OHPC
DET

Previous Year Paper
(Electrical)
15 Jan, 2026 Shift 3

ODISHA HYDRO POWER CORPORATION LIMITED
A GOLD RATED STATE PSU OF GOVT. OF ODISHA

Participant ID	
Participant Name	
Test Center Name	
Test Date	15/01/2026
Test Time	5:00 PM - 7:00 PM
Subject	DET Electrical

Section : **Respective Discipline Syllabus**

Q.1 **When is a two-port network said to be reciprocal?**

Ans
✗ 1. $B = C$
✓ 2. $Z_{12} = Z_{21}$
✗ 3. $Z_{11} = Z_{22}$
✗ 4. $A = D$

Question ID : **4410091487876**
Option 1 ID : **4410095877630**
Option 2 ID : **4410095877627**
Option 3 ID : **4410095877629**
Option 4 ID : **4410095877628**
Status : **Answered**
Chosen Option : **2**

Q.2 **A single-phase full wave fully controlled AC-DC rectifier (4-SCR configuration) is used for speed control of a separately excited DC motor. In how many quadrants the rectifier can control the drive?**

Ans
✓ 1. Two quadrants only
✗ 2. One quadrant only
✗ 3. All four quadrants
✗ 4. Three quadrants only

Question ID : **4410091400014**
Option 1 ID : **4410095529824**
Option 2 ID : **4410095529823**
Option 3 ID : **4410095529826**
Option 4 ID : **4410095529825**
Status : **Answered**
Chosen Option : **1**

Q.3 Which two control signals are used for DMA operations in the 8085?

Ans
✗ 1. INTR and INTA
✗ 2. RD and WR
✗ 3. IO/M and ALE
✓ 4. HOLD and HLDA

Question ID : **4410091304423**
Option 1 ID : **4410095149619**
Option 2 ID : **4410095149621**
Option 3 ID : **4410095149618**
Option 4 ID : **4410095149620**
Status : **Not Answered**
Chosen Option : **--**

Q.4 In a magnetic hysteresis loop, what does the area enclosed by the loop represent?

Ans
✗ 1. Coercivity
✓ 2. Energy loss
✗ 3. Permeability
✗ 4. Flux density

Question ID : **4410091335063**
Option 1 ID : **4410095271940**
Option 2 ID : **4410095271939**
Option 3 ID : **4410095271938**
Option 4 ID : **4410095271937**
Status : **Answered**
Chosen Option : **4**

Q.5 A technician wants to verify the electricity bill of his house. He noticed that he was running two fans of 100 watt (W) each daily for 10 hours and two lights of 50 W each daily for 10 hours. Rest of the time, electricity is unavailable on daily basis. What is his monthly bill if the cost of one unit of electricity is Rs. 5? Consider the month of 30 days and No other charges are levied.

Ans
✓ 1. Rs. 450
✗ 2. Rs. 750
✗ 3. Rs. 300
✗ 4. Rs. 500

Question ID : **4410091381222**
Option 1 ID : **4410095456209**
Option 2 ID : **4410095456210**
Option 3 ID : **4410095456211**
Option 4 ID : **4410095456212**
Status : **Not Answered**
Chosen Option : **--**

Q.6 Which among the following is NOT the constituent of *steam generating system* in a thermal power plant?

Ans
✗ 1. Boiler
✗ 2. Air pre-heater
✗ 3. Economiser
✓ 4. Condenser

Question ID : **4410091399382**
Option 1 ID : **4410095527311**
Option 2 ID : **4410095527312**
Option 3 ID : **4410095527309**
Option 4 ID : **4410095527310**
Status : **Answered**
Chosen Option : **4**

Q.7 A 30 V DC source is connected to three resistors R_1=5 Ω, R_2=10 Ω, and R_3=15 Ω in series.
Using **Kirchhoff's Voltage Law (KVL)**, what will be the **potential drop across R_3**?

Ans
✗ 1. 20 V
✗ 2. 5 V
✓ 3. 15 V
✗ 4. 10 V

Question ID : **4410091495024**
Option 1 ID : **4410095905434**
Option 2 ID : **4410095905431**
Option 3 ID : **4410095905433**
Option 4 ID : **4410095905432**
Status : **Answered**
Chosen Option : **2**

Q.8 To significantly reduce the fluctuations in the rectifier output voltage, a capacitor filter circuit is employed, which is also referred to as a _____ circuit.

Ans
✗ 1. clipper
✗ 2. voltage doubler
✗ 3. clamper
✓ 4. peak detector

Question ID : **4410091369069**
Option 1 ID : **4410095407733**
Option 2 ID : **4410095407735**
Option 3 ID : **4410095407734**
Option 4 ID : **4410095407732**
Status : **Not Answered**
Chosen Option : **--**

Q.9 An **All Aluminium Alloy Conductor (AAAC)** is used in transmission lines due to its improved performance over conventional conductors. Which of the following statements about **AAAC** is correct?

Ans
✗ 1. It has higher conductivity than ACSR of the same diameter.
✓ 2. It has better corrosion resistance and higher strength-to-weight ratio than ACSR.
✗ 3. It has lower current-carrying capacity compared to AAC.
✗ 4. It has a steel core for additional mechanical strength.

Question ID : **4410091488064**
Option 1 ID : **4410095878388**
Option 2 ID : **4410095878389**
Option 3 ID : **4410095878391**
Option 4 ID : **4410095878390**
Status : **Answered**
Chosen Option : **1**

Q.10 When the **excitation** of a **synchronous motor** running at **constant load and constant supply voltage** is **increased**, the **power factor** of the motor:

Ans
✓ 1. Goes from lagging towards leading
✗ 2. Becomes unity suddenly
✗ 3. Goes from leading toward lagging
✗ 4. Is not affected at all

Question ID : **4410091495166**
Option 1 ID : **4410095905979**
Option 2 ID : **4410095905980**
Option 3 ID : **4410095905977**
Option 4 ID : **4410095905978**
Status : **Answered**
Chosen Option : **1**

Q.11 In an automatic measurement system that employs a feedback loop, which functional block is responsible for continuously comparing the measured output with the reference input to generate an error signal?

Ans
✗ 1. Primary sensing element
✓ 2. Error detection in feedback-controlled instruments
✗ 3. Signal conditioning unit
✗ 4. Output stage

Question ID : **4410091301020**
Option 1 ID : **4410095136386**
Option 2 ID : **4410095136385**
Option 3 ID : **4410095136387**
Option 4 ID : **4410095136384**
Status : **Answered**
Chosen Option : **2**

Q.12 In an 8085 system, when multiple interrupt signals coincide, the hardware logic that determines the service precedence based on a fixed or programmable hierarchy is referred to as _____.

Ans
✗ 1. interrupt controller
✗ 2. comparator
✗ 3. multiplexer
✓ 4. priority encoder

Question ID : **4410091487529**
Option 1 ID : **4410095876508**
Option 2 ID : **4410095876510**
Option 3 ID : **4410095876509**
Option 4 ID : **4410095876507**
Status : **Answered**
Chosen Option : **1**

Q.13 In a plot of logarithm of the magnitude of a sinusoidal transfer function, _____ represents the first-order factor.

Ans
✗ 1. $1+\frac{2\zeta j\omega}{\omega n}+(\frac{j\omega}{\omega n})^2$
✗ 2. k
✗ 3. $j\omega$
✓ 4. $(1+j\omega T)^{\pm 1}$

Question ID : **4410091421954**
Option 1 ID : **4410095616705**
Option 2 ID : **4410095616706**
Option 3 ID : **4410095616707**
Option 4 ID : **4410095616704**
Status : **Answered**
Chosen Option : **4**

Q.14 Why is mercury commonly preferred in certain types of electrical switches?

Ans
✓ 1. It forms smooth contacts
✗ 2. It is a good insulator
✗ 3. It has high melting point
✗ 4. It is magnetic in nature

Question ID : **4410091335051**
Option 1 ID : **4410095271891**
Option 2 ID : **4410095271889**
Option 3 ID : **4410095271890**
Option 4 ID : **4410095271892**
Status : **Not Answered**
Chosen Option : **--**

Q.15 A two port network has the following *h-parameters*. h_{11} = 2 Ω, h_{12} = 0.4. If the given two port network is reciprocal as well as symmetrical, what will be the value of h_{21} and h_{22} , respectively?

