NHPC
JE

Previous Year Paper
(Electrical)
29 Oct, 2025 Shift 2

Participant ID	
Participant Name	
Test Center Name	
Test Date	29/10/2025
Test Time	2:00 PM - 5:00 PM
Subject	Junior Engineer Electrical

Section : **General Awareness**

Q.1 Who among the following appoints Indian ambassadors to foreign countries?

Ans
✗ 1. Ministry of External Affairs of India
✗ 2. Union Public Service Commission
✓ 3. President of India
✗ 4. Prime Minister of India

Question ID : **441009284397**
Option 1 ID : **4410091104671**
Option 2 ID : **4410091104670**
Option 3 ID : **4410091104668**
Option 4 ID : **4410091104669**
Status : **Answered**
Chosen Option : **1**

Q.2 Which significant infrastructure project did Prime Minister Narendra Modi inaugurate in Jammu and Kashmir's Sonamarg in January 2025?

Ans
✓ 1. Z-Morh Tunnel
✗ 2. Banihal Qazigund Road Tunnel
✗ 3. Chenani-Nashri Tunnel
✗ 4. Atal Tunnel

Question ID : **441009100438**
Option 1 ID : **441009399729**
Option 2 ID : **441009399727**
Option 3 ID : **441009399728**
Option 4 ID : **441009399726**
Status : **Answered**
Chosen Option : **4**

Q.3 **Which of the following statements is correct about Fundamental Duties of the Indian Constitution?**

Ans
✔ 1. These are subject to reasonable restrictions.
✘ 2. These are applicable only to citizens of India.
✘ 3. These are non-justiciable in a court of law.
✘ 4. These are absolute and without any restrictions.

Question ID : **441009284350**
Option 1 ID : **4410091104484**
Option 2 ID : **4410091104486**
Option 3 ID : **4410091104485**
Option 4 ID : **4410091104483**
Status : **Answered**
Chosen Option : **2**

Q.4 **Through which of the following processes can a judge of the Supreme Court of India be removed?**

Ans
✘ 1. An order of the Chief Justice of India
✘ 2. An order of the Prime Minister of India
✔ 3. Special majority in both Houses of the Parliament
✘ 4. Special majority in the Lok Sabha only

Question ID : **441009284404**
Option 1 ID : **4410091104698**
Option 2 ID : **4410091104697**
Option 3 ID : **4410091104699**
Option 4 ID : **4410091104696**
Status : **Answered**
Chosen Option : **3**

Q.5 **As per the National Economic Policy 1991, the number of areas reserved for the public sector was reduced from 17 to _____.**

Ans
✘ 1. 6
✔ 2. 8
✘ 3. 10
✘ 4. 12

Question ID : **441009158013**
Option 1 ID : **441009627030**
Option 2 ID : **441009627031**
Option 3 ID : **441009627032**
Option 4 ID : **441009627033**
Status : **Answered**
Chosen Option : **3**

Q.6 Due to which of the following factors does the Indian subcontinent experience mild winter?

Ans
✔ 1. The Himalayas
✘ 2. Ocean currents
✘ 3. Tropic of Cancer
✘ 4. The surrounding seas

Question ID : **44100973451**
Option 1 ID : **441009292115**
Option 2 ID : **441009292117**
Option 3 ID : **441009292116**
Option 4 ID : **441009292114**
Status : **Answered**
Chosen Option : **2**

Q.7 As of February 2025, how many Ramsar sites are there in India?

Ans
✘ 1. 110
✔ 2. 89
✘ 3. 95
✘ 4. 100

Question ID : **44100995439**
Option 1 ID : **441009379714**
Option 2 ID : **441009379713**
Option 3 ID : **441009379712**
Option 4 ID : **441009379715**
Status : **Answered**
Chosen Option : **2**

Q.8 As per Union Budget 2025-26, government will set an urban challenge hub of _____ to implement the 'Cities as Growth Hubs', 'Creative Redevelopment of Cities' and 'Water and Sanitation'.

