) of the investment after three years?

Ans
✗ A. 1,64,000
✗ B. 1,84,500
✓ C. 2,18,400
✗ D. 2,42,000

Question ID : **44100947573**
Option 1 ID : **441009189385**
Option 2 ID : **441009189386**
Option 3 ID : **441009189387**
Option 4 ID : **441009189384**
Status : **Not Answered**
Chosen Option : **--**

Q.35 Anupam starts from Point Y and drives 25 km towards south. He then takes a right turn, drives 68 km, turns left and drives 75 km. He then takes a left turn and drives 26 km. He takes a left turn, drives 51 km. He then turns right, drives 42 km, turns right and drives 17 km to stop at Point Z. How far (shortest distance) and towards which direction should he drive in order to reach Point Y again? (All turns are 90 degree turns only unless specified.)

Ans
✗ A. 73 km towards north
✗ B. 69 km towards south
✓ C. 66 km towards north
✗ D. 61 km towards south

Question ID : **44100919451**
Option 1 ID : **44100977536**
Option 2 ID : **44100977535**
Option 3 ID : **44100977537**
Option 4 ID : **44100977538**
Status : **Not Answered**
Chosen Option : **--**

Q.36 If + means −, − means ×, × means ÷ , ÷ means +, then what will come in place of the question mark (?) in the following equation?
63 × 7 − 5 ÷ 114 + 28 = ?

Ans
✗ A. 142
✓ B. 131
✗ C. 137
✗ D. 129

Question ID : **44100919631**
Option 1 ID : **44100978251**
Option 2 ID : **44100978253**
Option 3 ID : **44100978254**
Option 4 ID : **44100978252**
Status : **Answered**
Chosen Option : **B**

Q.37 Refer to the following letter, number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) H & 6 K 5 C % 7 L & + L Y 4 M # E * S @ T (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

Ans
✗ A. Four
✓ B. Two
✗ C. Three
✗ D. One

Question ID : **44100915629**
Option 1 ID : **44100962406**
Option 2 ID : **44100962407**
Option 3 ID : **44100962405**
Option 4 ID : **44100962408**
Status : **Answered**
Chosen Option : **B**

Q.38 Sweety and Sonu invest in a business in the ratio of 14 : 13. If 19% of the total profit is donated and Sweety's share is ₹29,274, then what is the amount (in ₹) of donation?

Ans
✗ A. 12,343
✗ B. 14,233
✓ C. 13,243
✗ D. 13,432

Question ID : **44100951182**
Option 1 ID : **441009203878**
Option 2 ID : **441009203881**
Option 3 ID : **441009203879**
Option 4 ID : **441009203880**
Status : **Not Answered**
Chosen Option : **--**

Q.39 The average age of six children in a family is 14 years. When the ages of their mother and father are included, the average age of the entire family increases to 25 years. If the father is 10 years older than the mother, what is the mother's age (in years)?

Ans
✗ A. 63
✗ B. 50
✓ C. 53
✗ D. 60

Question ID : **44100944255**
Option 1 ID : **441009176467**
Option 2 ID : **441009176470**
Option 3 ID : **441009176469**
Option 4 ID : **441009176468**
Status : **Not Answered**
Chosen Option : **--**

Q.40 A cylindrical vessel is completely filled with water. When a solid sphere having surface area 452.16 cm^2 is placed into the vessel, how much water (in litres, correct up to three decimal places) will overflow? (Take π = 3.14)

Ans
✗ A. 0.884
✓ B. 0.904
✗ C. 0.914
✗ D. 0.928

Question ID : **44100942851**
Option 1 ID : **441009170883**
Option 2 ID : **441009170884**
Option 3 ID : **441009170885**
Option 4 ID : **441009170886**
Status : **Not Answered**
Chosen Option : **--**

Q.41 Select the number from among the given options that can replace the question mark (?) in the following series.

308 263 221 184 154 ?

Ans
✗ A. 156
✗ B. 124
✓ C. 133
✗ D. 147

Question ID : **44100919693**
Option 1 ID : **44100978500**
Option 2 ID : **44100978502**
Option 3 ID : **44100978501**
Option 4 ID : **44100978499**
Status : **Answered**
Chosen Option : **B**

Q.42 Refer to the following letter, number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) S = # T + G 3 % L & 6 R @ B * M & > N 4 D 5 E (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

Ans
✗ A. Four
✗ B. Two
✗ C. Three
✓ D. One

Question ID : **44100915633**
Option 1 ID : **44100962423**
Option 2 ID : **44100962421**
Option 3 ID : **44100962422**
Option 4 ID : **44100962424**
Status : **Answered**
Chosen Option : **D**

Q.43 Seven boxes, A, B, C, D, E, F and G, are kept one over the other but not necessarily in the same order. G is kept fifth from the bottom. B is kept fourth from the top. F is kept below D but above G. E is kept above C but below A. How many boxes are kept between E and F?

Ans
✗ A. Two
✗ B. One
✓ C. Three
✗ D. Four

Question ID : **44100915592**
Option 1 ID : **44100962260**
Option 2 ID : **44100962259**
Option 3 ID : **44100962257**
Option 4 ID : **44100962258**
Status : **Not Answered**
Chosen Option : **--**

Q.44 The present age of Anwesha and Reena is in the ratio 7 : 9. Sixteen years hence, the ratio of their ages will be 11 : 13. What will be the sum of their ages (in years) after two years?

Ans
✓ A. 68
✗ B. 60
✗ C. 64
✗ D. 70

Question ID : **44100967790**
Option 1 ID : **441009269936**
Option 2 ID : **441009269934**
Option 3 ID : **441009269935**
Option 4 ID : **441009269937**
Status : **Answered**
Chosen Option : **A**

Q.45 Three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the letter-cluster pair that does NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their positions in the letter-cluster.)

Ans
✗ A. XN – AK
✗ B. LZ – OW
✓ C. PB – TY
✗ D. RT – UQ

Question ID : **44100919573**
Option 1 ID : **44100978022**
Option 2 ID : **44100978019**
Option 3 ID : **44100978020**
Option 4 ID : **44100978021**
Status : **Not Answered**
Chosen Option : **--**

Q.46 In △ABC, P and Q are points on the sides AB and AC, respectively, such that PQ ∥ BC. If the ratio of AP to PB is 2 : 3, and the area of △APQ is 80 cm^2, then what is the area (in cm^2) of △ABC?

Ans
✗ A. 120
✗ B. 240
✓ C. 500
✗ D. 200

Question ID : **44100967892**
Option 1 ID : **441009270336**
Option 2 ID : **441009270338**
Option 3 ID : **441009270339**
Option 4 ID : **441009270337**
Status : **Not Answered**
Chosen Option : **--**

Q.47 A company sells two types of tea blends: Premium Blend and Standard Blend. The Premium Blend costs ₹480 per kg and the Standard Blend costs ₹250 per kg. A new Custom Blend is created by mixing these two blends in a certain ratio. If the final Custom Blend costs ₹300 per kg, then what is the ratio of Premium Blend to Standard Blend in the mixture?