Ans
✔ 1. -0.4, 0.42 S
✘ 2. -0.4, 0.42 Ω
✘ 3. 0.4, 0.42 S
✘ 4. 0.4, 0.42 Ω

Question ID : **4410091375525**
Option 1 ID : **4410095433631**
Option 2 ID : **4410095433632**
Option 3 ID : **4410095433630**
Option 4 ID : **4410095433633**
Status : **Answered**
Chosen Option : **4**

Q.16 When a series diode is connected in the gate circuit of a thyristor, its primary purpose is:

Ans
✔ 1. To safeguard the gate junction against reverse voltage
✘ 2. To restrict the forward gate voltage
✘ 3. To increase the magnitude of gate current
✘ 4. To reduce the turn-on time of the thyristor

Question ID : **4410091295983**
Option 1 ID : **4410095115955**
Option 2 ID : **4410095115958**
Option 3 ID : **4410095115956**
Option 4 ID : **4410095115957**
Status : **Answered**
Chosen Option : **1**

Q.17 The phenomenon which states that due to the frequency of an electric current, in a conductor, most of the current concentrates near the surface which results in an increase in effective A.C. resistance of a conductor. What is this phenomenon known as?

Ans
✘ 1. Proximity effect
✘ 2. Ferranti effect
✔ 3. Skin effect
✘ 4. Corona effect

Question ID : **4410091398915**
Option 1 ID : **4410095525433**
Option 2 ID : **4410095525435**
Option 3 ID : **4410095525434**
Option 4 ID : **4410095525436**
Status : **Answered**
Chosen Option : **3**

Q.18 In the equivalent circuit of a single-phase transformer referred to the primary side, the **core-loss components** are represented by a parallel combination of resistance R_c and reactance X_m

Which of the following statements about these components is most accurate?

Ans ✗ 1. Rc is used to represent eddy current loss and Xm is used to represent hysteresis loss.

✗ 2. Both Rc and Xm vary significantly with load current and leakage reactance.

✗ 3. Rc represents the magnetizing reactance, while Xm accounts for eddy current loss in the core.

✓ 4. Rc represents hysteresis and eddy current losses collectively, while Xm represents the magnetizing current producing the working flux in the core.

Question ID : **4410091474125**
Option 1 ID : **4410095824100**
Option 2 ID : **4410095824102**
Option 3 ID : **4410095824099**
Option 4 ID : **4410095824101**
Status : **Not Answered**
Chosen Option : **--**

Q.19 **Which among the following are the properties of ACSR conductor?**
i) High tensile strength
ii) Good conductivity
iii) Can operate at higher temperatues (75-85 °C)
iv) Corrosion resistance

Ans ✗ 1. (i), (ii) and (iv) only

✓ 2. (i), (ii), (iii) and (iv) only

✗ 3. (i) and (ii) only

✗ 4. (i) and (iv) only

Question ID : **4410091396347**
Option 1 ID : **4410095515125**
Option 2 ID : **4410095515126**
Option 3 ID : **4410095515124**
Option 4 ID : **4410095515127**
Status : **Answered**
Chosen Option : **2**

Q.20 **Which of the following statements correctly describes the constructional feature of a synchronous reluctance motor?**

Ans ✓ 1. The rotor is made of laminated iron with axial slots forming alternate high and low reluctance paths

✗ 2. The rotor is identical to that of a squirrel cage induction motor

✗ 3. The rotor has permanent magnets to maintain constant magnetic polarity

✗ 4. The stator contains salient poles similar to those in DC machines

Question ID : **4410091495176**
Option 1 ID : **4410095906014**
Option 2 ID : **4410095906015**
Option 3 ID : **4410095906013**
Option 4 ID : **4410095906016**
Status : **Answered**
Chosen Option : **1**

Q.21 In a series resonant circuit, the voltage magnification at resonance is numerically equal to which of the following parameters?

Ans
✗ 1. Current gain
✗ 2. Bandwidth
✗ 3. Power factor
✓ 4. Quality factor

Question ID : **4410091331470**
Option 1 ID : **4410095257455**
Option 2 ID : **4410095257456**
Option 3 ID : **4410095257453**
Option 4 ID : **4410095257454**
Status : **Answered**
Chosen Option : **3**

Q.22 A customer, on average, has daily energy consumption of 4800 watt-hour, however, the maximum demand of the consumer is found to be 800 Watts. What is the load factor of the consumer?

Ans
✗ 1. 0.8
✗ 2. 6
✗ 3. 0.5
✓ 4. 0.25

Question ID : **4410091399235**
Option 1 ID : **4410095526788**
Option 2 ID : **4410095526785**
Option 3 ID : **4410095526787**
Option 4 ID : **4410095526786**
Status : **Answered**
Chosen Option : **2**

Q.23 What is the primary purpose of using a dc load line in the graphical analysis of a BJT amplifier?

Ans
✗ 1. To determine the input resistance of the amplifier
✓ 2. To find the operating point (Q-point) of the transistor
✗ 3. To calculate the current gain (β) of the transistor
✗ 4. To analyze the frequency response of the amplifier

Question ID : **4410091294539**
Option 1 ID : **4410095110128**
Option 2 ID : **4410095110127**
Option 3 ID : **4410095110126**
Option 4 ID : **4410095110125**
Status : **Answered**
Chosen Option : **2**

Q.24 An ideal integrator circuit using op-amp may face stability issues in practice. Which component is usually added to improve stability?

Ans
✔ 1. A small resistor in parallel with the feedback capacitor
✘ 2. An inductor in series with the input
✘ 3. A diode in feedback path
✘ 4. A large capacitor in parallel with the input resistor

Question ID : **4410091294971**
Option 1 ID : **4410095111868**
Option 2 ID : **4410095111865**
Option 3 ID : **4410095111867**
Option 4 ID : **4410095111866**
Status : **Answered**
Chosen Option : **1**

Q.25 What is the main advantage of a PIPO shift register over other types?

Ans
✘ 1. Can load data serially with fewer input lines
✘ 2. Can perform addition and subtraction
✔ 3. Immediate availability of all bits at the output
✘ 4. Reduced hardware compared to SISO

Question ID : **4410091303115**
Option 1 ID : **4410095144428**
Option 2 ID : **4410095144425**
Option 3 ID : **4410095144427**
Option 4 ID : **4410095144426**
Status : **Answered**
Chosen Option : **3**

Q.26 Which signal is used to demultiplex the lower 8-bit address and data bus (AD_0-AD_7) in the 8085 microprocessor?

Ans
✘ 1. RESET IN
✘ 2. READY
✘ 3. HOLD
✔ 4. ALE

Question ID : **4410091304385**
Option 1 ID : **4410095149458**
Option 2 ID : **4410095149460**
Option 3 ID : **4410095149461**
Option 4 ID : **4410095149459**
Status : **Not Answered**
Chosen Option : **--**

Q.27 When an NPN bipolar junction transistor is used as a switch, the equation for the DC load line with a slope of -1/R_C is _____.

Ans

1. $I_C = I_E - I_B$ ✗
2. $I_C = \frac{V_{CC} - V_{CE}}{R_C}$ ✓
3. $I_C = \frac{V_{CC}}{R_C}$ ✗
4. $I_C = I_{C_{majority}} + I_{CO_{minority}}$ ✗

Question ID : **4410091359756**
Option 1 ID : **4410095371082**
Option 2 ID : **4410095371083**
Option 3 ID : **4410095371085**
Option 4 ID : **4410095371084**
Status : **Answered**
Chosen Option : **2**

Q.28 In a single-line diagram of an electrical distribution system, various symbols are used to represent system components. Which of the following correctly matches the component with its standard single-line diagram symbol?

Ans

1. Circuit breaker — a simple switch symbol without any marking ✗
2. Busbar — a small circle indicating connection points ✗
3. Earth connection — two parallel lines perpendicular to the conductor line ✗
4. Transformer — two interlinked coils with a magnetic core line between them ✓

Question ID : **4410091479665**
Option 1 ID : **4410095845765**
Option 2 ID : **4410095845766**
Option 3 ID : **4410095845767**
Option 4 ID : **4410095845764**
Status : **Answered**
Chosen Option : **4**

Q.29 For a second-order control system, the bandwidth is defined as:

Ans

1. The resonant peak of the system ✗
2. The frequency where the magnitude of the response drops by 3 dB ✓
3. The frequency where the phase shift becomes −180° ✗
4. The natural frequency ωn of the system ✗

Question ID : **4410091302737**
Option 1 ID : **4410095142901**
Option 2 ID : **4410095142898**
Option 3 ID : **4410095142899**
Option 4 ID : **4410095142900**
Status : **Not Answered**
Chosen Option : **--**

Q.30 In a Permanent Magnet Moving Coil instrument, eddy current damping is primarily produced in which component?