Ans
✘ 1. ₹4 lakh crore
✘ 2. ₹3 lakh crore
✔ 3. ₹1 lakh crore
✘ 4. ₹2 lakh crore

Question ID : **441009158240**
Option 1 ID : **441009627941**
Option 2 ID : **441009627940**
Option 3 ID : **441009627938**
Option 4 ID : **441009627939**
Status : **Answered**
Chosen Option : **3**

Q.9 Who founded the New English School in Pune in 1880?

Ans
✘ 1. Annie Besant
✔ 2. Bal Gangadhar Tilak
✘ 3. Mahatma Gandhi
✘ 4. Gopal Krishna Gokhale

Question ID : **441009283140**
Option 1 ID : **4410091099700**
Option 2 ID : **4410091099698**
Option 3 ID : **4410091099701**
Option 4 ID : **4410091099699**
Status : **Answered**
Chosen Option : **1**

Q.10 Which type of cells is the hypodermis of the monocotyledonous stem made up of?

Ans
✗ 1. Parenchyma
✓ 2. Sclerenchyma
✗ 3. Tracheids
✗ 4. Collenchyma

Question ID : **44100987788**
Option 1 ID : **441009349063**
Option 2 ID : **441009349065**
Option 3 ID : **441009349066**
Option 4 ID : **441009349064**
Status : **Answered**
Chosen Option : **2**

Q.11 How many Khelo India State Centres of Excellence (KISCE) have been notified across India as of February 2025?

Ans
✗ 1. 52
✗ 2. 42
✗ 3. 22
✓ 4. 32

Question ID : **44100998084**
Option 1 ID : **441009390455**
Option 2 ID : **441009390454**
Option 3 ID : **441009390456**
Option 4 ID : **441009390453**
Status : **Answered**
Chosen Option : **3**

Q.12 Which of the following is the key feature of the Waqf (Amendment) Act, 2025?

Ans
✓ 1. It mandates the inclusion of at least two Muslim women on the Central Waqf Council and State Waqf Boards.
✗ 2. The Waqf (Amendment) Act, 2025, removes the requirement for regular auditing of Waqf properties.
✗ 3. It abolishes all Waqf Boards in India.
✗ 4. It allows non-Muslims to declare Waqf properties.

Question ID : **441009100418**
Option 1 ID : **441009399638**
Option 2 ID : **441009399639**
Option 3 ID : **441009399641**
Option 4 ID : **441009399640**
Status : **Answered**
Chosen Option : **1**

Q.13 अतरौली घराना, भारत के किस स्थान से संबंधित है?

Ans
✗ 1. आगरा
✓ 2. जयपुर
✗ 3. ग्वालियर
✗ 4. रामपुर

Question ID : **44100975505**
Option 1 ID : **441009300297**
Option 2 ID : **441009300295**
Option 3 ID : **441009300296**
Option 4 ID : **441009300294**
Status : **Answered**
Chosen Option : **1**

Q.14 Which therapy showed a remarkable success rate in India's first clinical trials for cancer treatment, as reported in March 2025?

Ans
✗ 1. Radiation Therapy
✗ 2. Immunotherapy
✗ 3. Gene Therapy
✓ 4. CAR T-Cell Therapy

Question ID : **441009100457**
Option 1 ID : **441009399804**
Option 2 ID : **441009399805**
Option 3 ID : **441009399803**
Option 4 ID : **441009399802**
Status : **Answered**
Chosen Option : **4**

Q.15 Which landmass has been formed by the interaction of the rivers Indus, Ganga and Brahmaputra along with their tributaries?

Ans
✓ 1. The Northern Plains
✗ 2. The Coastal Plains
✗ 3. The Indian Desert
✗ 4. The Peninsular Plateau

Question ID : **44100973477**
Option 1 ID : **441009292225**
Option 2 ID : **441009292223**
Option 3 ID : **441009292222**
Option 4 ID : **441009292224**
Status : **Answered**
Chosen Option : **4**

Q.16 Who among the following has written the book 'Bombay Duck: A Culinary History'?