Ans
✗ A. 18 : 5
✓ B. 5 : 18
✗ C. 17 : 4
✗ D. 4 : 17

Question ID : **44100966818**
Option 1 ID : **441009266072**
Option 2 ID : **441009266071**
Option 3 ID : **441009266070**
Option 4 ID : **441009266069**
Status : **Not Answered**
Chosen Option : **--**

Q.48 The speeds of Daljeet, Anwesha and Bhoomika are in the ratio of 6 : 7 : 9. Daljeet takes 42 min more than Bhoomika to reach a destination. In how much time (in hr) does Anwesha reach the destination?

Ans
✗ A. 1.4
✗ B. 1.6
✗ C. 2.0
✓ D. 1.8

Question ID : **44100959394**
Option 1 ID : **441009236485**
Option 2 ID : **441009236486**
Option 3 ID : **441009236488**
Option 4 ID : **441009236487**
Status : **Not Answered**
Chosen Option : **--**

Q.49 Aditya offered 18% discount on the listed price. After applying the discount, he sold an article for ₹615 and made a profit of 25%. What would have been his profit percentage if he had sold the article at the full listed price without any discount? (Rounded off to two decimal places)

Ans
✗ A. 54.24%
✓ B. 52.44%
✗ C. 52.12%
✗ D. 50.22%

Question ID : **44100951131**
Option 1 ID : **441009203677**
Option 2 ID : **441009203676**
Option 3 ID : **441009203675**
Option 4 ID : **441009203674**
Status : **Not Answered**
Chosen Option : **--**

Q.50 Three pipes L, M and N can fill a cistern in 24, 30 and 40 hours, respectively. If the pipe L is opened all the time while M and N are opened for two hours each alternately starting with M, then how many hours will they take to fill the empty cistern?

Ans
✓ A. 14
✗ B. $13\frac{1}{2}$
✗ C. $12\frac{1}{2}$
✗ D. 13

Question ID : **44100951207**
Option 1 ID : **441009203981**
Option 2 ID : **441009203980**
Option 3 ID : **441009203978**
Option 4 ID : **441009203979**
Status : **Not Answered**
Chosen Option : **--**

Section : **Section III General Knowledge**

Q.1 **Who launched 'Srjanam', India's first automated biomedical waste conversion system, developed by CSIR NIIST, Thiruvananthapuram, in February 2025?**

Ans
✗ A. Shri Narendra Modi
✗ B. Dr. Anil Jain
✓ C. Dr. Jitendra Singh
✗ D. Shri V Narayanan

Question ID : **44100930330**
Option 1 ID : **441009120733**
Option 2 ID : **441009120735**
Option 3 ID : **441009120732**
Option 4 ID : **441009120734**
Status : **Answered**
Chosen Option : **C**

Q.2 **In 2009, India ranked number 88 in the Global Human Poverty Index (HPI) among how many countries?**

Ans
✗ A. 150 countries
✗ B. 145 countries
✗ C. 140 countries
✓ D. 135 countries

Question ID : **44100921588**
Option 1 ID : **44100986102**
Option 2 ID : **44100986101**
Option 3 ID : **44100986100**
Option 4 ID : **44100986099**
Status : **Answered**
Chosen Option : **D**

Q.3 **What was the Human Development Index (HDI) of Kerala in 2001 according to the National Human Development Report (HDR), in which Kerala ranked number one in HDI?**

Ans
✗ A. 0.550
✗ B. 0.637
✗ C. 0.500
✓ D. 0.638

Question ID : **44100921562**
Option 1 ID : **44100985995**
Option 2 ID : **44100985996**
Option 3 ID : **44100985998**
Option 4 ID : **44100985997**
Status : **Answered**
Chosen Option : **B**

Q.4 **In 1990-91, the manufacturing sector used what percentage of India's economy's net renewable capital stock?**

Ans
- ✔ A. 39%
- ✘ B. 15%
- ✘ C. 6%
- ✘ D. 24%

Question ID : **44100921595**
Option 1 ID : **44100986130**
Option 2 ID : **44100986128**
Option 3 ID : **44100986127**
Option 4 ID : **44100986129**
Status : **Answered**
Chosen Option : **D**

Q.5 **The Twelfth Five Year Plan (2012-17) aimed to increase the investment in infrastructure as a percentage of GDP to _____ by the end of the plan.**

Ans
- ✔ A. 9%
- ✘ B. 7%
- ✘ C. 6%
- ✘ D. 8%

Question ID : **44100921566**
Option 1 ID : **44100986014**
Option 2 ID : **44100986012**
Option 3 ID : **44100986011**
Option 4 ID : **44100986013**
Status : **Answered**
Chosen Option : **C**

Q.6 **As per the Board of Control for Cricket in India (BCCI) Naman Awards 2025, who among the following was honoured with Lifetime Achievement Award?**

Ans
- ✘ A. Rothi Sharma
- ✘ B. Kapil Dev
- ✔ C. Sachin Tendulkar
- ✘ D. Virat Kohli

Question ID : **44100916954**
Option 1 ID : **44100967676**
Option 2 ID : **44100967674**
Option 3 ID : **44100967673**
Option 4 ID : **44100967675**
Status : **Answered**
Chosen Option : **B**

Q.7 What was the Statutory Liquidity Ratio (SLR) in India before the proposed reduction in 1991?

Ans
- ✗ A. 40%
- ✗ B. 36%
- ✓ C. 38.5%
- ✗ D. 35%

Question ID : **44100921604**
Option 1 ID : **44100986166**
Option 2 ID : **44100986164**
Option 3 ID : **44100986165**
Option 4 ID : **44100986163**
Status : **Answered**
Chosen Option : **C**

Q.8 Who among the following was awarded Padma Vibhushan by Government of India in 2025?

Ans
- ✗ A. A Surya Prakash
- ✗ B. Nandamuri Balakrishna
- ✗ C. Nalli Kuppuswami Chetti
- ✓ D. Duvvur Nageshwar Reddy

Question ID : **44100916959**
Option 1 ID : **44100967696**
Option 2 ID : **44100967693**
Option 3 ID : **44100967694**
Option 4 ID : **44100967695**
Status : **Answered**
Chosen Option : **C**

Q.9 Which plan period was crucial for monitoring the successful implementation of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and urban infrastructure development?

Ans
- ✓ A. Eleventh Plan
- ✗ B. Twelfth Plan
- ✗ C. Ninth Plan
- ✗ D. Tenth Plan

Question ID : **44100921569**
Option 1 ID : **44100986025**
Option 2 ID : **44100986026**
Option 3 ID : **44100986023**
Option 4 ID : **44100986024**
Status : **Answered**
Chosen Option : **C**

Q.10 The State's executive power is to be exercised in such a manner as to ensure compliance with the laws made by the Union Parliament. This is mentioned in which Article of the Indian Constitution?

Ans
✗ A. Article 257
✗ B. Article 258
✓ C. Article 256
✗ D. Article 255

Question ID : **44100921014**
Option 1 ID : **44100983801**
Option 2 ID : **44100983802**
Option 3 ID : **44100983800**
Option 4 ID : **44100983799**
Status : **Answered**
Chosen Option : **C**

Q.11 What percentage of India's workforce was employed in the manufacturing sector in 1990-91?