Ans
✗ 1. Copper winding
✗ 2. Steel yoke
✗ 3. Iron core
✓ 4. Aluminium frame

Question ID : **4410091331466**
Option 1 ID : **4410095257439**
Option 2 ID : **4410095257438**
Option 3 ID : **4410095257440**
Option 4 ID : **4410095257437**
Status : **Answered**
Chosen Option : **4**

Q.31 For $G(s) = \frac{1}{(1 + s)(1 + 0.1s)}$,

what happens to the slope of the Bode magnitude plot after the second corner frequency?

Ans
✗ 1. 20 dB/decade
✗ 2. −20 dB/decade
✓ 3. −40 dB/decade
✗ 4. Remains 0 dB/decade

Question ID : **4410091302529**
Option 1 ID : **4410095142053**
Option 2 ID : **4410095142052**
Option 3 ID : **4410095142054**
Option 4 ID : **4410095142055**
Status : **Not Answered**
Chosen Option : **--**

Q.32 Which Indian Standard code specifies the selection criteria for the selection of three-phase transformers?

Ans
✗ 1. IS: 2026 (Part-I)-1977
✗ 2. IS: 2026 (Part 4)-1977
✗ 3. IS: 2099-1973
✓ 4. IS:10028 (Part-I) 1985

Question ID : **4410091396235**
Option 1 ID : **4410095514711**
Option 2 ID : **4410095514712**
Option 3 ID : **4410095514713**
Option 4 ID : **4410095514710**
Status : **Not Answered**
Chosen Option : **--**

Q.33 Which of the following statements about a full adder is correct?

Ans
✗ 1. A full adder can be built using only one half adder.
✗ 2. A full adder outputs only the carry bit, not the sum.
✓ 3. A full adder adds three input bits and produces a sum and a carry.
✗ 4. A full adder has two inputs and two outputs.

Question ID : **4410091304179**
Option 1 ID : **4410095148649**
Option 2 ID : **4410095148648**
Option 3 ID : **4410095148650**
Option 4 ID : **4410095148651**
Status : **Answered**
Chosen Option : **3**

Q.34 In a single-phase series inverter operating with a purely resistive load and commutating components L and C, the circuit current becomes zero after half of the resonant period. What condition must be satisfied between the supply voltage V_s and the capacitor voltage V_c at the instant of current zero for proper commutation?

Ans
✓ 1. Vc>Vs
✗ 2. Vc=0
✗ 3. Vc<Vs
✗ 4. Vc=Vs

Question ID : **4410091492134**
Option 1 ID : **4410095894243**
Option 2 ID : **4410095894241**
Option 3 ID : **4410095894244**
Option 4 ID : **4410095894242**
Status : **Answered**
Chosen Option : **1**

Q.35 Which electrical quantity is measured using Maxwell's Inductance-Capacitance Bridge?

Ans
✓ 1. Self-inductance
✗ 2. Resistance
✗ 3. Mutual inductance
✗ 4. Capacitance

Question ID : **4410091331459**
Option 1 ID : **4410095257409**
Option 2 ID : **4410095257412**
Option 3 ID : **4410095257411**
Option 4 ID : **4410095257410**
Status : **Answered**
Chosen Option : **1**

Q.36 Which of the following configurations provides the lowest voltage gain in a transistor amplifier?

Ans
✗ 1. All three configurations (CC, CB and CE) provide the same voltage gain.
✓ 2. Common Collector (CC) only
✗ 3. Common Base (CB) only
✗ 4. Common Emitter (CE) only

Question ID : **4410091294625**
Option 1 ID : **4410095110469**
Option 2 ID : **4410095110470**
Option 3 ID : **4410095110471**
Option 4 ID : **4410095110472**
Status : **Answered**
Chosen Option : **2**

Q.37 In the 8085 microprocessor, _____ is a programmable register that functions as a memory pointer in different instructions.

Ans
✗ 1. flag register
✗ 2. W-register
✗ 3. accumulator
✓ 4. H-L pair

Question ID : **4410091492139**
Option 1 ID : **4410095894257**
Option 2 ID : **4410095894260**
Option 3 ID : **4410095894259**
Option 4 ID : **4410095894258**
Status : **Answered**
Chosen Option : **3**

Q.38 In a 7476 JK master-slave flip-flop, when the preset input is low and the clear input is high, the output of the flip-flop stays _____.

Ans
✗ 1. logic low
✗ 2. no change
✗ 3. toggle
✓ 4. logic high

Question ID : **4410091471834**
Option 1 ID : **4410095815216**
Option 2 ID : **4410095815217**
Option 3 ID : **4410095815218**
Option 4 ID : **4410095815215**
Status : **Not Answered**
Chosen Option : **--**

Q.39 In an electrical control system, the armature-controlled DC motor is often used as the actuator. Which of the following statements about this system is correct?

Ans
✗ 1. Torque developed is directly proportional to the field current.
✗ 2. Back emf is inversely proportional to speed.
✗ 3. Speed is independent of armature voltage.
✓ 4. Torque developed is directly proportional to the armature current.

Question ID : **4410091302389**
Option 1 ID : **4410095141467**
Option 2 ID : **4410095141464**
Option 3 ID : **4410095141465**
Option 4 ID : **4410095141466**
Status : **Answered**
Chosen Option : **4**

Q.40 In precision control systems, servo motors are widely preferred over conventional motors. Which of the following inherent characteristics is primarily responsible for their suitability in such applications?

Ans
✗ 1. High efficiency and constant speed operation
✗ 2. High starting torque and poor speed regulation
✓ 3. Linearity between control signal and output response
✗ 4. Low power factor at rated load

Question ID : **4410091309909**
Option 1 ID : **4410095171246**
Option 2 ID : **4410095171248**
Option 3 ID : **4410095171247**
Option 4 ID : **4410095171249**
Status : **Answered**
Chosen Option : **1**

Q.41 Why does the virtual ground concept simplify circuit analysis in an op-amp based inverting amplifier?

Ans
✗ 1. It reduces the complexity of the op-amp's internal circuitry.
✗ 2. It ensures the output is always zero volts.
✓ 3. It allows the assumption that the inverting input is at ground potential, simplifying the application of Kirchhoff's laws.
✗ 4. It eliminates the need for feedback resistors.

Question ID : **4410091298319**
Option 1 ID : **4410095125611**
Option 2 ID : **4410095125610**
Option 3 ID : **4410095125613**
Option 4 ID : **4410095125612**
Status : **Answered**
Chosen Option : **3**

Q.42 Which among the following starters is used for starting of DC Shunt and compound motors?

Ans
✗ 1. Direct on-line starter
✗ 2. Two-point starter
✗ 3. No-load release starter
✓ 4. Three-point starter

Question ID : **4410091396145**
Option 1 ID : **4410095514293**
Option 2 ID : **4410095514291**
Option 3 ID : **4410095514292**
Option 4 ID : **4410095514290**
Status : **Answered**
Chosen Option : **1**

Q.43 Which design feature is used in a Potential Transformer to minimize phase angle error?

Ans
✗ 1. Short-circuited turns
✓ 2. Low-loss magnetic core
✗ 3. Increased air gap
✗ 4. High winding resistance

Question ID : **4410091331460**
Option 1 ID : **4410095257416**
Option 2 ID : **4410095257415**
Option 3 ID : **4410095257414**
Option 4 ID : **4410095257413**
Status : **Answered**
Chosen Option : **4**

Q.44 If a single-phase energy meter is running slow, which adjustment is used to correct it?

Ans
✗ 1. Change the voltage coil
✓ 2. Loosen the brake magnet
✗ 3. Reduce supply frequency
✗ 4. Tighten the brake magnet

Question ID : **4410091310295**
Option 1 ID : **4410095172792**
Option 2 ID : **4410095172791**
Option 3 ID : **4410095172793**
Option 4 ID : **4410095172790**
Status : **Answered**
Chosen Option : **2**

Q.45 The resonant frequency of a parallel RLC circuit with resistance in the coil is given by:

$$f_r = \frac{1}{2\pi}\sqrt{\frac{1}{LC} - \left(\frac{R}{L}\right)^2}$$

What does the term $\left(\frac{R}{L}\right)^2$ represent?

Ans
✔ 1. The damping factor due to resistance
✘ 2. The quality factor of the circuit
✘ 3. The capacitive reactance effect
✘ 4. The frequency shift due to capacitance

Question ID : **4410091302715**
Option 1 ID : **4410095142798**
Option 2 ID : **4410095142799**
Option 3 ID : **4410095142800**
Option 4 ID : **4410095142801**
Status : **Not Answered**
Chosen Option : **--**

Q.46 The closed-loop gain of an op-amp based inverting amplifier depends entirely on the _____ components.