Ans
✗ 1. Simran MIrza
✗ 2. Kiran Dessai
✗ 3. Suman Dessai
✓ 4. Meher Mirza

Question ID : **44100995556**
Option 1 ID : **441009380182**
Option 2 ID : **441009380181**
Option 3 ID : **441009380183**
Option 4 ID : **441009380180**
Status : **Answered**
Chosen Option : **2**

Q.17 Which Constitutional Amendment Act of the Indian Constitution has increased the retirement age of judges of the High Court from 60 years to 62 years?

Ans
✗ 1. 96th Constitutional Amendment Act
✗ 2. 102nd Constitutional Amendment Act
✗ 3. 54th Constitutional Amendment Act
✓ 4. 15th Constitutional Amendment Act

Question ID : **441009284373**
Option 1 ID : **4410091104574**
Option 2 ID : **4410091104575**
Option 3 ID : **4410091104573**
Option 4 ID : **4410091104572**
Status : **Answered**
Chosen Option : **2**

Q.18 Which Indian fashion designer, celebrated for his innovative and elegant designs, passed away on 1 November 2024?

Ans
1. Ritu Kumar
2. Manish Malhotra
3. Rohit Bal
4. Sabyasachi Malhotra

Question ID : **44100995639**
Option 1 ID : **441009380528**
Option 2 ID : **441009380530**
Option 3 ID : **441009380529**
Option 4 ID : **441009380531**
Status : **Answered**
Chosen Option : **4**

Q.19 Who was the earliest leader of the Swadeshi Movement?

Ans
1. Bal Gangadhar Tilak
2. Annie Besant
3. Jawaharlal Nehru
4. Mahatma Gandhi

Question ID : **441009283137**
Option 1 ID : **4410091099686**
Option 2 ID : **4410091099688**
Option 3 ID : **4410091099689**
Option 4 ID : **4410091099687**
Status : **Answered**
Chosen Option : **4**

Q.20 What was the increase in the sports budget in the 2025-26 Union Budget compared to the previous year?

Ans
1. ₹200 crore
2. ₹351.98 crore
3. ₹251.98 crore
4. ₹300 crore

Question ID : **44100998091**
Option 1 ID : **441009390491**
Option 2 ID : **441009390490**
Option 3 ID : **441009390492**
Option 4 ID : **441009390489**
Status : **Answered**
Chosen Option : **3**

Q.21 Which of the following rivers rises in the Amarkantak Hills?

Ans
1. Godavari
2. Gandak
3. Kosi
4. Narmada

Question ID : **44100973464**
Option 1 ID : **441009292166**
Option 2 ID : **441009292169**
Option 3 ID : **441009292168**
Option 4 ID : **441009292167**
Status : **Answered**
Chosen Option : **4**

Q.22 In January 2025, which convention did Prime Minister Modi inaugurate in Odisha?

Ans
✗ 1. Global Investors Meet
✗ 2. India Economic Summit
✗ 3. Vibrant Gujarat Summit
✓ 4. Pravasi Bharatiya Divas

Question ID : **441009100442**
Option 1 ID : **441009399743**
Option 2 ID : **441009399742**
Option 3 ID : **441009399744**
Option 4 ID : **441009399745**
Status : **Answered**
Chosen Option : **4**

Q.23 Which scheme was launched by the Government of India on 13 February 2024?

Ans
✗ 1. Pradhan Mantri Jan Dhan Yojana
✗ 2. Pradhan Mantri Garib Kalyan Yojana
✗ 3. Pradhan Mantri Fasal Bima Yojana
✓ 4. PM Surya Ghar: Muft Bijli Yojana

Question ID : **441009157898**
Option 1 ID : **441009626573**
Option 2 ID : **441009626572**
Option 3 ID : **441009626571**
Option 4 ID : **441009626570**
Status : **Answered**
Chosen Option : **4**

Q.24 Who was the founder of the Chola dynasty?

Ans
✗ 1. Dhruva
✗ 2. Rajendra I
✓ 3. Vijayalaya
✗ 4. Rajaraja I

Question ID : **441009283075**
Option 1 ID : **4410091099453**
Option 2 ID : **4410091099452**
Option 3 ID : **4410091099450**
Option 4 ID : **4410091099451**
Status : **Answered**
Chosen Option : **1**

Q.25 Who composed the Gita Govinda, a Sanskrit work with songs and verses?