Ans
✓ A. 15%
✗ B. 14%
✗ C. 16%
✗ D. 17%

Question ID : **44100921601**
Option 1 ID : **44100986152**
Option 2 ID : **44100986151**
Option 3 ID : **44100986153**
Option 4 ID : **44100986154**
Status : **Answered**
Chosen Option : **C**

Q.12 Which of the following parts of the Indian Constitution is entitled as the co-operative societies?

Ans
✗ A. Part 12A
✗ B. Part 12B
✗ C. Part 11A
✓ D. Part 9B

Question ID : **44100920980**
Option 1 ID : **44100983665**
Option 2 ID : **44100983666**
Option 3 ID : **44100983664**
Option 4 ID : **44100983663**
Status : **Answered**
Chosen Option : **C**

Q.13 What are the three key dimensions of the Human Poverty Index (HPI) developed in 1997?

Ans
- ✔ A. Standard of living, knowledge and longevity
- ✘ B. Income, education and technology
- ✘ C. Social justice, health and employment
- ✘ D. Wealth, income and education

Question ID : **44100921581**
Option 1 ID : **44100986072**
Option 2 ID : **44100986071**
Option 3 ID : **44100986073**
Option 4 ID : **44100986074**
Status : **Answered**
Chosen Option : **D**

Q.14 What happens to a country's Gender-related Development Index (GDI) when there is an increase in gender disparity?

Ans
- ✘ A. The GDI fluctuates randomly.
- ✘ B. The GDI increases.
- ✔ C. The GDI decreases.
- ✘ D. The GDI remains stable.

Question ID : **44100921556**
Option 1 ID : **44100985973**
Option 2 ID : **44100985971**
Option 3 ID : **44100985974**
Option 4 ID : **44100985972**
Status : **Answered**
Chosen Option : **C**

Q.15 The poverty reduction target in the 10^{th} Plan aimed for a total reduction of how many percentage points by 2012?

Ans
- ✘ A. 5 percentage points
- ✘ B. 10 percentage points
- ✘ C. 25 percentage points
- ✔ D. 15 percentage points

Question ID : **44100921584**
Option 1 ID : **44100986084**
Option 2 ID : **44100986083**
Option 3 ID : **44100986086**
Option 4 ID : **44100986085**
Status : **Answered**
Chosen Option : **C**

Q.16 Which of the following Articles of the Indian Constitution pertains to offences and penalties related to co-operative societies?

Ans
✔ A. Article 243ZQ
✘ B. Article 243ZT
✘ C. Article 243ZC
✘ D. Article 243ZP

Question ID : **44100920975**
Option 1 ID : **44100983643**
Option 2 ID : **44100983645**
Option 3 ID : **44100983646**
Option 4 ID : **44100983644**
Status : **Answered**
Chosen Option : **C**

Q.17 What was the theme of the 11th Five Year Plan (2007-2012)?

Ans
✔ A. Inclusive Growth
✘ B. Global Trade
✘ C. Sustainable Development
✘ D. Social Welfare

Question ID : **44100921558**
Option 1 ID : **44100985980**
Option 2 ID : **44100985981**
Option 3 ID : **44100985979**
Option 4 ID : **44100985982**
Status : **Answered**
Chosen Option : **C**

Q.18 What is the target percentage of GDP for total investment in infrastructure by 2011-12?

Ans
✘ A. 7%
✘ B. 8%
✔ C. 9%
✘ D. 10%

Question ID : **44100921574**
Option 1 ID : **44100986043**
Option 2 ID : **44100986044**
Option 3 ID : **44100986045**
Option 4 ID : **44100986046**
Status : **Answered**
Chosen Option : **C**

Q.19 What was India's fiscal deficit as a percentage of GDP in the year 1990-91?

Ans
✘ A. 4.8%
✘ B. 9.0%
✔ C. 8.4%
✘ D. 6.2%

Question ID : **44100921608**
Option 1 ID : **44100986179**
Option 2 ID : **44100986182**
Option 3 ID : **44100986181**
Option 4 ID : **44100986180**
Status : **Answered**
Chosen Option : **A**

Q.20 Which policy regime is widely argued to have ended with the liberalising reforms in 1991?

Ans
✗ A. Privatisation and Deregulation Policy
✗ B. Export-Oriented Industrialisation Policy
✓ C. License Raj
✗ D. Open Trade Policy

Question ID : **44100921613**
Option 1 ID : **44100986201**
Option 2 ID : **44100986202**
Option 3 ID : **44100986199**
Option 4 ID : **44100986200**
Status : **Answered**
Chosen Option : **C**

Section : **Section IV General English**

Q.1 Select the most appropriate ANTONYM of the given word.

Conceal

Ans
✗ A. Liberate
✗ B. Vague
✗ C. Caress
✓ D. Divulge

Question ID : **44100913726**
Option 1 ID : **44100954722**
Option 2 ID : **44100954723**
Option 3 ID : **44100954724**
Option 4 ID : **44100954721**
Status : **Answered**
Chosen Option : **D**

Q.2 Select the most appropriate option to fill in the blank.

Children are the _____ people in the world, as far as I know.

Ans
✗ A. happy
✗ B. happily
✓ C. happiest
✗ D. happier

Question ID : **44100911906**
Option 1 ID : **44100947435**
Option 2 ID : **44100947438**
Option 3 ID : **44100947437**
Option 4 ID : **44100947436**
Status : **Answered**
Chosen Option : **C**

Q.3 Select the most appropriate option to fill in the blank.

We_____ a pair of shoes.

Ans
- ✔ A. have bought
- ✘ B. has bought
- ✘ C. has buy
- ✘ D. have buy

Question ID : **44100912071**
Option 1 ID : **44100948097**
Option 2 ID : **44100948096**
Option 3 ID : **44100948098**
Option 4 ID : **44100948095**
Status : **Answered**
Chosen Option : **A**

Q.4 Select the most appropriate option to fill in the blank.

They left him _____ behind.

Ans
- ✘ A. before
- ✘ B. upstairs
- ✘ C. after
- ✔ D. well

Question ID : **44100911935**
Option 1 ID : **44100947644**
Option 2 ID : **44100947646**
Option 3 ID : **44100947645**
Option 4 ID : **44100947643**
Status : **Answered**
Chosen Option : **D**

Q.5 Select the most appropriate option to fill in the blank.

But I remember that his mom _____ asks about his health.

Ans
- ✘ A. after
- ✔ B. seldom
- ✘ C. abroad
- ✘ D. before

Question ID : **44100911968**
Option 1 ID : **44100947682**
Option 2 ID : **44100947679**
Option 3 ID : **44100947680**
Option 4 ID : **44100947681**
Status : **Answered**
Chosen Option : **B**

Q.6 Select the most appropriate option to fill in the blanks.

_____ had I taken my clothes off _____ I found out we had to leave again.

Ans
✔ A. No sooner; than
✘ B. Either; or
✘ C. Whether; or
✘ D. Rather; than

Question ID : **44100912054**
Option 1 ID : **44100948027**
Option 2 ID : **44100948030**
Option 3 ID : **44100948029**
Option 4 ID : **44100948028**
Status : **Answered**
Chosen Option : **A**

Q.7 Select the option that rectifies the error in the given sentence.

He plowed right threw the other team's defensive line.

