

AP Vidyut Recruitment Exam 23rd to 27th Aug 2026

Hall Ticket Number	
Participant Name	
Test Center Name	
Test Time	2:30 PM - 5:30 PM
Test Date	27/08/2026
Subject	Electrical Engineering

Section : General Intelligence and Reasoning

Q.1 Read the given statements and conclusions carefully. Assuming that the information given in the statements 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 statements.
Statements: All biscuits are cumin. All cumin are mirrors.
Conclusions (I) : Some mirrors are cumin.
Conclusions (II): All biscuits are mirrors.

- Ans
- ☒ 1. Only conclusion (I) follows.
 - ☒ 2. Only conclusion (II) follows.
 - ☒ 3. Both conclusions (I) and (II) follow.
 - ☒ 4. Neither conclusion (I) nor (II) follows.

Question ID : 441009793916
Chosen Option : 3

Q.2 Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north.
Only E sits to the left of G. Only four people sit between E and A. Only D sits between F and C and F is not an immediate neighbour of A.
How many people sit between B and G?

- Ans
- ☒ 1. 4
 - ☒ 2. 2
 - ☒ 3. 3
 - ☒ 4. 1

Question ID : 441009814184
Chosen Option : 1



ALL EXAMS, **ONE** SUBSCRIPTION



Test. Analyze. Improve. Repeat.



*Don't just
prepare.
Perform.*

Test Prime – built only
for mock tests.



1,50,000+
Mock Tests



25,000+
Previous Year
Papers



800+
Exam
Covered



500%
Refund on
Selection



5 lakh+
Free Quizzes



Daily
Free PDFs



Top Alerts
Stay Updated

WHY TEST PRIME?

- ✓ Multilingual
- ✓ Detailed Solution
- ✓ Strong and Weak Areas
- ✓ All India Rankings



Safe & Reliable



Trusted by
Lakhs of Aspirants



Your Success,
Our Mission



**DOWNLOAD
TEST PRIME**

Your Success Partner!



Test

Prime



SUCCESS GALLERY!

MEET THE ACHIEVERS



Shreya, SBI PO



Sahil, SBI PO



Srijita, SBI PO



Vikram, IBPS PO



Neeti, IBPS PO



Arya, IBPS PO



Hasan, SSC CGL



Palak, SSC CGL



Priti, UP TGT



Aniket, Bihar Stet



Shaurya, NTPC



Sarita, CTET



Gourav, NTPC



Sanni, NTPC



Abhishek, CTET



Sapna, IBPS Clerk

THEY DID IT. YOU CAN TOO

READ THEIR STORIES!



Q.3 If 'A' stands for '÷', 'B' stands for 'x', 'C' stands for '+' and 'D' stands for '-', what will come in place of the question mark (?) in the following equation?

25 D 39 C 10 A 20 B 34 = ?

- Ans ☒ 1. 3
- ☐ 2. 1
- ☐ 3. 5
- ☐ 4. 4

Question ID : 4410091314915
Chosen Option : 1

Q.4 Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements 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: All hats are belts. Some hats are watches.
Conclusion (I) : Some belts are watches.
Conclusion (II) : All watches are hats.

- Ans ☐ 1. Only Conclusion (II) follows
- ☐ 2. Both Conclusion (I) and (II) follow
- ☒ 3. Only Conclusion (I) follows
- ☐ 4. Neither Conclusion (I) nor (II) follows

Question ID : 441009798045
Chosen Option : 3

Q.5 Each vowel in the word AGOUTIS is changed to the letter immediately following it in the English alphabetical order and each consonant is changed to the letter immediately preceding it in the English alphabetical order. How many letters will appear exactly twice in the group of letters thus formed? 11282

- Ans ☒ 1. 0
- ☐ 2. 3
- ☐ 3. 1
- ☐ 4. 2

Question ID : 441009797266
Chosen Option : 1

Q.6 Which Hindu leaders joined the Sannyasi and Faqir Rebellion against the British in Bengal during the 1770s?

- Ans
- ✓ 1. Bhawani Pathak and Devi Choudhurani
 - ✗ 2. Ram Mohan Roy and Rabindranath Tagore
 - ✗ 3. Nana Sahib and Rani Laxmibai
 - ✗ 4. Lokmanya Tilak and Veer Savarkar

Question ID : 4410091081392
Chosen Option : 1

Q.7 The Indian Councils Act of 1892 is known for introducing which of the following important changes in the legislative process of British India?

- Ans
- ✓ 1. Right to discuss the budget
 - ✗ 2. Complete self-government
 - ✗ 3. Abolition of separate electorates
 - ✗ 4. Voting rights for women

Question ID : 4410092115977
Chosen Option : 2

Q.8 Which civilian honour was conferred upon cricketer Rohit Sharma in June 2026?

- Ans
- ✓ 1. Padma Shri
 - ✗ 2. Padma Vibhushan
 - ✗ 3. Padma Bhushan
 - ✗ 4. Bharat Ratna

Question ID : 4410092199779
Chosen Option : 4

Q.9 Which of the following was a significant initiative launched by India and Sri Lanka in 1998 to enhance bilateral exchanges?

- Ans
- ✗ 1. BIMSTEC Council
 - ✗ 2. SAARC Treaty
 - ✗ 3. Colombo Plan
 - ✓ 4. Indo Sri Lankan Foundation

Question ID : 4410092115988
Chosen Option : 4

Q.10 Which geological process is primarily responsible for shaping the landforms of the Great Indian Desert?

- Ans
- ✓ 1. Wind erosion and deposition creating shifting sand dunes
 - ✗ 2. River meandering resulting in oxbow lake formations
 - ✗ 3. Tectonic uplift forming elevated plateau regions
 - ✗ 4. Volcanic eruptions forming extensive basaltic lava plains

Question ID : 4410092258053
Chosen Option : 4

Q.11 A regional painting style is often distinguished by its use of natural pigments and traditional themes. Which Indian folk painting is characterized by intricate line work and depictions of mythological stories?

- Ans
- ✗ 1. Saura painting
 - ✗ 2. Gond painting
 - ✗ 3. Cheriya painting
 - ✓ 4. Pattachitra painting

Question ID : 4410092199549
Chosen Option : 2

Q.12 Which of the following best reflects the impact of globalization on India's balance of payments after 1991 reforms?

- Ans
- ✗ 1. Expansion of agricultural subsidies by government
 - ✗ 2. Decline in foreign direct investment inflows
 - ✗ 3. Reduced trade with Asian neighbors
 - ✓ 4. Increase in service exports and foreign remittances

Question ID : 4410092258060
Chosen Option : 2

Section : English

Comprehension:

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

The gig economy, once celebrated as a paradigm of labour-market flexibility, is increasingly exposing the inadequacy of conventional employment classifications. Digital platforms have blurred the distinction between entrepreneurship and wage labour by exercising algorithmic control over pricing, task allocation, and performance evaluation while disclaiming employer obligations. Recent developments—including the International Labour Organization's adoption of Convention No. 193 on Decent Work in the Platform Economy (2026) and ongoing debates in India over expanding social-security coverage for gig workers—reflect a growing recognition that labour regulation must evolve alongside technological innovation. The central challenge, therefore, is not whether platform work should exist, but whether regulatory systems can preserve economic dynamism without institutionalising a workforce whose flexibility is achieved through the systematic externalisation of employment risks.