Ans
✔ 1. passive
✘ 2. sensitive
✘ 3. op-amp's internal
✘ 4. active

Question ID : **4410091369019**
Option 1 ID : **4410095407536**
Option 2 ID : **4410095407538**
Option 3 ID : **4410095407539**
Option 4 ID : **4410095407537**
Status : **Answered**
Chosen Option : **3**

Q.47 In a series RC circuit, when frequency domain analysis is performed with the output taken across the capacitor, the circuit behaves like a _____.

Ans
✘ 1. band pass filter
✔ 2. low pass filter
✘ 3. high pass filter
✘ 4. band reject filter

Question ID : **4410091407990**
Option 1 ID : **4410095560960**
Option 2 ID : **4410095560958**
Option 3 ID : **4410095560959**
Option 4 ID : **4410095560961**
Status : **Answered**
Chosen Option : **2**

Q.48 In a 4-bit SISO shift register, what is the purpose of the clock signal (CLK)?

Ans
✗ 1. To filter out noise from the input signal
✓ 2. To control the shifting of data through the flip-flops
✗ 3. To convert analog signals to digital signals
✗ 4. To amplify the input signal

Question ID : **4410091303143**
Option 1 ID : **4410095144538**
Option 2 ID : **4410095144539**
Option 3 ID : **4410095144537**
Option 4 ID : **4410095144540**
Status : **Answered**
Chosen Option : **4**

Q.49 In a Cathode Ray Oscilloscope, the peak-to-peak voltage of a sinusoidal signal is determined by which of the following methods?

Ans
✓ 1. By multiplying the number of vertical divisions occupied by the waveform with the volts/div setting
✗ 2. By measuring the horizontal distance between successive waveforms
✗ 3. By multiplying the number of horizontal divisions by the time/div setting
✗ 4. By using an additional CRO, and connecting its channel in series with original signal

Question ID : **4410091479748**
Option 1 ID : **4410095846103**
Option 2 ID : **4410095846102**
Option 3 ID : **4410095846104**
Option 4 ID : **4410095846105**
Status : **Answered**
Chosen Option : **1**

Q.50 Which of the following is an advantage of using PVC (Polyvinyl Chloride) as an insulating material in electrical cables?

Ans
✓ 1. It has high dielectric strength, is moisture resistant, and non-hygroscopic.
✗ 2. It cannot withstand exposure to chemicals or sunlight.
✗ 3. It is highly flammable and emits toxic gases at low temperatures.
✗ 4. It has poor flexibility and absorbs moisture easily.

Question ID : **4410091488106**
Option 1 ID : **4410095878560**
Option 2 ID : **4410095878562**
Option 3 ID : **4410095878563**
Option 4 ID : **4410095878561**
Status : **Answered**
Chosen Option : **1**

Q.51 In a LASCR, the device is turned ON by the incidence of light on its surface. When the light is removed and the anode current is still above the holding current, the device:

Ans
✗ 1. Starts conducting partially and then stops automatically
✗ 2. Turns OFF immediately as light is removed
✓ 3. Remains in the ON state until the anode current falls below the holding current
✗ 4. Requires a gate signal to remain in conduction

Question ID : **4410091492078**
Option 1 ID : **4410095894003**
Option 2 ID : **4410095894001**
Option 3 ID : **4410095894002**
Option 4 ID : **4410095894004**
Status : **Answered**
Chosen Option : **3**

Q.52 The negative resistance region in the characteristic curve of a Unijunction Transistor (UJT) is primarily utilized in which type of circuit?

Ans
✗ 1. Filters
✗ 2. Amplifiers
✗ 3. Rectifiers
✓ 4. Oscillators

Question ID : **4410091335076**
Option 1 ID : **4410095271992**
Option 2 ID : **4410095271989**
Option 3 ID : **4410095271991**
Option 4 ID : **4410095271990**
Status : **Answered**
Chosen Option : **4**

Q.53 For the transfer function $G(s) = \frac{1}{s+1}$, what is the magnitude at ω = 1 rad/s?

Ans
✗ 1. 0 dB
✓ 2. -3 dB
✗ 3. -10 dB
✗ 4. -20 dB

Question ID : **4410091302595**
Option 1 ID : **4410095142315**
Option 2 ID : **4410095142316**
Option 3 ID : **4410095142313**
Option 4 ID : **4410095142314**
Status : **Answered**
Chosen Option : **1**

Q.54 In precision metering applications, a current transformer (CT) is connected to a burden with impedance significantly higher than its rated value. Which of the following effects is most likely to occur?

Ans
✗ 1. No change in error, as burden impedance has negligible effect
✗ 2. Reduced hysteresis loss in the core
✓ 3. Increased phase angle error due to higher voltage drop across secondary
✗ 4. Decrease in ratio error because of better utilization of flux

Question ID : **4410091310251**
Option 1 ID : **4410095172617**
Option 2 ID : **4410095172614**
Option 3 ID : **4410095172615**
Option 4 ID : **4410095172616**
Status : **Answered**
Chosen Option : **3**

Q.55 While applying the Superposition Theorem, dependent sources:

Ans
✗ 1. are removed from the circuit
✗ 2. are always replaced by short circuits
✗ 3. are always replaced by open circuits
✓ 4. should be left undisturbed

Question ID : **4410091295379**
Option 1 ID : **4410095113480**
Option 2 ID : **4410095113478**
Option 3 ID : **4410095113477**
Option 4 ID : **4410095113479**
Status : **Answered**
Chosen Option : **1**

Q.56 The maximum power output of a cylindrical rotor synchronous generator occurs when the load angle δ is:

Ans
✓ 1. 90°
✗ 2. 45°
✗ 3. 0°
✗ 4. 120°

Question ID : **4410091335134**
Option 1 ID : **4410095272215**
Option 2 ID : **4410095272214**
Option 3 ID : **4410095272213**
Option 4 ID : **4410095272216**
Status : **Answered**
Chosen Option : **1**

Q.57 When a buffer amplifier is primarily used as an impedance transformer or a power amplifier, its voltage gain should be _____.

Ans
✔ 1. unity
✘ 2. finite
✘ 3. infinite
✘ 4. zero

Question ID : **4410091369012**
Option 1 ID : **4410095407508**
Option 2 ID : **4410095407509**
Option 3 ID : **4410095407510**
Option 4 ID : **4410095407511**
Status : **Answered**
Chosen Option : **1**

Q.58 In semi-converter, average output voltage control is achieved by:

Ans
✔ 1. Firing angle of thyristors
✘ 2. Transformer tap changing
✘ 3. Load resistance
✘ 4. Diode reverse recovery

Question ID : **4410091335149**
Option 1 ID : **4410095272273**
Option 2 ID : **4410095272276**
Option 3 ID : **4410095272275**
Option 4 ID : **4410095272274**
Status : **Answered**
Chosen Option : **1**

Q.59 What is the primary function of a surge tank in a hydel power plant?

Ans
✘ 1. To house the turbine and generator
✔ 2. To prevent damage from the water hammer effect
✘ 3. To increase the head of water
✘ 4. To discharge surplus water

Question ID : **4410091296393**
Option 1 ID : **4410095117693**
Option 2 ID : **4410095117691**
Option 3 ID : **4410095117690**
Option 4 ID : **4410095117692**
Status : **Answered**
Chosen Option : **4**

Q.60 In a decade counter, what is the purpose of the reset input?

Ans
✘ 1. All flip-flops are set to '1'
✘ 2. The flip-flops are set to the previous state
✔ 3. All flip-flops are set to '0'
✘ 4. The flip-flops are set to random states

Question ID : **4410091303173**
Option 1 ID : **4410095144660**
Option 2 ID : **4410095144657**
Option 3 ID : **4410095144659**
Option 4 ID : **4410095144658**
Status : **Answered**
Chosen Option : **1**

Q.61 In a **parabolic dish collector–based solar power plant**, which of the following statements is correct?