Ans
✘ A. throw
✘ B. though
✔ C. through
✘ D. thru

Question ID : **44100924433**
Option 1 ID : **44100997445**
Option 2 ID : **44100997446**
Option 3 ID : **44100997444**
Option 4 ID : **44100997447**
Status : **Answered**
Chosen Option : **C**

Q.8 Select the correctly spelt word.

Ans
✔ A. Questionnaire
✘ B. Calender
✘ C. Seperate
✘ D. Accomodation

Question ID : **44100914168**
Option 1 ID : **44100956520**
Option 2 ID : **44100956518**
Option 3 ID : **44100956519**
Option 4 ID : **44100956517**
Status : **Answered**
Chosen Option : **D**

Q.9 Select the most appropriate synonym of the given word.

Tenuous

Ans
✗ A. Salubrious
✗ B. Significant
✗ C. Lengthy
✓ D. Delicate

Question ID : **44100914164**
Option 1 ID : **44100956489**
Option 2 ID : **44100956492**
Option 3 ID : **44100956490**
Option 4 ID : **44100956491**
Status : **Answered**
Chosen Option : **C**

Q.10 Sentences of a paragraph are given below. While the first and the last sentences (S1 and S6) are in the correct order, the sentences in between are jumbled up. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

S1. In Engineering, Soviet pre-eminence cannot be doubted.
P. All this does not have to proved.
Q. The gigantic successive five-year plans had, as their basis, tremendous feats of engineering in the USSR.
R. You saw in 1941 the sudden attack upon the USSR by a highly trained, beautifully equipped army that had swept all the great armies of Europe out of the field.
S. Although foreign engineers were imported at first to speed up the tempo, the work has been done, and has been very well done for the last decade or more by Soviet engineers entirely.
S6. But today the USSR is stronger than ever before while the German army of 1939-41 is only a memory.

Ans
✗ A. PRSQ
✗ B. PSRQ
✓ C. QSPR
✗ D. QPSR

Question ID : **44100916998**
Option 1 ID : **44100967845**
Option 2 ID : **44100967848**
Option 3 ID : **44100967846**
Option 4 ID : **44100967847**
Status : **Answered**
Chosen Option : **C**

Q.11 Select the most appropriate ANTONYM of the given word.

Abate

Ans
✗ A. Repudiate
✓ B. Intensify
✗ C. Veto
✗ D. Subdue

Question ID : **44100914160**
Option 1 ID : **44100956473**
Option 2 ID : **44100956476**
Option 3 ID : **44100956475**
Option 4 ID : **44100956474**
Status : **Answered**
Chosen Option : **B**

Q.12 Select the most appropriate ANTONYM of the given word.

Flexible

Ans
✗ A. Versatile
✓ B. Established
✗ C. Elastic
✗ D. Cruel

Question ID : **44100916479**
Option 1 ID : **44100965782**
Option 2 ID : **44100965784**
Option 3 ID : **44100965781**
Option 4 ID : **44100965783**
Status : **Answered**
Chosen Option : **B**

Q.13 Select the most appropriate option to fill in the blanks.

_____ I discovered this bar, I used to go straight home _____ work.

Ans
✗ A. No word required, after
✓ B. Before, after
✗ C. No word required, before
✗ D. After, before

Question ID : **44100912002**
Option 1 ID : **44100947817**
Option 2 ID : **44100947815**
Option 3 ID : **44100947818**
Option 4 ID : **44100947816**
Status : **Answered**
Chosen Option : **B**

Q.14 Select the correct spelling of the underlined incorrectly spelt word in the given sentence.

Those lands where the leading intellectuals persisted in these speculations remained ignorant, backward and were progressively enslaved in spite of a millenial culture.

Ans
✗ A. milionial
✗ B. milenial
✗ C. millionnial
✓ D. millennial

Question ID : **44100916219**
Option 1 ID : **44100964745**
Option 2 ID : **44100964746**
Option 3 ID : **44100964747**
Option 4 ID : **44100964748**
Status : **Answered**
Chosen Option : **D**

Q.15 Select the INCORRECTLY spelt word.

Ans
- ✔ A. Equinne
- ✘ B. Tungsten
- ✘ C. Brackish
- ✘ D. Palatability

Question ID : **44100916173**
Option 1 ID : **44100964561**
Option 2 ID : **44100964562**
Option 3 ID : **44100964563**
Option 4 ID : **44100964564**
Status : **Answered**
Chosen Option : **A**

Q.16 Select the correct spelling of the underlined incorrectly spelt word in the given sentence.

This reaction is <u>pueerille</u>.

Ans
- ✘ A. puerrile
- ✘ B. purelile
- ✔ C. puerile
- ✘ D. puriele

Question ID : **44100916211**
Option 1 ID : **44100964715**
Option 2 ID : **44100964716**
Option 3 ID : **44100964713**
Option 4 ID : **44100964714**
Status : **Answered**
Chosen Option : **C**

Q.17 Sentences of a paragraph are given below. While the first and the last sentences (S1 and S6) are in the correct order, the sentences in between are jumbled up. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

S1. The threat of war with India reached its highest point the summer after I returned from New York.
P. September was deemed the best month for battle, since the mountain passes of Kashmir might be closed by snow as early as October.
Q. Multinational corporations on both sides of the border ordered senior employees to leave, and travel advisories were issued throughout the nations of the First World, counseling their citizens to defer nonessential trips to our region.
R. So we waited as our September ticked by - little noticed by the media in your county, which was focussed at that time on the first anniversary of the attacks on New York and Washington - and then the days started to shorten, the negotiations began to make progress, and the likelihood of a catastrophe that could have claimed tens of millions of lives recorded.
S. It seemed the weather was the only factor delaying the official commencement of hostilities: First because the heat was too great for an Indian offensive in the desert, then because the monsoon's rains made driving treacherous for Indians tanks in the Punjab.
S6. Of course, humanity's respite was brief: Six months later the invasion of Iraq would be under way.

Ans
✔ A. QSPR
✘ B. PQSR
✘ C. QRPS
✘ D. PSQR

Question ID : **44100916984**
Option 1 ID : **44100967790**
Option 2 ID : **44100967791**
Option 3 ID : **44100967789**
Option 4 ID : **44100967792**
Status : **Answered**
Chosen Option : **A**

Q.18 Select the option that rectifies the error in the given sentence.

I see my carrier as a ship captain; for this, I have joined coaching classes.

Ans
✘ A. joint
✔ B. career
✘ C. coahcing
✘ D. captan

Question ID : **44100924394**
Option 1 ID : **44100997290**
Option 2 ID : **44100997288**
Option 3 ID : **44100997291**
Option 4 ID : **44100997289**
Status : **Answered**
Chosen Option : **B**

Q.19 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

A. Raji called up the technical team representative Roshni.
B. She first reported the matter to her supervisor, Raji.
C. Krishika identified the problem in the electric unit.
D. Roshni visited the premises and fixed the issue immediately.