SubQuestion No : 13

Q.13 Which of the following can be most reasonably inferred from the passage?

- Ans
- ☒ 1. Algorithmic management necessarily transforms all platform workers into formal employees under existing labour legislation regardless of contractual arrangements or jurisdiction.
 - ☒ 2. International labour standards have already eliminated the principal legal ambiguities surrounding platform work across diverse regulatory systems and labour markets.
 - ☒ 3. The author believes that platform-based work remains fundamentally incompatible with effective labour regulation under existing legal and institutional frameworks.
 - ☒ 4. The passage implies that preserving labour flexibility and extending worker protections can coexist through appropriately designed regulatory and institutional mechanisms.

Question ID : 4410092413214
Chosen Option : 4

Comprehension:

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

The gig economy, once celebrated as a paradigm of labour-market flexibility, is increasingly exposing the inadequacy of conventional employment classifications. Digital platforms have blurred the distinction between entrepreneurship and wage labour by exercising algorithmic control over pricing, task allocation, and performance evaluation while disclaiming employer obligations. Recent developments—including the International Labour Organization's adoption of Convention No. 193 on Decent Work in the Platform Economy (2026) and ongoing debates in India over expanding social-security coverage for gig workers—reflect a growing recognition that labour regulation must evolve alongside technological innovation. The central challenge, therefore, is not whether platform work should exist, but whether regulatory systems can preserve economic dynamism without institutionalising a workforce whose flexibility is achieved through the systematic externalisation of employment risks.

SubQuestion No : 14

Q.14 Which of the following best illustrates the regulatory approach advocated by the passage?

- Ans
- ☒ 1. A country mandates that every gig worker be classified as a permanent employee irrespective of contractual arrangements, work patterns, or platform structure.
 - ☒ 2. A government abolishes app-based platforms entirely to eliminate non-standard employment despite the resulting reduction in labour-market flexibility and innovation.
 - ☒ 3. Digital platforms receive complete autonomy in determining worker compensation, assuming unrestricted market competition alone guarantees equitable employment conditions for all.
 - ☒ 4. A government introduces portable social-security benefits funded by digital platforms while preserving contractual flexibility and encouraging continued labour-market participation.

Question ID : 4410092413215
Chosen Option : 4

Q.15 Choose the option that converts the given sentence from active voice to passive voice.

The housekeeping staff clean these verandas and rooms every morning.

- Ans
- ☒ 1. Cleaning has been done in these verandas and rooms every morning.
 - ☐ 2. These verandas and rooms are cleaned every morning by the housekeeping staff.
 - ☒ 3. Every morning these verandas and rooms are to be cleaned by the housekeeping staff.
 - ☒ 4. The Verandas and rooms were cleaned every morning.

Question ID : 441009496822
Chosen Option : 2

Q.16 Complete the following sentence by choosing the correct option.
Despite the challenges presented by the pandemic, the research team collaborated ____ various departments to complete the interdisciplinary project.

- Ans
- ☒ 1. about
 - ☐ 2. across
 - ☒ 3. for
 - ☒ 4. with

Question ID : 4410091711215
Chosen Option : 1

Q.17 Select the most appropriate one-word substitute for the highlighted phrase.
I was awakened from my **deep thoughts** while admiring the beauty of the jungle by the shrill cry of a fox.

- Ans
- ☒ 1. mirage
 - ☒ 2. liminal
 - ☒ 3. quietude
 - ☐ 4. reverie

Question ID : 4410091538202
Chosen Option : 3

Section : Quantitative aptitude

Q.18 A stock of provisions can sustain 104 men for 15 weeks. If 52 additional men join them, how many weeks will the provisions now last?

- Ans
- ☒ 1. 12
 - ☒ 2. 14
 - ☐ 3. 10
 - ☒ 4. 8

Question ID : 441009522918
Chosen Option : 1

Q.19 20% of a number is more than 20% of 700 by 150. The number is:

- Ans
- ☒ 1. 1550
 - ☒ 2. 1300
 - ☒ 3. 1500
 - ☒ 4. 1450

Question ID : 441009855142
Chosen Option : 1

Q.20 A hemispherical metallic bowl has an internal radius of 8 cm and an external radius of 10 cm. If the mass of 1 cm³ of the metal is 6.6 grams, find the mass of the metal used in the bowl. (Round off to two decimal places. Use $\pi = 3.14$ and the formula mass = density $\times$ volume.)

- Ans
- ☒ 1. 5.36 kg
 - ☒ 2. 6.74 kg
 - ☒ 3. 4.86 kg
 - ☒ 4. 7.28 kg

Question ID : 4410091558733
Chosen Option : 2

Q.21 What is the minimum value that must be assigned to A so that the 8-digit number 496A2772 is divisible by 4?

- Ans
- ☒ 1. 2
 - ☒ 2. 1
 - ☒ 3. 0
 - ☒ 4. 5

Question ID : 441009533615
Chosen Option : 2

Q.22 Find the simple interest (in ₹) if a sum of ₹500 is borrowed for 7.5 years at 8% per annum rate of interest.

- Ans
- ☒ 1. 280
 - ☒ 2. 350
 - ☒ 3. 400
 - ☒ 4. 300

Question ID : 441009852061
Chosen Option : 4

Q.23 A starts business with ₹32,000 and after 7 months, B joins with A as his partner. After a year, the profit is divided in the ratio 3 : 2. What is B's contribution in the capital?

- Ans
- ☒ 1. ₹51,080
 - ☒ 2. ₹50,015
 - ☒ 3. ₹51,200
 - ☒ 4. ₹49,610

Question ID : 441009548028
Chosen Option : 3

Q.24 There are 23 members in group A, 20 members in group B and 25 members in group C. All the members of these groups went to a restaurant. The average amount spent on each member of group A, B and C is ₹121, ₹319 and ₹221, respectively. The total average amount (in ₹) spent per member is:

- Ans
- ☒ 1. 215
 - ☒ 2. 220
 - ☒ 3. 216
 - ☒ 4. 211

Question ID : 441009582460
Chosen Option : 3

Q.25 A woman travelled at a speed of 20 m/min for 88 min, and at a speed of 55 m/min for 66 min. Her average speed (in m/min) is:

- Ans
- ☒ 1. 28
 - ☒ 2. 35
 - ☒ 3. 41
 - ☒ 4. 39

Question ID : 441009542922
Chosen Option : 2

Section : Computer knowledge

Q.26 Which component is responsible for storing firmware and permanent instructions in computers?

- Ans
- ☒ 1. CPU
 - ☒ 2. RAM
 - ☒ 3. ROM
 - ☒ 4. PCB

Question ID : 4410092306885
Chosen Option : 3

Q.27 You receive an email containing important information that another colleague needs to see exactly as written. Which action should you perform to share it without modifying the original content?