Ans
✗ 1. Pt. Bhatkhande
✗ 2. Matanga
✗ 3. Bhimsen Joshi
✓ 4. Jayadeva

Question ID : **44100975502**
Option 1 ID : **441009300284**
Option 2 ID : **441009300283**
Option 3 ID : **441009300285**
Option 4 ID : **441009300282**
Status : **Answered**
Chosen Option : **1**

Q.26 In which State of India is the plantation crop coffee grown in the highest quantity?

Ans
✗ 1. Bihar
✓ 2. Karnataka
✗ 3. Punjab
✗ 4. Madhya Pradesh

Question ID : **44100973433**
Option 1 ID : **441009292034**
Option 2 ID : **441009292035**
Option 3 ID : **441009292037**
Option 4 ID : **441009292036**
Status : **Answered**
Chosen Option : **2**

Q.27 Which university won the 'Emerging University of the Year' award at the FICCI Higher Education Excellence Awards 2024?

Ans
✗ 1. Central University of Rajasthan
✓ 2. Central University of Haryana
✗ 3. Central University of Punjab
✗ 4. Central University of Tamil Nadu

Question ID : **44100995476**
Option 1 ID : **441009379862**
Option 2 ID : **441009379863**
Option 3 ID : **441009379861**
Option 4 ID : **441009379860**
Status : **Answered**
Chosen Option : **4**

Q.28 As of November 2024, according to government statistics, what was India's total installed renewable energy capacity?

Ans
✗ 1. 195.70 GW
✗ 2. 205.70 GW
✗ 3. 200.70 GW
✓ 4. 213.70 GW

Question ID : **44100995301**
Option 1 ID : **441009379159**
Option 2 ID : **441009379157**
Option 3 ID : **441009379158**
Option 4 ID : **441009379156**
Status : **Answered**
Chosen Option : **4**

Q.29 Who among the following is NOT a nationalist extremist leader of the Indian National Congress?

Ans
✗ 1. Lala Lajpat Rai
✗ 2. Aurobindo Ghose
✓ 3. MN Roy
✗ 4. Bal Gangadhar Tilak

Question ID : **441009283123**
Option 1 ID : **4410091099636**
Option 2 ID : **4410091099634**
Option 3 ID : **4410091099637**
Option 4 ID : **4410091099635**
Status : **Answered**
Chosen Option : **3**

Q.30 Which advanced technology did DRDO showcase at Aero India 2025?

Ans
✗ 1. Directed Energy Weapons
✗ 2. Autonomous Underwater Vehicle
✓ 3. Advanced Medium Combat Aircraft
✗ 4. Hypersonic Glide Vehicle

Question ID : **441009100469**
Option 1 ID : **441009399851**
Option 2 ID : **441009399850**
Option 3 ID : **441009399852**
Option 4 ID : **441009399853**
Status : **Answered**
Chosen Option : **3**

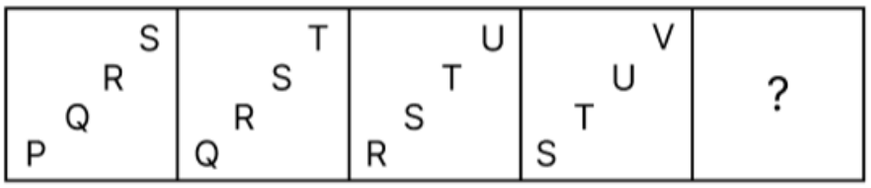
Section : **Reasoning**

Q.1 In a certain code language, ‘book your ticket’ is coded as 'lw rt bu' and ‘please book hall’ is coded as ‘bu px cp’. How is ‘book’ coded in that language?

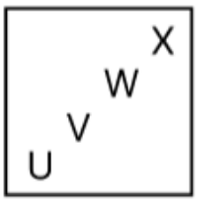
Ans
✗ 1. rt
✗ 2. lw
✓ 3. bu
✗ 4. px

Question ID : **441009759072**
Option 1 ID : **4410092990283**
Option 2 ID : **4410092990282**
Option 3 ID : **4410092990281**
Option 4 ID : **4410092990284**
Status : **Answered**
Chosen Option : **3**

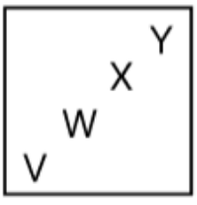
Q.2 Identify the figure given in the options which when put in place of the question mark (?) will logically complete the series.