Ans
✗ A. BADC
✗ B. ABCD
✗ C. DCBA
✓ D. CBAD

Question ID : **44100912097**
Option 1 ID : **44100948202**
Option 2 ID : **44100948200**
Option 3 ID : **44100948201**
Option 4 ID : **44100948199**
Status : **Answered**
Chosen Option : **D**

Q.20 Sentences of a paragraph are given below. While the first and the last sentences (S1 and S6) are in the correct order, the sentences in between are jumbled up. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

S1. Many conceptions and beliefs are associated with numbers.
P. For them, five was not marriage but the five wounds of Christ.
Q. Four, they believed, was two and two, or the balance between right and wrong; and five was the union of an odd and an even.
R. Later the Christian theologians taught men to associate one with the Godhead and three with the trinity.
S. In ancient times the Greeks believed that four symbolized justice and five marriage.
S6. Today most of our numerology is sheer superstition: seven is lucky, two and thirteen are unlucky.

Ans
✗ A. QPRS
✗ B. PSQR
✓ C. SQRP
✗ D. RPQS

Question ID : **44100917041**
Option 1 ID : **44100968026**
Option 2 ID : **44100968028**
Option 3 ID : **44100968027**
Option 4 ID : **44100968025**
Status : **Answered**
Chosen Option : **B**

Q.21 Sentences of a paragraph are given below. While the first and the last sentences (S1 and S6) are in the correct order, the sentences in between are jumbled up. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

S1. Altogether collisions between the classes of the old society further, in many ways, the course of development of the proletariat.
P. The bourgeoisie itself, therefore, supplies the proletariat with its own elements of political and general education.
Q. At first with the aristocracy; later on, with those portions of the bourgeoisie itself whose interests have become antagonistic to the progress of industry; at all time with the bourgeoisie of foreign countries.
R. The bourgeoisie finds itself involved in a constant battle.
S. In all these battles, it sees itself compelled to appeal to the proletariat, to ask for help, and thus, to drag it into the political arena.
S6. In other words, it furnishes the proletariat with weapons for fighting the bourgeoisie.

Ans
✗ A. PRQS
✓ B. RQSP
✗ C. RPSQ
✗ D. PQSR

Question ID : **44100916991**
Option 1 ID : **44100967820**
Option 2 ID : **44100967817**
Option 3 ID : **44100967819**
Option 4 ID : **44100967818**
Status : **Answered**
Chosen Option : **A**

Q.22 Select the most appropriate ANTONYM of the given word.

Vivacious

Ans
✗ A. Light
✗ B. Distinct
✓ C. Dead
✗ D. Evident

Question ID : **44100914161**
Option 1 ID : **44100956479**
Option 2 ID : **44100956478**
Option 3 ID : **44100956480**
Option 4 ID : **44100956477**
Status : **Answered**
Chosen Option : **B**

Q.23 Select the INCORRECTLY spelt word.

Ans
✗ A. Remarkable
✗ B. Suddenly
✓ C. Mermur
✗ D. Further

Question ID : **44100916131**
Option 1 ID : **44100964395**
Option 2 ID : **44100964393**
Option 3 ID : **44100964394**
Option 4 ID : **44100964396**
Status : **Answered**
Chosen Option : **C**

Q.24 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

A. Anamika is a good person.
B. I have a friend.
C. She and I have been friends for a very long time.
D. Her name is Anamika.

Ans ✔ A. BDCA

✘ B. ABCD

✘ C. CADB

✘ D. DCBA

Question ID : **44100912241**
Option 1 ID : **44100953765**
Option 2 ID : **44100953766**
Option 3 ID : **44100953768**
Option 4 ID : **44100953767**
Status : **Answered**
Chosen Option : **A**

Q.25 Select the most appropriate option to fill in the blank.

This soup is not _____.

Ans ✘ A. eat

✔ B. edible

✘ C. eaten

✘ D. eating

Question ID : **44100911931**
Option 1 ID : **44100947534**
Option 2 ID : **44100947531**
Option 3 ID : **44100947533**
Option 4 ID : **44100947532**
Status : **Answered**
Chosen Option : **B**

Q.26 Select the most appropriate adjective to fill in the blank.

The weather was _____ today. It has been changing the whole day.

Ans ✔ A. unpredictable

✘ B. predict

✘ C. forecasted

✘ D. unpredict

Question ID : **44100911465**
Option 1 ID : **44100947321**
Option 2 ID : **44100947320**
Option 3 ID : **44100947322**
Option 4 ID : **44100947319**
Status : **Answered**
Chosen Option : **A**

Q.27 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

A. A new publication on this subject is attempted to lend teachers a helping hand.
B. The Environment Education Unit of the Centre for Science and Environment has always been working towards providing easy-to-understand reading material.
C. It also includes information on natural resources, how to share and care for them.
D. It unfolds in two sections: 'Climate Change: How to Make Sense of It All'.
E. However, they are introduced to students not as a paragraph to memorise but as an activity to do.

Ans
✗ A. BCAED
✓ B. BADCE
✗ C. DBECA
✗ D. ABCDE

Question ID : **44100926043**
Option 1 ID : **441009103784**
Option 2 ID : **441009103786**
Option 3 ID : **441009103785**
Option 4 ID : **441009103783**
Status : **Answered**
Chosen Option : **B**

Q.28 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

A. The perception of time, in a philosophical sense, transcends mere clocks and calendars.
B. The modern world, with its emphasis on productivity, has imposed a linear conception of time.
C. It is shaped by historical and cultural contexts, altering how we experience and value it.
D. Ancient civilisations, for instance, understood time as cyclical, as seen in their agricultural practices and religious ceremonies.
E. Contemporary theories of time argue that it is not simply an objective, measurable phenomenon but one that is deeply intertwined with human experience.
F. As time becomes a commodity, we often overlook its subjective and emotional dimensions, focusing on efficiency instead

Ans
✗ A. BAEFCD
✓ B. BACDEF
✗ C. ABCEFD
✗ D. BACEFD

Question ID : **44100923225**
Option 1 ID : **44100992639**
Option 2 ID : **44100992640**
Option 3 ID : **44100992641**
Option 4 ID : **44100992638**
Status : **Answered**
Chosen Option : **D**

Q.29 Select the most appropriate ANTONYM of the given word.

Vicious

Ans
✗ A. Intense
✓ B. Moderate
✗ C. Acute
✗ D. Deep

Question ID : **44100916505**
Option 1 ID : **44100965885**
Option 2 ID : **44100965887**
Option 3 ID : **44100965888**
Option 4 ID : **44100965886**
Status : **Answered**
Chosen Option : **B**

Q.30 Select the most appropriate ANTONYM of the given word.

Defame

Ans
✗ A. Ruin
✓ B. Praise
✗ C. Spoil
✗ D. Disrepute

Question ID : **44100913697**
Option 1 ID : **44100954610**
Option 2 ID : **44100954612**
Option 3 ID : **44100954609**
Option 4 ID : **44100954611**
Status : **Answered**
Chosen Option : **B**

Q.31 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

A. After he was dismissed from service by the king of Portugal,
B. In the 16th century, an age of great marine and terrestrial exploration, Ferdinand Magellan led the first expedition to sail around the world.
C. But he became involved in the quagmire of political intrigue at court and lost the king's favour.
D. As a young Portuguese noble, he served the king of Portugal,
E. He offered to serve the future Emperor Charles V of Spain.

Ans
✗ A. ABCDE
✗ B. BDACE
✗ C. CABED
✓ D. BDCAE

Question ID : **44100913619**
Option 1 ID : **44100954301**
Option 2 ID : **44100954304**
Option 3 ID : **44100954303**
Option 4 ID : **44100954302**
Status : **Answered**
Chosen Option : **D**

Q.32 Select the correct spelling of the underlined incorrectly spelt word in the given sentence.