- Ans
- ☐ 1. Reply to the original sender with the colleague added
 - ☐ 2. Copy the email content into a new message
 - ☐ 3. Create a new email and rewrite the information
 - ☒ 4. Forward the email to the colleague

Question ID : 4410092307614
Chosen Option : 1

Q.28 A researcher is analyzing survey data in Excel and needs to determine the position of a specific respondent ID within a single column of records. Which Excel function should be used to return the position of that value in the column?

- Ans
- ☒ 1. MATCH
 - ☐ 2. LOOKUP
 - ☐ 3. FIND
 - ☐ 4. INDEX

Question ID : 4410092307318
Chosen Option : 2

Q.29 When opening a PowerPoint presentation from an email attachment, what should you do to edit the slides safely?

- Ans
- ☐ 1. Edit the file within the email client
 - ☐ 2. Print the attachment without downloading
 - ☐ 3. Create a new presentation file instead
 - ☒ 4. Download the file and open it in PowerPoint

Question ID : 4410092276668
Chosen Option : 4

Q.30 Which option can be used to quickly apply a specific style, like bold or italic, to selected text in MS Word 2021?

- Ans
- ☐ 1. Clicking the Review tab
 - ☐ 2. Selecting Print Preview
 - ☐ 3. Opening the File menu
 - ☒ 4. Using the formatting toolbar

Question ID : 4410092307515
Chosen Option : 4

Q.31 In single phase induction motors, in the simplified running-condition equivalent circuit, which element is neglected?

- Ans
- ☐ 1. Magnetizing reactance
 - ☐ 2. Stator impedance
 - ☐ 3. Rotor resistance
 - ☒ 4. Core loss component

Question ID : 4410091558610
Chosen Option : 3

Q.32 A 4-bit synchronous counter is properly designed using an JKFF excitation logic. How many distinct states can it reliably cycle through?

- Ans
- ☐ 1. 8
 - ☐ 2. 32
 - ☐ 3. 4
 - ☒ 4. 16

Question ID : 4410091576279
Chosen Option : 4

Q.33 In the design of an RCC transmission tower foundation subjected to uplift and lateral forces, which of the following factors is most critical for resisting tensile stresses and preventing structural failure?

- Ans
- ☐ 1. Increasing water-cement ratio for workability
 - ☐ 2. Using larger aggregates size in concrete mix
 - ☒ 3. Providing adequate tensile reinforcement and proper anchorage
 - ☐ 4. Increasing clear cover beyond standard requirements

Question ID : 4410091816722
Chosen Option : 3

Q.34 The angle rule for root locus states that the sum of angles from the poles to a test point minus the sum of angles from zeros must be _____.

- Ans
- ☒ 1. Odd multiple of 180°
 - ☐ 2. 360°
 - ☐ 3. Even multiple of 180°
 - ☐ 4. Zero

Question ID : 4410091554130
Chosen Option : 2

Q.35 A 4-bit binary down counter is initially in the state $Q_3Q_2Q_1Q_0 = 0101$. What will be its state $Q_3Q_2Q_1Q_0$ after 3 clock pulses?

- Ans
- ☐ 1. 0011
 - ☐ 2. 1000
 - ☐ 3. 0110
 - ☒ 4. 0010

Question ID : 4410091658583
Chosen Option : 3

Q.36 Which of the following addressing modes are suitable for program relocation at run time?

1. Absolute addressing
2. Based addressing
3. Relative addressing
4. Indirect addressing

- Ans
- ☐ 1. Only 1 and 2
 - ☐ 2. Only 1, 2 and 4
 - ☒ 3. Only 2 and 3
 - ☐ 4. Only 1 and 4

Question ID : 4410091660155
Chosen Option : 2

Q.37 The equivalent circuit of a synchronous motor is similar to:

- Ans
- ☐ 1. Induction motor rotor
 - ☐ 2. Transformer secondary
 - ☒ 3. Series RL circuit
 - ☐ 4. Series RC Circuit

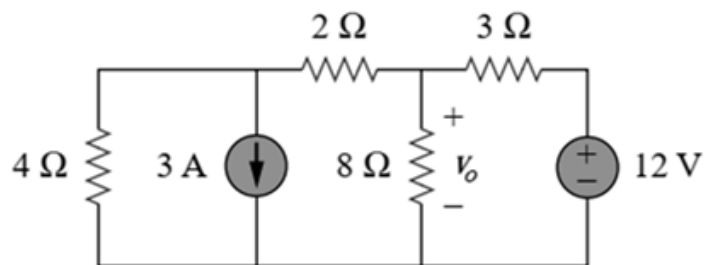
Question ID : 4410091555091
Chosen Option : 4

Q.38 Which of the following best defines the string efficiency (η) of a suspension insulator string?

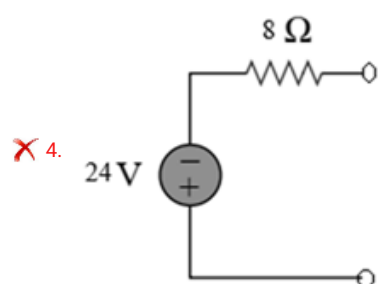
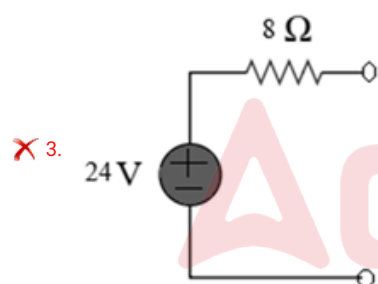
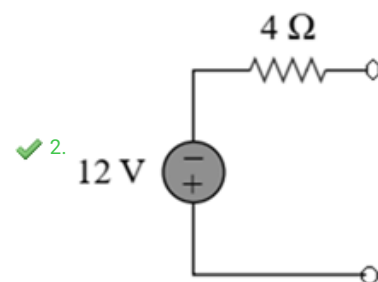
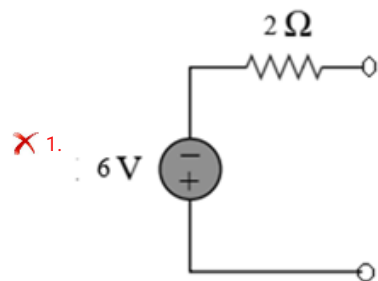
- Ans
- ☐ 1. The ration of voltage across the whole string to n times the voltage across the disc nearest to the tower.
 - ☐ 2. The ratio of the voltage across the disc nearest to the conductor to n times the voltage across the whole string.
 - ☒ 3. The ratio of the total voltage across the whole string to n times the voltage across the disc nearest to the line conductor.
 - ☐ 4. The ratio of n-times the voltage across the conductor-end disc to the total voltage across the string.

Question ID : 4410091549693
Chosen Option : 3

Q.39 For the circuit given below, find the equivalent source transformed circuit for the 3 A current source.



Ans



Question ID : 4410091554880
Chosen Option : 2

Q.40 A synchronous generator is connected to an infinite bus using two parallel transmission lines between them. If one of these two parallel lines is suddenly disconnected, what will happen to the transfer reactance between the generator and the infinite bus?