Ans
✗ 1. The collector uses linear focusing and requires a central receiver at the top of a tower

✓ 2. The system employs a point-focus concentrator with a receiver located at the focal point of the dish

✗ 3. It can only generate low-temperature heat suitable for water heating

✗ 4. It does not require any solar tracking mechanism for efficient operation

Question ID : **4410091495135**
Option 1 ID : **4410095905815**
Option 2 ID : **4410095905816**
Option 3 ID : **4410095905817**
Option 4 ID : **4410095905818**
Status : **Answered**
Chosen Option : **2**

Q.62 Which of the following materials are used for constructing structural insulations for transmission towers/electric poles?
i) Toughened glass
ii) Porcelain
iii) Micanite
iv) Bakelite

Ans
✗ 1. (ii), (iii) and (iv) only

✗ 2. (i), (ii) and (iv) only

✗ 3. (ii) and (iv) only

✓ 4. (i) and (ii) only

Question ID : **4410091396607**
Option 1 ID : **4410095516107**
Option 2 ID : **4410095516106**
Option 3 ID : **4410095516105**
Option 4 ID : **4410095516104**
Status : **Answered**
Chosen Option : **1**

Q.63 Which two-port network parameters are most suitable for analysing a cascade connection of networks?

Ans
✗ 1. Y-parameters

✓ 2. ABCD-parameters

✗ 3. h-parameters

✗ 4. Z-parameters

Question ID : **4410091331476**
Option 1 ID : **4410095257478**
Option 2 ID : **4410095257479**
Option 3 ID : **4410095257480**
Option 4 ID : **4410095257477**
Status : **Answered**
Chosen Option : **3**

Q.64 According to the hierarchical structure of demultiplexers, to increase the number of outputs, the total number of minimum 1:2 demultiplexers required to create a 1:4 demultiplexer is ____.

Ans
✗ 1. 1
✗ 2. 5
✗ 3. 4
✓ 4. 3

Question ID : **4410091408198**
Option 1 ID : **4410095561758**
Option 2 ID : **4410095561760**
Option 3 ID : **4410095561759**
Option 4 ID : **4410095561757**
Status : **Answered**
Chosen Option : **1**

Q.65 For interconnected two-port networks, when two networks are joined in a series configuration, the overall network parameters can be directly obtained by which of the following operations?

Ans
✓ 1. Adding their Z-parameter matrices
✗ 2. Adding their h-parameter matrices
✗ 3. Multiplying their ABCD-parameter matrices
✗ 4. Adding their Y-parameter matrices

Question ID : **4410091304875**
Option 1 ID : **4410095151573**
Option 2 ID : **4410095151576**
Option 3 ID : **4410095151575**
Option 4 ID : **4410095151574**
Status : **Not Answered**
Chosen Option : **--**

Q.66 How can three single-phase transformers be used to form a three-phase **star-connected autotransformer**?

Ans
✗ 1. By connecting the primary windings of all three single-phase transformers in parallel and secondary windings in series
✓ 2. By interconnecting the common terminals of the three single-phase autotransformers to form a neutral point, and connecting the remaining terminals to the three phases of the supply
✗ 3. By magnetically coupling the cores of all three single-phase transformers without electrical connection
✗ 4. By connecting the primary of each transformer to one phase and using their secondaries as separate isolated outputs

Question ID : **4410091474143**
Option 1 ID : **4410095824174**
Option 2 ID : **4410095824173**
Option 3 ID : **4410095824176**
Option 4 ID : **4410095824175**
Status : **Answered**
Chosen Option : **2**

Q.67 The primary application of a three-phase dual converter drive is to achieve which type of operation for a DC motor?

Ans
✗ 1. Single quadrant
✗ 2. Two quadrant
✗ 3. Three quadrant
✓ 4. Four quadrant

Question ID : **4410091297141**
Option 1 ID : **4410095120715**
Option 2 ID : **4410095120716**
Option 3 ID : **4410095120717**
Option 4 ID : **4410095120718**
Status : **Answered**
Chosen Option : **4**

Q.68 Which type of damping is commonly employed in Permanent Magnet Moving Coil instruments?

Ans
✗ 1. Spring action
✗ 2. Fluid damping
✗ 3. Air damping
✓ 4. Eddy current damping

Question ID : **4410091331456**
Option 1 ID : **4410095257400**
Option 2 ID : **4410095257398**
Option 3 ID : **4410095257397**
Option 4 ID : **4410095257399**
Status : **Answered**
Chosen Option : **4**

Q.69 The voltage applied across a parallel RC circuit is "20 sin(314t - 10°)" volts. What will be the angle of the current flowing in the capacitive element of the RC circuit?

Ans
✗ 1. +100°
✓ 2. +80°
✗ 3. −100°
✗ 4. +90°

Question ID : **4410091375497**
Option 1 ID : **4410095433377**
Option 2 ID : **4410095433376**
Option 3 ID : **4410095433374**
Option 4 ID : **4410095433375**
Status : **Not Answered**
Chosen Option : **--**

Q.70 The total electrical energy consumed by a circuit is equal to:

Ans
✓ 1. The integral of power with respect to time
✗ 2. The rate at which energy is delivered
✗ 3. The square of the current multiplied by the resistance
✗ 4. The product of voltage and current

Question ID : **4410091296311**
Option 1 ID : **4410095117367**
Option 2 ID : **4410095117366**
Option 3 ID : **4410095117369**
Option 4 ID : **4410095117368**
Status : **Answered**
Chosen Option : **1**

Q.71 The power transfer capability of an EHVAC line is limited by its surge impedance loading (SIL) and stability constraints, which degrade with distance. In contrast, an HVDC line's power transfer capability is primarily limited by:

Ans

✗ 1. Corona losses and radio interference

✗ 2. The need for reactive power compensation along the line

✗ 3. The skin effect, which becomes pronounced at high DC voltages

✓ 4. The thermal rating of the conductors and the converter station design

Question ID : **4410091300077**
Option 1 ID : **4410095132634**
Option 2 ID : **4410095132636**
Option 3 ID : **4410095132637**
Option 4 ID : **4410095132635**
Status : **Answered**
Chosen Option : **4**

Q.72 A three-phase, 50 Hz, balanced transmission line has conductors arranged symmetrically in an equilateral triangle of side D meters. If each conductor has a radius r meters, what is the **capacitance to neutral per phase**?

Ans

✗ 1. $C_n = \frac{\pi\varepsilon_0}{\ln(D/r)}$

✓ 2. $C_n = \frac{2\pi\varepsilon_0}{\ln(D/r)}$

✗ 3. $C_n = \frac{4\pi\varepsilon_0}{\ln(D/r)}$

✗ 4. $C_n = \frac{\pi\varepsilon_0}{2\ln(D/r)}$

Question ID : **4410091474206**
Option 1 ID : **4410095824431**
Option 2 ID : **4410095824432**
Option 3 ID : **4410095824434**
Option 4 ID : **4410095824433**
Status : **Answered**
Chosen Option : **1**

Q.73 A coil of inductance 0.5 H and resistance 10 Ω is connected to a 50 V DC source. What is the **energy stored in the magnetic field** of the coil at the instant when the **induced emf (across the inductance) equals the voltage drop across resistance?**

Ans

✗ 1. 3.125 J

✗ 2. 2.5 J

✗ 3. 5.0 J

✓ 4. 1.56 J

Question ID : **4410091495050**
Option 1 ID : **4410095905516**
Option 2 ID : **4410095905517**
Option 3 ID : **4410095905515**
Option 4 ID : **4410095905518**
Status : **Answered**
Chosen Option : **3**

Q.74 In control system applications, torque motors are primarily used as:

Ans
✗ 1. Energy storage devices
✗ 2. High-speed drives
✓ 3. Position controllers
✗ 4. Prime movers

Question ID : **4410091335151**
Option 1 ID : **4410095272284**
Option 2 ID : **4410095272283**
Option 3 ID : **4410095272282**
Option 4 ID : **4410095272281**
Status : **Answered**
Chosen Option : **2**

Q.75 Which property of copper conductors is primarily improved through annealing?

Ans
✗ 1. Thermal resistance
✗ 2. Mechanical strength
✓ 3. Ductility
✗ 4. Electrical resistivity

Question ID : **4410091335054**
Option 1 ID : **4410095271904**
Option 2 ID : **4410095271901**
Option 3 ID : **4410095271903**
Option 4 ID : **4410095271902**
Status : **Answered**
Chosen Option : **4**

Q.76 In arithmetic circuits, if we subtract the binary number 00110000 from the binary number 00010111 using the 2's complement method, then _____ is the expected result in decimal.

Ans
✗ 1. 71
✗ 2. 25
✓ 3. -25
✗ 4. -15

Question ID : **4410091408165**
Option 1 ID : **4410095561630**
Option 2 ID : **4410095561631**
Option 3 ID : **4410095561629**
Option 4 ID : **4410095561632**
Status : **Not Answered**
Chosen Option : **--**

Q.77 What is the main advantage of a closed-loop control system over an open-loop system?