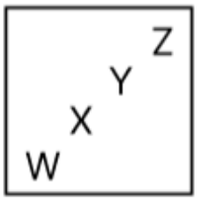


Ans

✗ 1.


✓ 2.


✗ 3.


✗ 4.


Question ID : **4410096843 10**
Option 1 ID : **4410092691208**
Option 2 ID : **4410092691209**
Option 3 ID : **4410092691211**
Option 4 ID : **4410092691210**
Status : **Answered**
Chosen Option : **2**

Q.3 यदि शब्द MAFIOSA के प्रत्येक अक्षर को अंग्रेजी वर्णमाला के व्युत्क्रम में व्यवस्थित किया जाए, तो कितने अक्षरों की स्थिति अपरिवर्तित रहेगी?

Ans
✓ 1. दो
✗ 2. एक
✗ 3. तीन
✗ 4. शून्य

Question ID : **4410091313704**
Option 1 ID : **4410095186517**
Option 2 ID : **4410095186516**
Option 3 ID : **4410095186518**
Option 4 ID : **4410095186515**
Status : **Answered**
Chosen Option : **4**

Q.4 What should come in place of the question mark (?) in the given series based on the English alphabetical order?

OOL QSN SWP UAR ?

Ans
✗ 1. WCS
✗ 2. WBC
✗ 3. XBC
✓ 4. WET

Question ID : **4410091313952**
Option 1 ID : **4410095187508**
Option 2 ID : **4410095187507**
Option 3 ID : **4410095187510**
Option 4 ID : **4410095187509**
Status : **Answered**
Chosen Option : **4**

Q.5 Refer to the given letter series and answer the question that follows. Counting to be done from left to right only.

(Left) G R D L U B V Q F K I N A H T X W Y O Z S M (Right)

How many letters are there in the English alphabetical series between the letter which is fifth from the right end and fifth from the left end of the series?

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

Question ID : **441009793222**
Option 1 ID : **4410093126889**
Option 2 ID : **4410093126890**
Option 3 ID : **4410093126888**
Option 4 ID : **4410093126887**
Status : **Answered**
Chosen Option : **4**

Q.6 POET is related to NKBN in a certain way based on the English alphabetical order. In the same way, HYSV is related to FUPP. To which of the following options is BMJD related, following the same logic?

Ans
✓ 1. ZIGX
✗ 2. ZGXI
✗ 3. ZIXG
✗ 4. ZGIX

Question ID : **4410091313865**
Option 1 ID : **4410095187159**
Option 2 ID : **4410095187161**
Option 3 ID : **4410095187160**
Option 4 ID : **4410095187162**
Status : **Answered**
Chosen Option : **1**

Q.7 9 is related to 36 following a certain logic. Following the same logic, 6 is related to 24. To which of the following is 10 related, following the same logic?
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding to/subtracting from/multiplying with 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

Ans
1. 41
2. 40
3. 38
4. 42

Question ID : **441009590397**
Option 1 ID : **4410092316703**
Option 2 ID : **4410092316702**
Option 3 ID : **4410092316701**
Option 4 ID : **4410092316704**
Status : **Answered**
Chosen Option : **2**

Q.8 Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in the given sets?
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding to/subtracting from/multiplying with 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
7-49-69-59 ; 5-25-45-35

Ans
1. 12-144-124-134
2. 11-121-141-131
3. 10-100-110-100
4. 4-64-84-64

Question ID : **4410091312750**
Option 1 ID : **4410095182708**
Option 2 ID : **4410095182705**
Option 3 ID : **4410095182706**
Option 4 ID : **4410095182707**
Status : **Answered**
Chosen Option : **2**

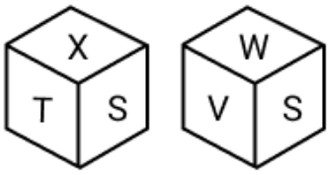
Q.9 If 'P' stands for '×', 'Q' stands for '÷', 'R' stands for '–' and 'S' stands for '+', then what will come in place of the question mark (?) in the following equation?