- Ans
- ☒ 1. Transfer reactance remains at the initial value
 - ☒ 2. Transfer reactance fluctuates for some time before settling down at the initial value
 - ☒ 3. Transfer reactance increases to a new value
 - ☒ 4. Transfer reactance decreases to a new value

Question ID : 4410091580434
Chosen Option : 2

Q.41 Which of the following best describes Phase Modulation (PM) in communication systems?

- Ans
- ☒ 1. The phase of the carrier is varied in accordance to the message signal.
 - ☒ 2. The amplitude of the carrier is varied in accordance to the message signal.
 - ☒ 3. The frequency of the carrier is varied in accordance to the message signal.
 - ☒ 4. Both amplitude and phase are varied simultaneously.

Question ID : 4410091805420
Chosen Option : 2

Q.42 During an insulation test using a High-Voltage Schering bridge, a low value of dissipation factor is shown. What does this indicate?

- Ans
- ☒ 1. The insulation is dry and in good condition
 - ☒ 2. The test frequency is too high
 - ☒ 3. The capacitance value is incorrect
 - ☒ 4. The insulation has started deteriorating

Question ID : 4410091537576
Chosen Option : 4

Q.43 Which of the following is NOT a standard method used to determine the ultimate bearing capacity of soil?

- Ans
- ☒ 1. Triaxial shear test for strength parameters
 - ☒ 2. Analytical method based on bearing capacity theories
 - ☒ 3. Method of dropping weight
 - ☒ 4. Plate load test

Question ID : 4410091813169
Chosen Option : 4

Q.44 An electrostatic instrument has a linear capacitance relation given as: $C(\theta) = C_0 + a\theta$.
A dielectric with loss tangent ($\tan \delta$) = 0.02 is inserted in this instrument, causing an effective reduction by a factor of $(1 - \tan \delta)$ in its deflecting torque expression. For an input voltage of 400 V, value of constant $a = 1.0 \text{ pF/rad}$ and controlling spring constant $k_s = 1.0 \times 10^{-5} \text{ Nm/rad}$, find the percentage decrease in the deflection of the electrostatic instrument.

- Ans
- ☒ 1. 4%
 - ☒ 2. 0.5%
 - ☒ 3. 2%
 - ☒ 4. 1%

Question ID : 4410091534382
Chosen Option : 2

Q.45 Which of the following statements are true about the principle of operation of a.c. potentiometers:

- (i) Balance should be obtained for both phase and magnitude of the voltage being measured.
- (ii) Balance should be obtained only for magnitude of the voltage being measured.
- (iii) All the parts of the potentiometer circuit must be supplied from same source.
- (iv) The a.c. supply to the potentiometer should be perfectly sinusoidal to avoid the effect of harmonics in detector for obtaining balance point.

- Ans
- ☒ 1. (i) and (iii) only
 - ☒ 2. (i), (ii) and (iv) only
 - ☒ 3. (i) and (iv) only
 - ☒ 4. (i), (iii) and (iv) only

Question ID : 4410091534495
Chosen Option : 2

Q.46 Direct resistance heating works on the principle that:

- Ans
- ☒ 1. Heat is produced when current passes directly through the charge
 - ☒ 2. Heat is produced due to magnetic flux
 - ☒ 3. Heat is produced by high-frequency oscillations
 - ☒ 4. Heat is produced by radiation

Question ID : 4410091562181
Chosen Option : 3

Q.47 At resonance, the impedance of a parallel resonant circuit becomes _____, and the purely resistive impedance of the circuit at resonance is generally referred to as _____.

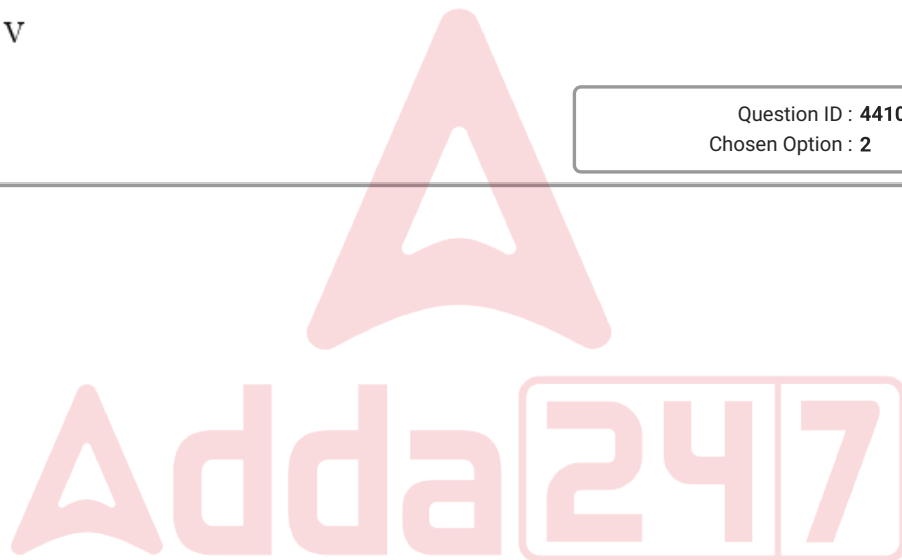
- Ans
- ☒ 1. Minimum, Static impedance
 - ☒ 2. Infinite, Terminal impedance
 - ☒ 3. Maximum, Dynamic impedance
 - ☒ 4. Minimum, Characteristic impedance

Question ID : 4410091546038
Chosen Option : 3

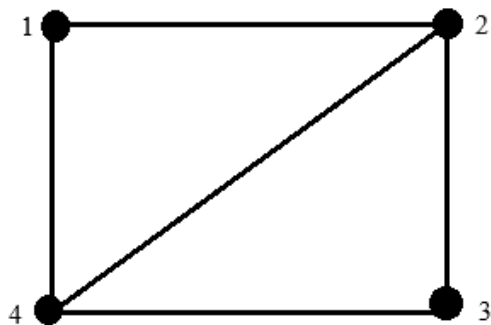
Q.48 A three-phase 3-pulse AC-DC controlled rectifier is supplying an RL load with continuous current conduction. If firing angle is 60° and the supply is 415V, 50 Hz, what is the average output voltage?

- Ans
- ☒ 1. $\frac{3 \cdot 415}{4\pi}$ V
 - ☒ 2. $\frac{3 \cdot 415 \cdot \sqrt{2}}{2\pi}$ V
 - ☒ 3. $\frac{3 \cdot 415 \cdot \sqrt{2}}{4\pi}$ V
 - ☒ 4. $\frac{3 \cdot 415}{2\pi}$ V

Question ID : 4410091568739
Chosen Option : 2



Q.49 Consider a connected graph representing an electrical network with 4 nodes and 5 branches. Construct the fundamental cut-set matrix Q with respect to the tree formed by branches $\{1,2,3\}$ and determine the value of "Rank(Q) + Number of independent cut-sets".