Ans
✓ 1. Accuracy and disturbance rejection
✗ 2. Lower cost
✗ 3. Simplicity
✗ 4. Always stable operation

Question ID : **4410091299461**
Option 1 ID : **4410095140734**
Option 2 ID : **4410095140733**
Option 3 ID : **4410095140735**
Option 4 ID : **4410095140732**
Status : **Answered**
Chosen Option : **1**

Q.78 In a digital control system, the _____ component is responsible for converting the continuous-time signal into a discrete-time signal.

Ans
✗ 1. comparator
✗ 2. quantizer
✗ 3. actuator
✓ 4. sampler

Question ID : **4410091407959**
Option 1 ID : **4410095560835**
Option 2 ID : **4410095560836**
Option 3 ID : **4410095560837**
Option 4 ID : **4410095560834**
Status : **Not Answered**
Chosen Option : **--**

Q.79 Magnetic materials which get "feebly" magnetised under the influence of external magnetic field are known as _____.

Ans
✗ 1. Ferrimagnetic
✗ 2. Ferromagnetic
✗ 3. Diamagnetic
✓ 4. Paramagnetic

Question ID : **4410091396552**
Option 1 ID : **4410095515871**
Option 2 ID : **4410095515870**
Option 3 ID : **4410095515868**
Option 4 ID : **4410095515869**
Status : **Answered**
Chosen Option : **1**

Q.80 In the design of sequential circuits, if the present state is 1 and the next state is 0, then _____ represents the input condition for the desired T flip-flop.

Ans
✗ 1. 0
✗ 2. toggle
✓ 3. 1
✗ 4. no change

Question ID : **4410091471859**
Option 1 ID : **4410095815316**
Option 2 ID : **4410095815317**
Option 3 ID : **4410095815315**
Option 4 ID : **4410095815318**
Status : **Answered**
Chosen Option : **3**

Section : **Reasoning**

Q.1 Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

BDG 6, FHK 9, JLO 12, NPS 15, ?

Ans
1. RSV 18
2. RTW 18
3. QRV 20
4. QSV 19

Question ID : **4410091397046**
Option 1 ID : **4410095517832**
Option 2 ID : **4410095517833**
Option 3 ID : **4410095517835**
Option 4 ID : **4410095517834**
Status : **Answered**
Chosen Option : **2**

Q.2 In a certain code language, 'quick brown fox' is coded as 'rh fk pq' and 'brown lazy dog' is coded as 'mt fk xs'. How is 'brown' coded in the given language?4901

Ans
1. rh
2. mt
3. fk
4. xs

Question ID : **441009790986**
Option 1 ID : **4410093117944**
Option 2 ID : **4410093117943**
Option 3 ID : **4410093117945**
Option 4 ID : **4410093117946**
Status : **Not Answered**
Chosen Option : **--**

Q.3 Each of the digits in the number 9182436 is arranged in ascending order from left to right. The position(s) of how many digits will remain unchanged as compared to that in the original number?

Ans
1. Three
2. None
3. One
4. Two

Question ID : **441009251810**
Option 1 ID : **441009981167**
Option 2 ID : **441009981164**
Option 3 ID : **441009981165**
Option 4 ID : **441009981166**
Status : **Answered**
Chosen Option : **2**

Q.4 Six people, L, M, N, O, P and Q are sitting in a row, facing north. Only two people sit to the left of Q. P sits second to the right of L. O sits on the immediate right of N. M sits on the immediate left of P. How many people sit between Q and M?

Ans
✔ 1. 1
✘ 2. 3
✘ 3. 2
✘ 4. 0

Question ID : **441009154276**
Option 1 ID : **441009612262**
Option 2 ID : **441009612264**
Option 3 ID : **441009612263**
Option 4 ID : **441009612265**
Status : **Answered**
Chosen Option : **1**

Q.5 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 8 * £ 2 8 9 % € € & $ % 7 © £ # 5 & 1 1 % 3 (Right)

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

Ans
✘ 1. One
✘ 2. Three
✘ 3. Four
✔ 4. Two

Question ID : **441009379876**
Option 1 ID : **4410091485303**
Option 2 ID : **4410091485302**
Option 3 ID : **4410091485304**
Option 4 ID : **4410091485301**
Status : **Answered**
Chosen Option : **4**

Q.6 WOIR is related to IYUB in a certain way based on the English alphabetical order. In the same way, SCEF is related to EMQP. To which of the following options is CGOJ related, following the same logic?5746

Ans
✘ 1. TAQO
✔ 2. OQAT
✘ 3. QAWE
✘ 4. OATQ

Question ID : **441009779689**
Option 1 ID : **4410093072761**
Option 2 ID : **4410093072759**
Option 3 ID : **4410093072762**
Option 4 ID : **4410093072760**
Status : **Answered**
Chosen Option : **2**

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

Ans
✗ 1. TK-NR
✗ 2. PG-JN
✗ 3. MD-GK
✓ 4. JA-DG

Question ID : **441009779801**
Option 1 ID : **4410093073210**
Option 2 ID : **4410093073209**
Option 3 ID : **4410093073208**
Option 4 ID : **4410093073207**
Status : **Answered**
Chosen Option : **4**

Q.8 **If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 3714865, what will be difference between the highest and the lowest digits in the number thus formed?**

Ans
✗ 1. 2
✓ 2. 6
✗ 3. 4
✗ 4. 5

Question ID : **441009532758**
Option 1 ID : **4410092086439**
Option 2 ID : **4410092086436**
Option 3 ID : **4410092086438**
Option 4 ID : **4410092086437**
Status : **Answered**
Chosen Option : **2**

Q.9 **Seven boxes, A, B, C, D, X, Y and Z, are kept one over the other but not necessarily in the same order. D is kept immediately above A. Z is kept immediately above B. Only C is kept above Y. Only two boxes are kept above D. Z is not kept at third position from the bottom. How many boxes are kept between X and C?**8730

Ans
✓ 1. Three
✗ 2. Two
✗ 3. One
✗ 4. Four

Question ID : **441009782592**
Option 1 ID : **4410093084373**
Option 2 ID : **4410093084372**
Option 3 ID : **4410093084371**
Option 4 ID : **4410093084374**
Status : **Answered**
Chosen Option : **1**

Q.10 G, D, E, J, T and R live on six different floors of the same building. The bottommost floor of the building is numbered as 1; the floor above it is numbered as 2 and so on. The topmost floor is numbered as 6.
G lives immediately above T. Only two people live below R. Only two people live between T and E. E lives on an odd-numbered floor, but not on floor number 5. D does not live on the topmost floor. Who lives on floor number 4?3261

Ans
✗ 1. D
✗ 2. G
✗ 3. J
✓ 4. T

Question ID : **441009841591**
Option 1 ID : **4410093319434**
Option 2 ID : **4410093319432**
Option 3 ID : **4410093319435**
Option 4 ID : **4410093319433**
Status : **Answered**
Chosen Option : **4**

Section : **Quantitative Aptitude**

Q.1 A certain amount of money is distributed to P, Q and R in the ratio 2:4:3. If the difference of the shares of R and P is ₹5,070 then find the total amount.

Ans
✗ 1. ₹44,640
✓ 2. ₹45,630
✗ 3. ₹55,800
✗ 4. ₹42,750

Question ID : **4410091326649**
Option 1 ID : **4410095238134**
Option 2 ID : **4410095238131**
Option 3 ID : **4410095238133**
Option 4 ID : **4410095238132**
Status : **Not Answered**
Chosen Option : **--**

Q.2 A shopkeeper has the following 3 schemes:

I. Two successive discounts of 30% and 40%.
II. Buy 5, get 6 free.
III. Buy 8, get 7 free.

Which scheme has the maximum discount percentage?

Ans
✓ 1. Only I
✗ 2. Both II and III
✗ 3. Only III
✗ 4. Only II

Question ID : **441009894369**
Option 1 ID : **4410093531546**
Option 2 ID : **4410093531549**
Option 3 ID : **4410093531548**
Option 4 ID : **4410093531547**
Status : **Not Answered**
Chosen Option : **--**

Q.3 The income of Amit in 2019 was ₹22,400. He gets an increment of 10% every year. What was his income (in ₹) in 2021?