85 P 5 R 125 Q 25 R 112 Q 2 S 66 P 3 R 105 = ?

Ans
1. 491
2. 513
3. 410
4. 457

Question ID : **441009556418**
Option 1 ID : **4410092180988**
Option 2 ID : **4410092180989**
Option 3 ID : **4410092180986**
Option 4 ID : **4410092180987**
Status : **Answered**
Chosen Option : **4**

Q.10 Six letters, S, T, U, V, W and X, are written on different faces of a dice. Two positions of this dice are shown in the given figures. Identify the letter on the face opposite to W.



Ans
1. V
2. U
3. X
4. T

Question ID : **441009923181**
Option 1 ID : **4410093646871**
Option 2 ID : **4410093646869**
Option 3 ID : **4410093646868**
Option 4 ID : **4410093646870**
Status : **Answered**
Chosen Option : **2**

Q.11 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 letter-cluster pair 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. XZ-AC
2. OQ-RU
3. GI-JL
4. FH-IK

Question ID : **4410091313800**
Option 1 ID : **4410095186899**
Option 2 ID : **4410095186901**
Option 3 ID : **4410095186902**
Option 4 ID : **4410095186900**
Status : **Answered**
Chosen Option : **2**

Q.12 दी गई अक्षर, संख्या और प्रतीक श्रृंखला का संदर्भ लीजिए और नीचे दिए गए प्रश्न का उत्तर दीजिए।
गिनती केवल बाएं से दाएं की जानी है। सभी संख्याएँ केवल एक-अंकीय संख्याएँ हैं।

(बाएं) Y ¥ 1 W % F 3 ! E S 5 V π @ N Y 7 + β 2 & M + 3 7 ≤ N (दाएं)

ऐसे कितने प्रतीक हैं जिनके ठीक पहले एक अक्षर है और ठीक बाद एक संख्या भी है?

Ans
1. तीन
2. दो
3. चार
4. एक

Question ID : **441009793437**
Option 1 ID : **4410093127749**
Option 2 ID : **4410093127748**
Option 3 ID : **4410093127750**
Option 4 ID : **4410093127747**
Status : **Answered**
Chosen Option : **2**

Q.13 Each of A, B, G, H, W, X and Y has an exam on a different day of a week starting from Monday and ending on Sunday of the same week.
A has exam on Thursday. B has before A. Only four people have exams between Y and B. H has exam on one of the days after B. G has exam on the day immediately before X.
Only one person has exam between B and A.
How many people have exams between X and H?

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

Question ID : **4410091313744**
Option 1 ID : **4410095186678**
Option 2 ID : **4410095186676**
Option 3 ID : **4410095186675**
Option 4 ID : **4410095186677**
Status : **Answered**
Chosen Option : **3**

Q.14 A, B, C, D, E, F and G are sitting around a circular table facing the centre. G sits to the immediate left of D. E is an immediate neighbour of both A and D. C is an immediate neighbour of both G and B. F sits to the immediate right of A. Who sits third to the left of F?

Ans
1. E
2. G
3. C
4. D

Question ID : **441009755619**
Option 1 ID : **4410092976469**
Option 2 ID : **4410092976472**
Option 3 ID : **4410092976470**
Option 4 ID : **4410092976471**
Status : **Answered**
Chosen Option : **4**

Q.15 निम्नलिखित अक्षर, और प्रतीक श्रृंखला का संदर्भ लीजिए और नीचे दिए गए प्रश्न का उत्तर दीजिए। गणना केवल बाएं से दाएं की जानी है।

(बाएं) A E T % G Y # & R D K Q C & @ U $ S * £ B Ω (दाएं)

ऐसे कितने अक्षर हैं जिनके ठीक पहले एक प्रतीक है और ठीक बाद एक अन्य अक्षर है?