- Ans
- ☒ 1. 4
 - ☒ 2. 6
 - ☒ 3. 3
 - ☒ 4. 5

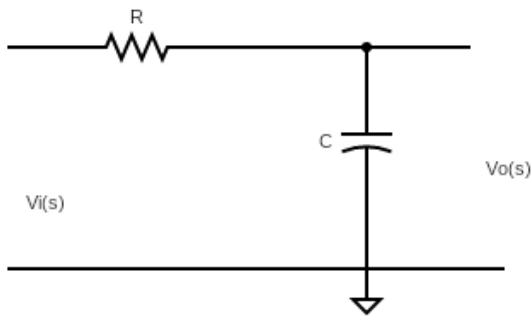
Question ID : 4410091565539
Chosen Option : 3

Q.50 In a string of suspension insulators, which factor is primarily responsible for the non-uniform distribution of voltage across the individual discs?

- Ans
- ☒ 1. Variation in dielectric strength of porcelain discs
 - ☒ 2. Mechanical tension differences along the string
 - ☒ 3. Presence of shunt capacitances between metal fittings and the tower
 - ☒ 4. Unequal thickness of insulating material in each disc

Question ID : 4410091561414
Chosen Option : 1

Q.51 The transfer function $V_o(s)/V_i(s)$ of a given series RC circuit is _____ if the value of $RC = 1$ sec.



- Ans
- ☒ 1. $1/(cs+1)$
 - ☒ 2. $(s+1)$
 - ☒ 3. $1/(s+1)$
 - ☒ 4. $Cs/(s+1)$

Question ID : 4410091565191
Chosen Option : 3

Q.52 Which factor does not significantly influence transformer inrush current magnitude?

- Ans
- ☒ 1. Point-on-wave of switching
 - ☒ 2. Load connected at energization
 - ☒ 3. Residual flux in the core
 - ☒ 4. Core saturation characteristics

Question ID : 4410091563806
Chosen Option : 2

Q.53 What is the output of an XOR gate when both inputs are 1?

- Ans
- ☒ 1. 1
 - ☒ 2. Same as the output of an AND gate for these inputs
 - ☒ 3. Same as the output of an OR gate for these inputs
 - ☒ 4. 0

Question ID : 4410091805695
Chosen Option : 1

Q.54 A low damping ratio ($0 < \zeta < 1$) in a second-order system results in _____.

- Ans
- ☐ 1. Overdamped and zero bandwidth
 - ☐ 2. Underdamped and lower bandwidth
 - ☐ 3. Overdamped and wider bandwidth
 - ☒ 4. Underdamped and wider bandwidth

Question ID : 4410091554086
Chosen Option : 3

Q.55 In an RC phase-shift oscillator designed using OP-AMP, the feedback resistor is $R_f = 180 \text{ k}\Omega$. For sustained oscillations, the value of input resistor R_{in} required is _____ if there are three R-C section each providing phase shift of 60 degrees.

- Ans
- ☐ 1. 1.8 k Ω
 - ☐ 2. 2.9 k Ω
 - ☐ 3. 5.2 k Ω
 - ☒ 4. 6.2 k Ω

Question ID : 4410091558465
Chosen Option : 3

Q.56 What property of an ideal transformer is considered to have infinitely large values for the primary and secondary windings?

- Ans
- ☐ 1. Leakage flux
 - ☒ 2. Inductance
 - ☐ 3. Coefficient of coupling
 - ☐ 4. Resistance

Question ID : 4410091545708
Chosen Option : 3

Q.57 In a 3-phase overhead transmission system, the conductors are arranged at the corners of an equilateral triangle with each side measuring 4 m. Each conductor has a radius of 1.2 cm. Which of the following is the Self GMD (in meters) for one conductor, considering the standard factor (rounded up to four decimal places)?

- Ans
- ☐ 1. 0.0048 meters
 - ☒ 2. 0.0093 meters
 - ☐ 3. 0.0120 meters
 - ☐ 4. 0.0082 meters

Question ID : 4410091593073
Chosen Option : 2

Q.58 Given zero initial inductor current and an initial capacitor voltage ' V_0 ' at $t = 0$ in an RLC parallel circuit with no sources connected to it, what eventually happens to the energy in the circuit after a long time (at $t = \infty$)?

- Ans
- ☐ 1. All the energy in the circuit is transferred to the inductor and stored in it.
 - ☐ 2. All the energy in the circuit remains in the capacitor.
 - ☐ 3. All the energy in the circuit keeps oscillating continuously without any losses.
 - ☒ 4. All the energy in the circuit is dissipated in the resistor.

Question ID : 4410091565495
Chosen Option : 2

Q.59 In large industrial furnaces, why are electronic or electromagnetic control systems incorporating servomechanisms commonly used?

- Ans
- ☒ 1. To control temperature of furnaces as per requirement
 - ☐ 2. To reduce the need for refractory lining materials
 - ☐ 3. To increase the thermal conductivity of the furnace walls
 - ☐ 4. To eliminate the requirement of temperature sensors in the furnace

Question ID : 4410091562303
Chosen Option : 4

Q.60 The bandwidth of a CRO is given as 0 Hz to 35 MHz. Calculate the fastest rise time a sine wave can have in order to be accurately reproduced by the CRO?

- Ans
- ☐ 1. 3.5 nanoseconds
 - ☐ 2. 1 nanosecond
 - ☒ 3. 10 nanoseconds
 - ☐ 4. 35 nanoseconds

Question ID : 4410091533360
Chosen Option : 2

Q.61 An ideal dual converter provides:

- Ans
- ☐ 1. Regeneration only
 - ☐ 2. No control over voltage
 - ☒ 3. Four-quadrant operation
 - ☐ 4. One-quadrant operation

Question ID : 4410091564055
Chosen Option : 3

Q.62 A single-phase transformer has 100 turns in its low voltage winding. The flux in one of its limbs is 5 mWb, and the magnetic reluctance of its core is 4×10^5 A/Wb. What is the current in the low-voltage winding required to establish this flux?

- Ans
- ☐ 1. 5 A
 - ☐ 2. 10 A
 - ☒ 3. 20 A
 - ☐ 4. 40 A

Question ID : 4410091549555
Chosen Option : 3

Q.63 In a practical circulating mode dual converter, one of the converters is operating at a firing angle of 45° . What will be the firing angle and mode of operation, respectively, of the other converter?

- Ans
- ☐ 1. 135° , rectifier mode
 - ☐ 2. 45° , rectifier mode
 - ☐ 3. 45° , inverter mode
 - ☒ 4. 135° , inverter mode

Question ID : 4410091566633
Chosen Option : 4

Q.64 In power electronic converters, which factor mainly determines discontinuous conduction?

- Ans
- ☐ 1. Supply frequency
 - ☐ 2. Output filter
 - ☐ 3. Thyristor rating
 - ☒ 4. Load inductance

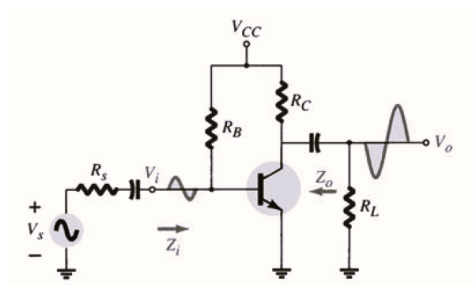
Question ID : 4410091564104
Chosen Option : 1

Q.65 What is the least significant bit (LSB) voltage step size for an N-bit ideal weighted-resistor DAC with full-scale reference voltage of V_{FS} ?