Ans
✗ 1. 22,400
✗ 2. 24,640
✓ 3. 27,104
✗ 4. 26,880

Question ID : **441009859586**
Option 1 ID : **4410093391319**
Option 2 ID : **4410093391317**
Option 3 ID : **4410093391316**
Option 4 ID : **4410093391318**
Status : **Answered**
Chosen Option : **4**

Q.4 Evaluate: 12 + 24 ÷ 4

Ans
✓ 1. 18
✗ 2. 19
✗ 3. 21
✗ 4. 17

Question ID : **441009521020**
Option 1 ID : **4410092039499**
Option 2 ID : **4410092039500**
Option 3 ID : **4410092039502**
Option 4 ID : **4410092039501**
Status : **Answered**
Chosen Option : **1**

Q.5 The average of 12, 19, 4, 15, 22, 5k, (9k+28), (2k-6), 30 and 26 is 23. The value of k is:

Ans
✗ 1. 2
✗ 2. 7
✗ 3. 4
✓ 4. 5

Question ID : **441009544661**
Option 1 ID : **4410092134041**
Option 2 ID : **4410092134043**
Option 3 ID : **4410092134042**
Option 4 ID : **4410092134040**
Status : **Answered**
Chosen Option : **2**

Q.6 The circumference of the base of a cone is 8.8 cm and it's vertical height is 4.8 cm. Find the total surface area of the cone. (Use $\pi = \frac{22}{7}$.)

Ans
✗ 1. 22.25 cm2
✓ 2. 28.16 cm2
✗ 3. 24.36 cm2
✗ 4. 32.15 cm2

Question ID : **4410091334387**
Option 1 ID : **4410095269218**
Option 2 ID : **4410095269216**
Option 3 ID : **4410095269215**
Option 4 ID : **4410095269217**
Status : **Not Answered**
Chosen Option : **--**

Q.7 Two pipes P and Q can fill an empty water tank in 1 hour and 1 hour 20 minutes respectively. Another pipe R can empty the same tank with full water in 2 hours. Pipes P and Q are opened at same time. After 30 minutes if the pipe R is also opened, then find the time taken by 3 pipes to fill the remaining tank.

Ans
✗ 1. 7.2 minutes
✓ 2. 6 minutes
✗ 3. 8 minutes
✗ 4. 6.4 minutes

Question ID : **4410091328027**
Option 1 ID : **4410095243633**
Option 2 ID : **4410095243634**
Option 3 ID : **4410095243635**
Option 4 ID : **4410095243632**
Status : **Not Answered**
Chosen Option : **--**

Q.8 The simple interest on a sum of money for 3 years at 20% per annum is ₹13,500. What will be the compound interest (in ₹) on the same sum at the same rate for the same period, the interest being compounded annually?

Ans
✗ 1. 18,360
✗ 2. 18,630
✗ 3. 16,830
✓ 4. 16,380

Question ID : **441009900411**
Option 1 ID : **4410093555717**
Option 2 ID : **4410093555716**
Option 3 ID : **4410093555715**
Option 4 ID : **4410093555714**
Status : **Not Answered**
Chosen Option : **--**

Q.9 **Pipe A can fill a tank in 11 hours, pipe B can fill the same tank in 28 hours, and pipe C can fill the same tank in 17 hours. The time taken by them to fill the same tank if they operate together is:**

Ans

1. $5\frac{381}{971} hours$
2. $11\frac{381}{971} hours$
3. $3\frac{381}{971} hours$
4. $7\frac{381}{971} hours$

Question ID : **441009913492**
Option 1 ID : **4410093608219**
Option 2 ID : **4410093608222**
Option 3 ID : **4410093608221**
Option 4 ID : **4410093608220**
Status : **Not Answered**
Chosen Option : **--**

Q.10 $Simplify \frac{\left(\frac{10}{5}+\frac{12}{9} \ of \ \frac{9}{5}\right)}{\left(17-\frac{18}{9}\div\frac{5}{9}\right)}$

Ans

1. $\frac{16}{77}$
2. $\frac{22}{67}$
3. $\frac{14}{75}$
4. $\frac{15}{68}$

Question ID : **441009912685**
Option 1 ID : **4410093604992**
Option 2 ID : **4410093604991**
Option 3 ID : **4410093604994**
Option 4 ID : **4410093604993**
Status : **Answered**
Chosen Option : **2**

Section : **General Awareness**

Q.1 Which statutory law regulates the acquisition and termination of citizenship in India?

Ans
✗ 1. The Representation of the People Act, 1951
✗ 2. Foreigners Act, 1946
✗ 3. Indian Passport Act, 1967
✓ 4. The Citizenship Act, 1955

Question ID : **4410091428960**
Option 1 ID : **4410095675382**
Option 2 ID : **4410095675381**
Option 3 ID : **4410095675380**
Option 4 ID : **4410095675379**
Status : **Not Answered**
Chosen Option : **--**

Q.2 In December 2025, the world's largest open-air theatre, Dhanu Yatra, began in which state?

Ans
✗ 1. Uttarakhand
✓ 2. Odisha
✗ 3. Assam
✗ 4. Himachal Pradesh

Question ID : **4410091420890**
Option 1 ID : **4410095612483**
Option 2 ID : **4410095612480**
Option 3 ID : **4410095612481**
Option 4 ID : **4410095612482**
Status : **Answered**
Chosen Option : **2**

Q.3 Which of the following best describes the core objective of the Directive Principles of State Policy as laid down in Part IV of the Indian Constitution?

Ans
✗ 1. Prescribing mandatory duties to be performed by citizens
✗ 2. Defining enforceable political rights of citizens against the State
✓ 3. Establishing a welfare state by guiding the State to promote social and economic justice
✗ 4. Ensuring the legal supremacy of Parliament over the Constitution

Question ID : **4410091428982**
Option 1 ID : **4410095671605**
Option 2 ID : **4410095671603**
Option 3 ID : **4410095671606**
Option 4 ID : **4410095671604**
Status : **Answered**
Chosen Option : **3**

Q.4 Who among the following articulated the capability approach to human development?

Ans
✗ 1. Dr. Abhijit Banerjee
✓ 2. Prof. Amartya Sen
✗ 3. Prof. Muhammad Yunus
✗ 4. Dr. Mahbub-ul-Haq

Question ID : **441009628027**
Option 1 ID : **4410092466263**
Option 2 ID : **4410092466260**
Option 3 ID : **4410092466262**
Option 4 ID : **4410092466261**
Status : **Not Answered**
Chosen Option : **--**

Q.5 To transform rural poor youth into an economically independent and globally relevant workforce' is the vision of which rural livelihood mission?

Ans
- ✗ 1. Pradhan Mantri Rozgar Yojana
- ✓ 2. Deen Dayal Upadhyaya Grameen Kaushalya Yojana
- ✗ 3. Pradhan Mantri Shram Yogi Maandhan
- ✗ 4. Shyama Prasad Mukherjee Rurban Mission

Question ID : **4410096390 59**
Option 1 ID : **4410092510381**
Option 2 ID : **4410092510380**
Option 3 ID : **4410092510382**
Option 4 ID : **4410092510379**
Status : **Answered**
Chosen Option : **1**

Q.6 The concept of Single Citizenship in the Indian Constitution primarily means which of the following?

Ans
- ✗ 1. Every Indian is a citizen of the Union and also of a State.
- ✗ 2. Indians can be citizens of more than one country.
- ✗ 3. Citizenship is granted only by the States.
- ✓ 4. There is only Indian citizenship and no state citizenship.

Question ID : **4410091428964**
Option 1 ID : **4410095675412**
Option 2 ID : **4410095675413**
Option 3 ID : **4410095675415**
Option 4 ID : **4410095675414**
Status : **Answered**
Chosen Option : **1**

Q.7 The early leaders of the Congress (1885–1905) are often called by which of the following names?

Ans
- ✓ 1. Moderates
- ✗ 2. Revolutionary reformers
- ✗ 3. Extremists
- ✗ 4. Revolutionaries

Question ID : **4410091429493**
Option 1 ID : **4410095646315**
Option 2 ID : **4410095646313**
Option 3 ID : **4410095646312**
Option 4 ID : **4410095646314**
Status : **Not Answered**
Chosen Option : **--**

Q.8 **Kanchenjunga, Makalu, Dhaulagiri and Nanga Parbat fall in which of the following mountains?**

Ans
✗ 1. Outer Himalayas
✗ 2. Purvanchal Range
✓ 3. Greater Himalayas
✗ 4. Lesser Himalayas

Question ID : **4410091468276**
Option 1 ID : **4410095801003**
Option 2 ID : **4410095801004**
Option 3 ID : **4410095801001**
Option 4 ID : **4410095801002**
Status : **Not Answered**
Chosen Option : **--**

Q.9 **In October 2025, AdaniConneX and Google announced a landmark partnership to develop India's largest AI data centre campus and new green energy infrastructure in which city?**

Ans
✗ 1. Chennai
✓ 2. Visakhapatnam
✗ 3. New Delhi
✗ 4. Bengaluru

Question ID : **4410091420682**
Option 1 ID : **4410095611650**
Option 2 ID : **4410095611648**
Option 3 ID : **4410095611651**
Option 4 ID : **4410095611649**
Status : **Answered**
Chosen Option : **3**

Q.10 **4% sugar solution in water by mass means _____.**

Ans
✗ 1. 4 g of sugar is dissolved in 100 g of water
✗ 2. 4 g of sugar is dissolved in 100 ml of water
✗ 3. 4 g of sugar is dissolved in 1000 ml of water
✓ 4. 4 g of sugar is dissolved in 96 g of water, resulting in a 100 g solution

Question ID : **441009616563**
Option 1 ID : **4410092420422**
Option 2 ID : **4410092420423**
Option 3 ID : **4410092420424**
Option 4 ID : **4410092420421**
Status : **Not Answered**
Chosen Option : **--**

Section : **English Language**

Q.1 Select the INCORRECTLY spelt word.