Borderline phenomena of classical physics illustrate unexhaustibility of the properties of matter.

Ans
✗ A. unexjostability
✗ B. unexsostability
✗ C. inexhuastibility
✓ D. inexhaustibility

Question ID : **44100916228**
Option 1 ID : **44100964784**
Option 2 ID : **44100964781**
Option 3 ID : **44100964783**
Option 4 ID : **44100964782**
Status : **Answered**
Chosen Option : **D**

Q.33 Select the INCORRECTLY spelt word.

Ans
✗ A. Narcissistic
✓ B. Brocolli
✗ C. Fissionable
✗ D. Personnel

Question ID : **44100916180**
Option 1 ID : **44100964591**
Option 2 ID : **44100964592**
Option 3 ID : **44100964589**
Option 4 ID : **44100964590**
Status : **Answered**
Chosen Option : **B**

Q.34 Select the most appropriate option to fill in the blank.
The artist's _____ use of colour created a vibrant and captivating painting.

Ans
✗ A. meagre
✓ B. bold
✗ C. limited
✗ D. careless

Question ID : **44100917079**
Option 1 ID : **44100968177**
Option 2 ID : **44100968178**
Option 3 ID : **44100968180**
Option 4 ID : **44100968179**
Status : **Answered**
Chosen Option : **B**

Q.35 Select the most appropriate synonym of the given word.

Cogent

Ans
✔ A. Convincing
✘ B. Tentative
✘ C. Social
✘ D. Forced

Question ID : **44100914162**
Option 1 ID : **44100956482**
Option 2 ID : **44100956481**
Option 3 ID : **44100956484**
Option 4 ID : **44100956483**
Status : **Answered**
Chosen Option : **A**

Q.36 Sentences of a paragraph are given below. While the first and the last sentences (S1 and S6) are in the correct order, the sentences in between are jumbled up. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

S1. Some kind of ethical approach to life has a strong appeal for me, though it would be difficult for me to justify it logically.
P. The idea is by no means new, but this application of an ethical doctrine to large-scale public activity was certainly novel.
Q. It is full of difficulty, and perhaps ends and means are not really separable and form together one organic whole.
R. I have been attracted by Gandhiji's stress on right means and I think one of his greatest contributions to our public life has been this emphasis.
S. In a world which thinks most exclusively of ends and ignores means the emphasis on means seems odd and remarkable.
S6. How far it has succeeded in India, I cannot say.

Ans
✘ A. PSQR
✘ B. RQPS
✘ C. PQSR
✔ D. RPQS

Question ID : **44100917048**
Option 1 ID : **44100968053**
Option 2 ID : **44100968055**
Option 3 ID : **44100968056**
Option 4 ID : **44100968054**
Status : **Answered**
Chosen Option : **D**

Q.37 Select the most appropriate ANTONYM of the given word.

Absence

Ans
✘ A. Absentee
✔ B. Existence
✘ C. Truancy
✘ D. Paucity

Question ID : **44100913678**
Option 1 ID : **44100954535**
Option 2 ID : **44100954533**
Option 3 ID : **44100954534**
Option 4 ID : **44100954536**
Status : **Answered**
Chosen Option : **B**

Q.38 Select the most appropriate option to fill in the blank.

The artist's approach to colour theory is remarkably _____, exploring unconventional palettes and challenging traditional notions of colour harmony.

Ans
✗ A. derivative
✓ B. avant-garde
✗ C. pedestrian
✗ D. monochromatic

Question ID : **44100921186**
Option 1 ID : **44100984493**
Option 2 ID : **44100984492**
Option 3 ID : **44100984494**
Option 4 ID : **44100984491**
Status : **Answered**
Chosen Option : **A**

Q.39 Select the option that rectifies the incorrectly spelt word in the given sentence.

The most strenus thing I've done all day has been to cut the pillar.

Ans
✗ A. strngth
✗ B. straintuous
✗ C. strentuous
✓ D. strenuous

Question ID : **44100924575**
Option 1 ID : **44100998017**
Option 2 ID : **44100998018**
Option 3 ID : **44100998019**
Option 4 ID : **44100998016**
Status : **Answered**
Chosen Option : **D**

Q.40 Select the most appropriate ANTONYM of the given word.

Parallel

Ans
✗ A. Comparable
✓ B. Diverse
✗ C. Similar
✗ D. Cognate

Question ID : **44100916496**
Option 1 ID : **44100965850**
Option 2 ID : **44100965852**
Option 3 ID : **44100965849**
Option 4 ID : **44100965851**
Status : **Answered**
Chosen Option : **B**

Comprehension:

Read the given passage and answer the questions that follow.

There are many new developments in high technology to which some people adapt very quickly, while others are reluctant to give them a try. In the main, it is the younger people who are most receptive to new ideas. The reason being that they are still developing a thinking structure and are keen to learn from new experiences. Older people, on the other hand, have well established mental structures and tend to prefer the familiar, rather than involve themselves in the risk and effort of exploring new territory. Whether you are young or old, the choice is yours. You may apply proactive thinking in your business or personal life. Ask yourself, such questions as, 'How can I improve my product to satisfy future demand and stay ahead of my competitors?' or 'Where am I going and what do I want to achieve?'. In each case, the method is to identify possible trends and ask yourself what you should be doing about it. You may even decide to take control and actually set the new trend. This is what 'Golden Wonder' did when they entered the potato crisp market in the UK hitherto dominated by Smiths. They decided to take their crisps into supermarkets and aimed their sales at housewives and children. This, in turn, led to the introduction of flavoured crisps and other snack foods.

SubQuestion No : 41

Q.41 What does the phrase 'proactive thinking' stand for in the passage?

Ans

✗ A. The ability to change and modify future events, needs and challenges

✗ B. The approach to overlook what has to be improved in order to enhance business

✓ C. The ability to anticipate and prepare for future events, tasks and challenges

✗ D. The approach to enhance business skills and market strategies

Question ID : **44100916596**
Option 1 ID : **44100966246**
Option 2 ID : **44100966248**
Option 3 ID : **44100966245**
Option 4 ID : **44100966247**
Status : **Answered**
Chosen Option : **C**

Comprehension:

Read the given passage and answer the questions that follow.

There are many new developments in high technology to which some people adapt very quickly, while others are reluctant to give them a try. In the main, it is the younger people who are most receptive to new ideas. The reason being that they are still developing a thinking structure and are keen to learn from new experiences. Older people, on the other hand, have well established mental structures and tend to prefer the familiar, rather than involve themselves in the risk and effort of exploring new territory. Whether you are young or old, the choice is yours. You may apply proactive thinking in your business or personal life. Ask yourself, such questions as, 'How can I improve my product to satisfy future demand and stay ahead of my competitors?' or 'Where am I going and what do I want to achieve?'. In each case, the method is to identify possible trends and ask yourself what you should be doing about it. You may even decide to take control and actually set the new trend. This is what 'Golden Wonder' did when they entered the potato crisp market in the UK hitherto dominated by Smiths. They decided to take their crisps into supermarkets and aimed their sales at housewives and children. This, in turn, led to the introduction of flavoured crisps and other snack foods.