- Ans
- ☐ 1. $\Delta V_{LSB} = \frac{V_{FS}}{N}$
 - ☐ 2. $\Delta V_{LSB} = \frac{2V_{FS}}{2^N}$
 - ☒ 3. $\Delta V_{LSB} = \frac{V_{FS}}{2^N}$
 - ☐ 4. $\Delta V_{LSB} = \frac{V_{FS}}{2^N + 1}$

Question ID : 4410091566121
Chosen Option : 3

Q.66 For the BJT transistor amplifier given below, choose the incorrect statement.



Ans

- ✗ 1. Voltage gain $\left(A_V = \frac{V_O}{V_{in}} \right) = - \frac{(R_L \parallel R_C)}{r_e}$
- ✓ 2. Voltage gain $\left(A_V = \frac{V_O}{V_{in}} \right) = - \frac{(R_L + R_C)}{r_e}$
- ✗ 3. Input impedance $(Z_i) = R_B \parallel \beta r_e$
- ✗ 4. Output impedance $(Z_O) \approx R_C$

Question ID : 4410091566495
Chosen Option : 2

Q.67 What is the primary purpose of a PV bus in power flow analysis?

- Ans
- ✗ 1. Minimize line losses
- ✗ 2. Control system frequency
- ✗ 3. Maintain real power balance
- ✓ 4. Maintain a constant voltage magnitude

Question ID : 4410091547039
Chosen Option : 4

Q.68 Owen's bridge is mainly used to measure:

- Ans
- ✗ 1. Power factor
- ✗ 2. High resistance
- ✓ 3. Inductance using a standard capacitor
- ✗ 4. Dielectric loss

Question ID : 4410091547316
Chosen Option : 4

Q.69 In a modern steam power plant, the reheater is placed between which two stages?

- Ans
- ☒ 1. Economizer and superheater
 - ☐ 2. High-pressure turbine and low-pressure turbine
 - ☐ 3. Feed pump and economizer
 - ☐ 4. Boiler and condenser

Question ID : 4410091560701
Chosen Option : 1

Q.70 During stability analysis for a system represented by a characteristic equation, when a row of zeros is encountered in the Routh array, what is the Auxiliary Equation derived from?

- Ans
- ☐ 1. The original characteristic equation of the system.
 - ☐ 2. The first row only.
 - ☒ 3. The row immediately above the row of zeros.
 - ☐ 4. The system's open-loop transfer function.

Question ID : 4410091579153
Chosen Option : 2

Q.71 In the graph theory of electrical networks, if a connected graph has n nodes, what is the rank of its tree?

- Ans
- ☐ 1. $2n - 1$
 - ☐ 2. $n + 1$
 - ☐ 3. n
 - ☒ 4. $n - 1$

Question ID : 4410091558172
Chosen Option : 2

Q.72 Which element is commonly used as an acceptor impurity in the creation of P-type semiconductors?

- Ans
- ☒ 1. Boron
 - ☐ 2. Arsenic
 - ☐ 3. Phosphorus
 - ☐ 4. Antimony

Question ID : 4410091805369
Chosen Option : 1

Q.73 In a power diode, the softness factor (S) relates to _____.

- Ans ☒ 1. The rate of fall of reverse recovery current compared to its rise
☒ 2. The ratio of latching current to holding current
☒ 3. The ratio of reverse recovery time to forward conduction time
☒ 4. The dv/dt capability of the diode

Question ID : 4410091559746
Chosen Option : 2

Q.74 The first two rows of Routh's tabulation of a third order equation are as follows:

s^3 2 2

s^2 4 4

This means there are _____.

- Ans ☒ 1. Two roots at $s = \pm 2j$ and one root in left half of the s - plane
☒ 2. Two roots at $s = \pm 2j$ and one root in right half of the s - plane
☒ 3. Two roots at $s = \pm j$ and one root in left half of the s - plane
☒ 4. Two roots at $s = \pm j$ and one root in right half of the s - plane

Question ID : 4410091661852
Chosen Option : 2

Q.75 In an induction-type energy meter, what is the primary purpose of the compensating coil connected in series with the pressure coil circuit?

- Ans ☒ 1. To improve the power factor of the load
☒ 2. To oppose and nullify the unwanted field produced by pressure-coil current in the current coil
☒ 3. To increase the torque produced by the current coil
☒ 4. To stabilize the meter against temperature variations

Question ID : 4410091547352
Chosen Option : 2

Q.76 A three-phase semi-converter provides:

- Ans ☒ 1. Four-quadrant operation
☒ 2. Forced commutation
☒ 3. One-quadrant controlled rectification
☒ 4. Zero ripple output

Question ID : 4410091563085
Chosen Option : 2

Q.77 A single-phase full bridge fully controlled AC-DC phase controlled rectifier is supplying a constant current load of 10 A. If the firing angle of each SCR is 60° , then what is the input power factor of the rectifier?

- Ans
- ☐ 1. 0.866
 - ☐ 2. 0.707
 - ☒ 3. 0.45
 - ☐ 4. 0.50

Question ID : 4410091565566
Chosen Option : 2

Q.78 In a single-phase induction type energy meter (SPEM), which component is primarily responsible for producing a magnetic flux proportional to the load current?

- Ans
- ☐ 1. Pressure coil
 - ☐ 2. Permanent braking magnet
 - ☒ 3. Current coil
 - ☐ 4. Aluminum disc

Question ID : 4410091642834
Chosen Option : 2

Q.79 Why is amplitude modulation (AM) more susceptible to noise than frequency modulation (FM)?

- Ans
- ☐ 1. Because AM transmits at a higher power than FM
 - ☐ 2. Because noise affects frequency, which is used to encode information in AM
 - ☒ 3. Because noise affects amplitude, which is used to encode information in AM
 - ☐ 4. Because AM uses higher bandwidth than FM

Question ID : 4410091805692
Chosen Option : 4

Q.80 Arrange the operating speeds of a DC shunt motor, for full load current, in descending order (highest to lowest) for the following conditions: Ideal Case, Practical Case (without Armature reaction) and Practical Case (with armature reaction).
(Note: In ideal case, all the losses and armature resistance of the motor are neglected. In practical case, all the losses and armature resistance of the motor are considered.)

- Ans
- ☐ 1. Ideal Case = Practical Case (without Armature reaction) > Practical Case (with Armature reaction)
 - ☒ 2. Ideal Case > Practical Case (with Armature reaction) > Practical Case (without Armature reaction)
 - ☐ 3. Ideal Case < Practical Case (without Armature reaction) < Practical Case (with Armature reaction)
 - ☐ 4. Ideal Case > Practical Case (without Armature reaction) > Practical Case (with Armature reaction)

Question ID : 4410091536659
Chosen Option : 2

Q.81 In an RC charging circuit, the capacitor voltage reaches approximately _____ of final value after one time constant.