Ans
✗ 1. Awareness
✗ 2. Observation
✗ 3. Punctual
✓ 4. Apllication

Question ID : **4410091517601**
Option 1 ID : **4410095993766**
Option 2 ID : **4410095993767**
Option 3 ID : **4410095993768**
Option 4 ID : **4410095993769**
Status : **Answered**
Chosen Option : **1**

Q.2 The question consists of four statements labelled A, B, C, and D, which when logically ordered form a coherent passage. Choose the option that represents the most logical order.

gradually leading to the irreversible deterioration of brain cells, ultimately disrupting daily life (P) / such as memory, reasoning, and behaviour, significantly impairing normal functioning, (Q) / Alzheimer's is a progressive neurodegenerative condition (R) / characterised by a decline in cognitive functions (S) 8515

Ans
✗ 1. RQSP
✗ 2. PQRS
✓ 3. RSQP
✗ 4. PSRQ

Question ID : **441009436171**
Option 1 ID : **4410091704205**
Option 2 ID : **4410091704203**
Option 3 ID : **4410091704202**
Option 4 ID : **4410091704204**
Status : **Answered**
Chosen Option : **3**

Q.3 Select the most appropriate ANTONYM of the underlined word in the given sentence.

The manager decided to cut down on <u>redundancy</u> by removing repetitive tasks from the workflow.

Ans
✗ 1. Excess
✗ 2. Waste
✗ 3. Repetition
✓ 4. Required

Question ID : **4410091517688**
Option 1 ID : **4410095994112**
Option 2 ID : **4410095994113**
Option 3 ID : **4410095994111**
Option 4 ID : **4410095994110**
Status : **Answered**
Chosen Option : **2**

Q.4 Ravi kept complaining that every task was too difficult, not realizing that ***for someone who lacks willingness, even simple work feels impossible***. Which proverb best replaces the underlined segment?

Ans
✗ 1. make hay while the sun shines
✗ 2. a stitch in time saves nine
✗ 3. where there's a will, there's a way
✓ 4. nothing is easy to the unwilling

Question ID : **4410091519609**
Option 1 ID : **4410096001703**
Option 2 ID : **4410096001702**
Option 3 ID : **4410096001700**
Option 4 ID : **4410096001701**
Status : **Answered**
Chosen Option : **4**

Q.5 Select the most appropriate option to fill in the blanks. If no article is required, select 'No article required'.

The professor assigned us _____ exceptionally challenging project that required _____ unusual combination of analytical and creative skills.

Ans
✗ 1. an; a
✗ 2. a; a
✓ 3. an; an
✗ 4. no article required; the

Question ID : **4410091517536**
Option 1 ID : **4410095993509**
Option 2 ID : **4410095993511**
Option 3 ID : **4410095993510**
Option 4 ID : **4410095993512**
Status : **Answered**
Chosen Option : **3**

Q.6 Select the most appropriate option to fill in each blank.

The research team operated _____ the constraint that all variables must be tested within a strictly controlled temperature range.

Ans
✓ 1. under
✗ 2. within
✗ 3. amidst
✗ 4. beneath

Question ID : **4410091517567**
Option 1 ID : **4410095993631**
Option 2 ID : **4410095993632**
Option 3 ID : **4410095993633**
Option 4 ID : **4410095993630**
Status : **Answered**
Chosen Option : **1**

Q.7 **Select the option that can be used as a one-word substitute for the given group of words/phrase.**

An organized, often zealous movement or vigorous campaign undertaken to achieve a moral, social, or political reform

Ans
✗ 1. Reprisal
✓ 2. Crusade
✗ 3. Conspiracy
✗ 4. Insurrection

Question ID : **4410091519429**
Option 1 ID : **4410096000995**
Option 2 ID : **4410096000993**
Option 3 ID : **4410096000994**
Option 4 ID : **4410096000992**
Status : **Not Answered**
Chosen Option : **--**

Comprehension:

Read the following passage carefully and answer the questions that follow.

There were four of us—George, William Samuel Harris, Montmorency, and myself—sitting in my room, smoking and discussing our poor health, medically speaking. All of us felt unwell and increasingly anxious about it. Harris complained of sudden bouts of dizziness that left him unsure of his actions, while George admitted to experiencing similar spells. As for me, I was convinced that my liver was the problem. I had recently read a circular advertising liver pills, which carefully listed the symptoms of a disordered liver, and I found that I possessed every one of them. It is a curious fact that whenever I read an advertisement for a patent medicine, I immediately believe I am suffering severely from the illness it describes. In every case, the diagnosis appears to match precisely all the discomforts I have ever experienced.

SubQuestion No : 8

Q.8 **What can be inferred about the narrator's attitude towards illness?**

Ans
✗ 1. He carefully verifies medical facts.
✓ 2. He easily believes he is seriously ill.
✗ 3. He ignores physical discomfort entirely.
✗ 4. He dislikes discussing health matters.

Question ID : **4410091625879**
Option 1 ID : **4410096421953**
Option 2 ID : **4410096421955**
Option 3 ID : **4410096421954**
Option 4 ID : **4410096421956**
Status : **Answered**
Chosen Option : **2**

Comprehension:

Read the following passage carefully and answer the questions that follow.

There were four of us—George, William Samuel Harris, Montmorency, and myself—sitting in my room, smoking and discussing our poor health, medically speaking. All of us felt unwell and increasingly anxious about it. Harris complained of sudden bouts of dizziness that left him unsure of his actions, while George admitted to experiencing similar spells. As for me, I was convinced that my liver was the problem. I had recently read a circular advertising liver pills, which carefully listed the symptoms of a disordered liver, and I found that I possessed every one of them. It is a curious fact that whenever I read an advertisement for a patent medicine, I immediately believe I am suffering severely from the illness it describes. In every case, the diagnosis appears to match precisely all the discomforts I have ever experienced.

SubQuestion No : 9

Q.9 The reference to patent medicine advertisements suggests that they:

Ans

✔ 1. encourage unnecessary fear of illness

✘ 2. offer reliable self-diagnosis methods

✘ 3. increase awareness about rare diseases

✘ 4. provide accurate medical solutions

Question ID : **4410091625880**
Option 1 ID : **4410096421960**
Option 2 ID : **4410096421959**
Option 3 ID : **4410096421958**
Option 4 ID : **4410096421957**
Status : **Answered**
Chosen Option : **3**

Comprehension:

Read the following passage carefully and answer the questions that follow.

There were four of us—George, William Samuel Harris, Montmorency, and myself—sitting in my room, smoking and discussing our poor health, medically speaking. All of us felt unwell and increasingly anxious about it. Harris complained of sudden bouts of dizziness that left him unsure of his actions, while George admitted to experiencing similar spells. As for me, I was convinced that my liver was the problem. I had recently read a circular advertising liver pills, which carefully listed the symptoms of a disordered liver, and I found that I possessed every one of them. It is a curious fact that whenever I read an advertisement for a patent medicine, I immediately believe I am suffering severely from the illness it describes. In every case, the diagnosis appears to match precisely all the discomforts I have ever experienced.

SubQuestion No : 10

Q.10 What is the central theme of the passage?

Ans

✘ 1. The dangers of untreated illness

✘ 2. The importance of medical diagnosis

✔ 3. Exaggerated concern about personal health

✘ 4. Friendship during difficult times

Question ID : **4410091625881**
Option 1 ID : **4410096421961**
Option 2 ID : **4410096421963**
Option 3 ID : **4410096421962**
Option 4 ID : **4410096421964**
Status : **Answered**
Chosen Option : **3**

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