SubQuestion No : 42

Q.42 According to passage, what can help to enlarge businesses using technology?

Ans

✗ A. Being reluctant to give a try to something new in market

✓ B. Understanding the nature of demand and a right approach to execute it

✗ C. Having well-established structures and preferring what is already booming in market

✗ D. Good business skills and knowledge of stock market

Question ID : **44100916598**
Option 1 ID : **44100966256**
Option 2 ID : **44100966255**
Option 3 ID : **44100966254**
Option 4 ID : **44100966253**
Status : **Answered**
Chosen Option : **C**

Comprehension:

Read the given passage and answer the questions that follow.

There are many new developments in high technology to which some people adapt very quickly, while others are reluctant to give them a try. In the main, it is the younger people who are most receptive to new ideas. The reason being that they are still developing a thinking structure and are keen to learn from new experiences. Older people, on the other hand, have well established mental structures and tend to prefer the familiar, rather than involve themselves in the risk and effort of exploring new territory. Whether you are young or old, the choice is yours. You may apply proactive thinking in your business or personal life. Ask yourself, such questions as, 'How can I improve my product to satisfy future demand and stay ahead of my competitors?' or 'Where am I going and what do I want to achieve?'. In each case, the method is to identify possible trends and ask yourself what you should be doing about it. You may even decide to take control and actually set the new trend. This is what 'Golden Wonder' did when they entered the potato crisp market in the UK hitherto dominated by Smiths. They decided to take their crisps into supermarkets and aimed their sales at housewives and children. This, in turn, led to the introduction of flavoured crisps and other snack foods.

SubQuestion No : 43

Q.43 Why are younger people most receptive to new ideas?

Ans
✔ A. They develop their thought process as per the needs
✘ B. They are well educated and technophobe
✘ C. Young people are familiar with the modern market
✘ D. Young people can learn business strategies easily

Question ID : **44100916597**
Option 1 ID : **44100966250**
Option 2 ID : **44100966251**
Option 3 ID : **44100966252**
Option 4 ID : **44100966249**
Status : **Answered**
Chosen Option : **C**

Comprehension:

Read the given passage and answer the questions that follow.

There are many new developments in high technology to which some people adapt very quickly, while others are reluctant to give them a try. In the main, it is the younger people who are most receptive to new ideas. The reason being that they are still developing a thinking structure and are keen to learn from new experiences. Older people, on the other hand, have well established mental structures and tend to prefer the familiar, rather than involve themselves in the risk and effort of exploring new territory. Whether you are young or old, the choice is yours. You may apply proactive thinking in your business or personal life. Ask yourself, such questions as, 'How can I improve my product to satisfy future demand and stay ahead of my competitors?' or 'Where am I going and what do I want to achieve?'. In each case, the method is to identify possible trends and ask yourself what you should be doing about it. You may even decide to take control and actually set the new trend. This is what 'Golden Wonder' did when they entered the potato crisp market in the UK hitherto dominated by Smiths. They decided to take their crisps into supermarkets and aimed their sales at housewives and children. This, in turn, led to the introduction of flavoured crisps and other snack foods.

SubQuestion No : 44

Q.44 Select the most appropriate ANTONYM of the given word as used in the given passage.

Hitherto

Ans
✘ A. So far
✘ B. Consequently
✔ C. Thereafter
✘ D. Thus

Question ID : **44100916600**
Option 1 ID : **44100966264**
Option 2 ID : **44100966263**
Option 3 ID : **44100966261**
Option 4 ID : **44100966262**
Status : **Answered**
Chosen Option : **C**

Comprehension:

Read the given passage and answer the questions that follow.

There are many new developments in high technology to which some people adapt very quickly, while others are reluctant to give them a try. In the main, it is the younger people who are most receptive to new ideas. The reason being that they are still developing a thinking structure and are keen to learn from new experiences. Older people, on the other hand, have well established mental structures and tend to prefer the familiar, rather than involve themselves in the risk and effort of exploring new territory. Whether you are young or old, the choice is yours. You may apply proactive thinking in your business or personal life. Ask yourself, such questions as, 'How can I improve my product to satisfy future demand and stay ahead of my competitors?' or 'Where am I going and what do I want to achieve?'. In each case, the method is to identify possible trends and ask yourself what you should be doing about it. You may even decide to take control and actually set the new trend. This is what 'Golden Wonder' did when they entered the potato crisp market in the UK hitherto dominated by Smiths. They decided to take their crisps into supermarkets and aimed their sales at housewives and children. This, in turn, led to the introduction of flavoured crisps and other snack foods.

SubQuestion No : 45

Q.45 How was the dominance of Smiths in the potato crisp market overtaken?

Ans

✗ A. When the Smiths aimed their sales at housewives and children

✓ B. When another company introduced flavored crisps and other snack foods

✗ C. When the Smiths launched more delicious and flavoured crisps in the market

✗ D. When another company introduced more flavoured crisps in the market

Question ID : **44100916599**
Option 1 ID : **44100966258**
Option 2 ID : **44100966257**
Option 3 ID : **44100966259**
Option 4 ID : **44100966260**
Status : **Answered**
Chosen Option : **C**

Comprehension:

Read the given passage and answer the questions that follow.

Marie Curie was one of the most accomplished scientists in history. Together with her husband, Pierre, she discovered radium, an element widely used for treating cancer, and studied uranium and other radioactive substances. Pierre and Marie's amicable collaboration later helped to unlock the secrets of the atom.
Marie was born in 1867 in Warsaw, Poland, where her father was a professor of physics. At an early age, she displayed a brilliant mind and a blithe personality. Her great exuberance for learning prompted her to continue with her studies after high school. She became disgruntled, however, when she learned that the university in Warsaw was closed to women. Determined to receive a higher education, she defiantly left Poland and in 1891 entered the Sorbonne, a French university, where she earned her master's degree and doctorate in physics.
Marie was fortunate to have studied at the Sorbonne with some of the greatest scientists of her day, one of whom was Pierre Curie. Marie and Pierre were married in 1895 and spent many productive years working together in the physics laboratory. A short time after they discovered radium, Pierre was killed by a horse-drawn wagon in 1906. Marie was stunned by this horrible misfortune and endured heartbreaking anguish. Despondently she recalled their close relationship and the joy that they had shared in scientific research. The fact that she had two young daughters to raise by herself greatly increased her distress.
Curie's feeling of desolation finally began to fade when she was asked to succeed her husband as a physics professor at the Sorbonne. She was the first woman to be given a professorship at the world-famous university. In 1911 she received the Nobel Prize in chemistry for isolating radium. Although Marie Curie eventually suffered a fatal illness from her long exposure to radium, she never became disillusioned about her work. Regardless of the consequences, she had dedicated herself to science and to revealing the mysteries of the physical world.

SubQuestion No : 46

Q.46 Identify the tone of the passage.

Ans

✗ A. Humorous

✗ B. Sarcastic

✗ C. Serious and indifferent

✓ D. Inspirational and respectful

Question ID : **44100925459**
Option 1 ID : **441009101536**
Option 2 ID : **441009101535**
Option 3 ID : **441009101537**
Option 4 ID : **441009101538**
Status : **Answered**
Chosen Option : **D**

Comprehension:

Read the given passage and answer the questions that follow.