- Ans
- ☐ 1. 33.3%
 - ☐ 2. 75%
 - ☐ 3. 50%
 - ☒ 4. 63.2%

Question ID : 4410091546084
Chosen Option : 1

Q.82 The speed of the rotating disc in an induction energy meter is proportional to:

- Ans
- ☐ 1. Supply voltage only
 - ☐ 2. Supply frequency
 - ☐ 3. Load current only
 - ☒ 4. Power consumed

Question ID : 4410091547345
Chosen Option : 2

Q.83 The equivalent circuit of a transformer is mainly required to:

- Ans
- ☐ 1. Measure magnetic field
 - ☐ 2. Determine mechanical strength
 - ☒ 3. Calculate exciting and series branch parameters
 - ☐ 4. Calculate Horse power (HP)

Question ID : 4410091557268
Chosen Option : 3

Q.84 For a petrochemical plant, what is the preferred grounding method?

- Ans
- ☐ 1. Reactance grounding applied to limit fault current magnitude and maintain balanced system voltage conditions
 - ☒ 2. High resistance grounding applied to minimize arc flash energy and control transient overvoltage conditions
 - ☐ 3. Ungrounded system applied to allow continuous operation even when a single line-to-ground fault occurs
 - ☐ 4. Solid grounding applied to provide maximum fault current during abnormal operating conditions

Question ID : 4410091565463
Chosen Option : 2

Q.85 Consider the 8085 instructions LXI H, 2050H and LHLD 2050H. While both instructions involve the 16-bit value 2050H, they utilize different addressing modes to determine the source of the data. Which of the following given statements correctly classifies the addressing mode for the source operand in each instruction?

- Ans
- ☒ 1. Both instructions utilize Direct addressing.
 - ☒ 2. LXI uses Immediate addressing; LHLD uses Direct addressing.
 - ☒ 3. LXI uses Direct addressing; LHLD uses Immediate addressing.
 - ☒ 4. Both instructions utilize Immediate addressing.

Question ID : 4410091538868
Chosen Option : 2

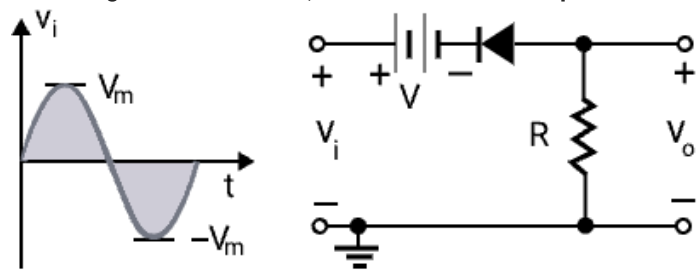
Q.86 Why is overcurrent protection generally not required in modern alternators?

- Ans
- ☒ 1. Alternators have inherent current-limiting characteristics due to their synchronous reactance
 - ☒ 2. Alternators operate at very low voltage
 - ☒ 3. Alternators are protected only by fuses
 - ☒ 4. Alternators are designed to never experience faults

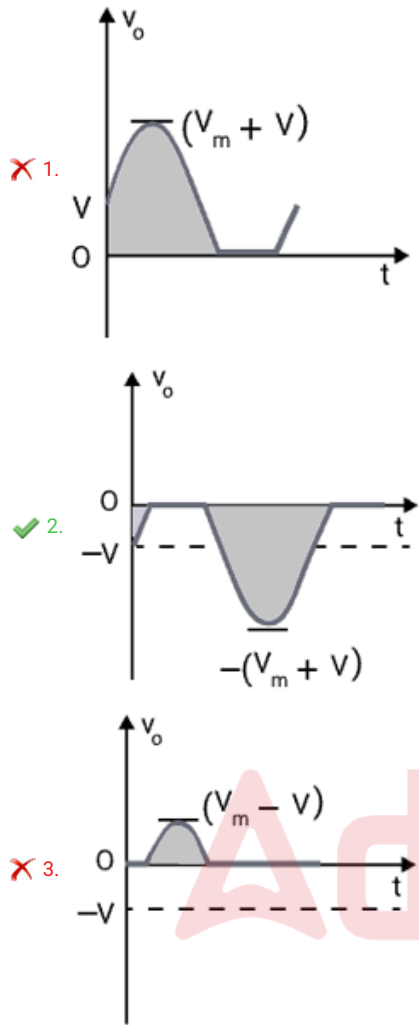
Question ID : 4410091549732
Chosen Option : 3

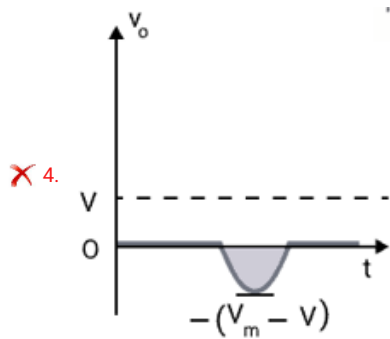


Q.87 Assuming diode to be ideal , choose the correct output waveform:



Ans





Question ID : 4410091567115
Chosen Option : 1

Q.88 Which of the following loads is fundamentally considered when calculating the bearing capacity demand on a transmission tower foundation?

- Ans
- ☒ 1. Wind load acting alone without gravity load combination effects
 - ☒ 2. Seismic load considered independently of all other load cases
 - ☒ 3. Electrical load associated with transmission line power flow
 - ☒ 4. Dead load arising from the self-weight of the structure

Question ID : 4410091813295
Chosen Option : 1

Q.89 An AC rectified welding unit is preferred for shielded arc welding mainly because it provides _____.

- Ans
- ☒ 1. High-frequency AC welding current
 - ☒ 2. Both AC and DC welding currents
 - ☒ 3. Stable DC welding current
 - ☒ 4. AC welding current at 50 Hz

Question ID : 4410091558637
Chosen Option : 2

Q.90 According to chopper circuit behavior, the maximum ripple current decreases when which of the following parameters increases?

- Ans
- ☒ 1. Duty ratio
 - ☒ 2. Load resistance
 - ☒ 3. Output voltage
 - ☒ 4. Switching frequency

Question ID : 4410091564180
Chosen Option : 2

Q.91 For a second-order underdamped control system with fixed natural frequency ω_n , if the damping ratio ζ is increased from 0.2 to 0.8, the resonant frequency ω_r _____

- Ans
- ☒ 1. Remains constant for all damping
 - ☒ 2. Decreases and may disappear
 - ☒ 3. Becomes equal to natural frequency
 - ☒ 4. Increases as damping increases

Question ID : 4410091576577
Chosen Option : 3

Q.92 For rapid construction of a transmission tower foundation, enabling early formwork removal and load application, which concrete property is most critical?

- Ans
- ☒ 1. Resistance to shrinkage cracking
 - ☒ 2. Early-age compressive strength development
 - ☒ 3. Better workability at high water cement ratio
 - ☒ 4. Long-term durability

Question ID : 4410091795852
Chosen Option : 2

Q.93 In a graph with 6 nodes and 10 branches, the number of independent KVL equations is _____

- Ans
- ☒ 1. 10
 - ☒ 2. 9
 - ☒ 3. 5
 - ☒ 4. 6

Question ID : 4410091565554
Chosen Option : 3

Q.94 In ultrasonic welding, the joining of materials is primarily achieved by:

- Ans
- ☒ 1. Heating the joint with an electric arc
 - ☒ 2. Melting filler material at the joint
 - ☒ 3. Applying high-frequency mechanical vibrations
 - ☒ 4. Passing heavy current through the joint

Question ID : 4410091564308
Chosen Option : 3

Q.95 During earthquake-induced ground shaking, pedestal transformer foundations may be affected by soil liquefaction. Which of the following sandy soils is most susceptible to this phenomenon?

- Ans
- ☒ 1. Dry dense sand
 - ☒ 2. Loose saturated sand
 - ☒ 3. Well-compacted sand
 - ☒ 4. Dense saturated sand

Question ID : 4410091813177
Chosen Option : 2

Q.96 Which of the following is a limitation of auxiliary motor starting?

- Ans
- ☒ 1. Leads to unstable operation at synchronous speed
 - ☒ 2. Requires additional equipment and mechanical coupling
 - ☒ 3. Cannot be used for large motors
 - ☒ 4. Produces excessive torque pulsations in the driven load

Question ID : 4410091563646
Chosen Option : 2

Q.97 Which of the following is not a general characteristic of CMOS (Complementary metal oxide semiconductor)?

- Ans
- ☒ 1. It has extensive applications in computer logic design.
 - ☒ 2. Static power dissipation is zero or negligible.
 - ☒ 3. It has very low input impedance.
 - ☒ 4. It has high noise immunity.

Question ID : 4410091563123
Chosen Option : 2

Q.98 The current through a capacitor is given by (symbols carry their usual meaning):

- Ans
- ☒ 1. $i = v/R$
 - ☒ 2. $i = C \, dv/dt$
 - ☒ 3. $i = L \, di/dt$
 - ☒ 4. $i = RC \, dv/dt$

Question ID : 4410091557904
Chosen Option : 2

**Test
Prime**

By Adda247

PREVIOUS YEAR PAPERS PDF



PRACTICE MORE, SCORE HIGHER!



**Free
25,000+
PDF's**

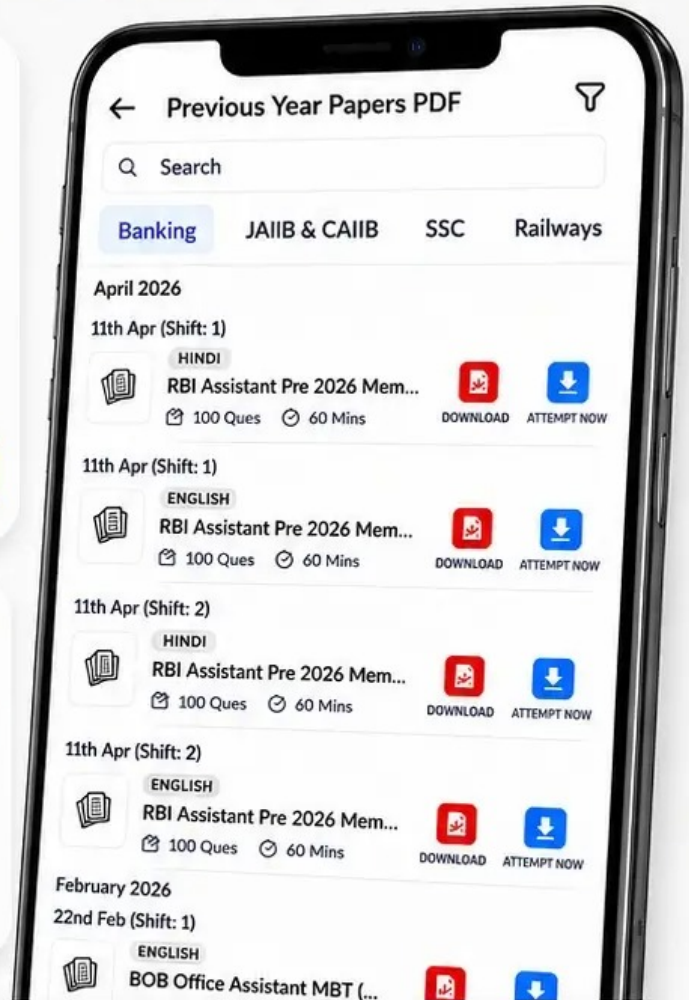
High-Quality | Exam-Wise | Updated Regularly



**ATTEMPT AS
MOCK**



Turn PDFs into real exam experience.
Analyze. Improve. Succeed.



Topic-wise &
Exam-wise PDFs



Download &
Study Offline



Attempt as Mock
& Track Score



Smart Analysis
& Performance

AVAILABLE IN



Banking



SSC



Railway



Teaching



UGC



Agriculture



Nursing



Bihar



UP



Punjab



WB



Odisha



TN



AP & Telangana



Haryana



DOWNLOAD TEST PRIME

Test

Prime



SUCCESS GALLERY!

★ MEET THE ACHIEVERS ★



Kunal, RRB JE



Shivam, UPSSSC AGTA



Priya, ANM



KHALILUR, LDA



Manoj, PWD



Atin, JENPAS



Shatarupa, OPSC



Arpita, JENPAS



Shital, SSC JE (Mech)



Nancy, UGC NET



Atul, SSC JE (ELCT)



Rahul, SSC JE (CIVIL)



Anand, SSC JE (ELCT)



Mohan, SSC JE (ELCT)



Saurabh, UGC NET



Ved, SSC JE (Mech)

★ THEY DID IT. YOU CAN TOO ★

READ THEIR STORIES!



Q.99 A voltage-divider biased BJT uses R_1 and R_2 to set a nominal base voltage of 3 V. Due to temperature rise, V_{BE} decreases slightly, and β increases significantly. Which statement predicts the correct behavior of the collector current I_C if the circuit includes an emitter resistor R_E of considerable size?

- Ans
- ☒ 1. I_C will increase drastically because β increased.
 - ☒ 2. I_C will decrease drastically because V_{BE} decreased.
 - ☒ 3. I_C will remain nearly constant because the drop in V_{BE} is absorbed by negative feedback through R_E .
 - ☒ 4. I_C will oscillate around its nominal value due to interaction between the divider and V_{BE} .

Question ID : 4410091528627
Chosen Option : 2

Q.100 What distinguishes the general expression of a phase modulated signal from that of a frequency modulated signal?

- Ans
- ☒ 1. Both phase and frequency modulation use the integral of the message signal in the phase.
 - ☒ 2. Frequency modulation uses $k_p m(t)$ in the phase, while phase modulation uses $k_f \int m(t) dt$.
 - ☒ 3. Both phase and frequency modulation uses no integral of message signal in the phase, instead directly proportional to message signal.
 - ☒ 4. Phase modulation uses $k_p m(t)$ in the phase, while frequency modulation uses $k_f \int m(t) dt$.

Question ID : 4410091807819
Chosen Option : 2