Marie Curie was one of the most accomplished scientists in history. Together with her husband, Pierre, she discovered radium, an element widely used for treating cancer, and studied uranium and other radioactive substances. Pierre and Marie's amicable collaboration later helped to unlock the secrets of the atom.
Marie was born in 1867 in Warsaw, Poland, where her father was a professor of physics. At an early age, she displayed a brilliant mind and a blithe personality. Her great exuberance for learning prompted her to continue with her studies after high school. She became disgruntled, however, when she learned that the university in Warsaw was closed to women. Determined to receive a higher education, she defiantly left Poland and in 1891 entered the Sorbonne, a French university, where she earned her master's degree and doctorate in physics.
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Curie's feeling of desolation finally began to fade when she was asked to succeed her husband as a physics professor at the Sorbonne. She was the first woman to be given a professorship at the world-famous university. In 1911 she received the Nobel Prize in chemistry for isolating radium. Although Marie Curie eventually suffered a fatal illness from her long exposure to radium, she never became disillusioned about her work. Regardless of the consequences, she had dedicated herself to science and to revealing the mysteries of the physical world.

SubQuestion No : 47

Q.47 Give an appropriate title to the passage.

Ans

✔ A. Marie Curie: A Life Devoted to Science

✗ B. Marie Curie: The Radium Discoverer

✗ C. The Tragic Life of Marie Curie

✗ D. Warsaw`s Scientific Legacy

Question ID : **44100925468**
Option 1 ID : **441009101571**
Option 2 ID : **441009101572**
Option 3 ID : **441009101573**
Option 4 ID : **441009101574**
Status : **Answered**
Chosen Option : **A**

Comprehension:

Read the given passage and answer the questions that follow.

Marie Curie was one of the most accomplished scientists in history. Together with her husband, Pierre, she discovered radium, an element widely used for treating cancer, and studied uranium and other radioactive substances. Pierre and Marie's amicable collaboration later helped to unlock the secrets of the atom.
Marie was born in 1867 in Warsaw, Poland, where her father was a professor of physics. At an early age, she displayed a brilliant mind and a blithe personality. Her great exuberance for learning prompted her to continue with her studies after high school. She became disgruntled, however, when she learned that the university in Warsaw was closed to women. Determined to receive a higher education, she defiantly left Poland and in 1891 entered the Sorbonne, a French university, where she earned her master's degree and doctorate in physics.
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Curie's feeling of desolation finally began to fade when she was asked to succeed her husband as a physics professor at the Sorbonne. She was the first woman to be given a professorship at the world-famous university. In 1911 she received the Nobel Prize in chemistry for isolating radium. Although Marie Curie eventually suffered a fatal illness from her long exposure to radium, she never became disillusioned about her work. Regardless of the consequences, she had dedicated herself to science and to revealing the mysteries of the physical world.

SubQuestion No : 48

Q.48 Select the correct structure of the passage.

Ans

✗ A. Expository and persuasive

✗ B. Comparative and Problematic

✗ C. Descriptive and argumentative

✓ D. Chronological and narrative

Question ID : **44100925509**
Option 1 ID : **441009101737**
Option 2 ID : **441009101738**
Option 3 ID : **441009101736**
Option 4 ID : **441009101735**
Status : **Answered**
Chosen Option : **D**

Comprehension:

Read the given passage and answer the questions that follow.

Marie Curie was one of the most accomplished scientists in history. Together with her husband, Pierre, she discovered radium, an element widely used for treating cancer, and studied uranium and other radioactive substances. Pierre and Marie's amicable collaboration later helped to unlock the secrets of the atom.
Marie was born in 1867 in Warsaw, Poland, where her father was a professor of physics. At an early age, she displayed a brilliant mind and a blithe personality. Her great exuberance for learning prompted her to continue with her studies after high school. She became disgruntled, however, when she learned that the university in Warsaw was closed to women. Determined to receive a higher education, she defiantly left Poland and in 1891 entered the Sorbonne, a French university, where she earned her master's degree and doctorate in physics.
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Curie's feeling of desolation finally began to fade when she was asked to succeed her husband as a physics professor at the Sorbonne. She was the first woman to be given a professorship at the world-famous university. In 1911 she received the Nobel Prize in chemistry for isolating radium. Although Marie Curie eventually suffered a fatal illness from her long exposure to radium, she never became disillusioned about her work. Regardless of the consequences, she had dedicated herself to science and to revealing the mysteries of the physical world.

SubQuestion No : 49

Q.49 Select the correct meaning of 'amicable'.

Ans

✗ A. Hostile

✗ B. Annoyed and angry

✓ C. Friendly and good natured

✗ D. Rude and unfriendly

Question ID : **44100925481**
Option 1 ID : **441009101626**
Option 2 ID : **441009101625**
Option 3 ID : **441009101623**
Option 4 ID : **441009101624**
Status : **Answered**
Chosen Option : **B**

Comprehension:

Read the given passage and answer the questions that follow.

Marie Curie was one of the most accomplished scientists in history. Together with her husband, Pierre, she discovered radium, an element widely used for treating cancer, and studied uranium and other radioactive substances. Pierre and Marie's amicable collaboration later helped to unlock the secrets of the atom.
Marie was born in 1867 in Warsaw, Poland, where her father was a professor of physics. At an early age, she displayed a brilliant mind and a blithe personality. Her great exuberance for learning prompted her to continue with her studies after high school. She became disgruntled, however, when she learned that the university in Warsaw was closed to women. Determined to receive a higher education, she defiantly left Poland and in 1891 entered the Sorbonne, a French university, where she earned her master's degree and doctorate in physics.
Marie was fortunate to have studied at the Sorbonne with some of the greatest scientists of her day, one of whom was Pierre Curie. Marie and Pierre were married in 1895 and spent many productive years working together in the physics laboratory. A short time after they discovered radium, Pierre was killed by a horse-drawn wagon in 1906. Marie was stunned by this horrible misfortune and endured heartbreaking anguish. Despondently she recalled their close relationship and the joy that they had shared in scientific research. The fact that she had two young daughters to raise by herself greatly increased her distress.
Curie's feeling of desolation finally began to fade when she was asked to succeed her husband as a physics professor at the Sorbonne. She was the first woman to be given a professorship at the world-famous university. In 1911 she received the Nobel Prize in chemistry for isolating radium. Although Marie Curie eventually suffered a fatal illness from her long exposure to radium, she never became disillusioned about her work. Regardless of the consequences, she had dedicated herself to science and to revealing the mysteries of the physical world.

SubQuestion No : 50

Q.50 Identify the central theme of the passage.

Ans

✗ A. Marie`s Journey to become a doctor in medicine.

✗ B. Marie Curie`s discovery of radium's uses in everyday life.

✓ C. Marie's dedication to science and her pursuit of knowledge despite personal losses.

✗ D. The challenges of living in Warsaw during the 19^{th} century.

Question ID : **44100925446**
Option 1 ID : **441009101483**
Option 2 ID : **441009101486**
Option 3 ID : **441009101484**
Option 4 ID : **441009101485**
Status : **Answered**
Chosen Option : **C**