Ans
1. चार
2. दो
3. तीन
4. पांच

Question ID : **4410091313634**
Option 1 ID : **4410095186237**
Option 2 ID : **4410095186235**
Option 3 ID : **4410095186236**
Option 4 ID : **4410095186238**
Status : **Answered**
Chosen Option : **2**

Q.16 Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of :: ?

: DGK :: ISL : %

Ans
1. # = CHL , % = JRK
2. # = EFJ , % = HQO
3. # = FIL , % = KTM
4. # = BIJ , % = ISL

Question ID : **4410091313684**
Option 1 ID : **4410095186435**
Option 2 ID : **4410095186437**
Option 3 ID : **4410095186438**
Option 4 ID : **4410095186436**
Status : **Answered**
Chosen Option : **3**

Q.17 In a certain code language,

'A @ B' means 'A is the father of B',
'A + B' means ' A is the brother of B',
'A x B' means 'A is the wife of B' and
'A ! B' means 'A is the sister of B'.

How is T related to R if 'T + O ! W x E @ R'?

Ans
1. Mother's brother
2. Mother's sister
3. Mother's mother
4. Mother's father

Question ID : **4410091313823**
Option 1 ID : **4410095186994**
Option 2 ID : **4410095186991**
Option 3 ID : **4410095186993**
Option 4 ID : **4410095186992**
Status : **Answered**
Chosen Option : **1**

Q.18 What should come in place of the question mark (?) in the given series?

55, 59, 67, 83, 115, ?

Ans
1. 167
2. 177
3. 179
4. 176

Question ID : **441009605266**
Option 1 ID : **4410092376182**
Option 2 ID : **4410092376181**
Option 3 ID : **4410092376183**
Option 4 ID : **4410092376184**
Status : **Answered**
Chosen Option : **3**

Q.19 If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 8425673, then which of the following digits will be second from the left?

Ans
✗ 1. 4
✗ 2. 3
✗ 3. 6
✓ 4. 2

Question ID : **441009585678**
Option 1 ID : **4410092297840**
Option 2 ID : **4410092297838**
Option 3 ID : **4410092297839**
Option 4 ID : **4410092297841**
Status : **Answered**
Chosen Option : **4**

Q.20 सात व्यक्ति, B, D, E, F, P, Q और R, एक पंक्ति में उत्तर दिशा की ओर अभिमुख होकर बैठे हैं। D के दाईं ओर केवल तीन व्यक्ति बैठे हैं। B और P के बीच केवल चार व्यक्ति बैठे हैं, जिनमें से कोई भी बाएं छोर पर नहीं बैठा है। F, R के ठीक बाएं पड़ोस में बैठा है। E और P के बीच केवल तीन व्यक्ति बैठे हैं। F के बाईं ओर कितने व्यक्ति बैठे हैं?

Ans
✗ 1. तीन
✗ 2. दो
✓ 3. चार
✗ 4. एक

Question ID : **4410091313874**
Option 1 ID : **4410095187197**
Option 2 ID : **4410095187196**
Option 3 ID : **4410095187198**
Option 4 ID : **4410095187195**
Status : **Answered**
Chosen Option : **1**

Q.21 In a certain code language,

'A + B' means 'A is the father of B',
'A × B' means 'A is the sister of B',
'A – B' means 'A is the son of B' and
'A ÷ B' means 'A is the mother of B'.

How is E related to I if 'E ÷ F + G × H – I'?

Ans
✓ 1. Husband's mother
✗ 2. Husband's sister's mother
✗ 3. Father's mother
✗ 4. Mother's mother

Question ID : **4410091313974**
Option 1 ID : **4410095187598**
Option 2 ID : **4410095187597**
Option 3 ID : **4410095187596**
Option 4 ID : **4410095187595**
Status : **Answered**
Chosen Option : **1**

Q.22 Each of the digits in the number 5348671 is arranged in ascending order from left to right, what will be the sum of the digits that are second from the left and second from the right in the new number thus formed?

Ans
✔ 1. 10
✘ 2. 13
✘ 3. 7
✘ 4. 12

Question ID : **4410091312792**
Option 1 ID : **4410095182874**
Option 2 ID : **4410095182876**
Option 3 ID : **4410095182873**
Option 4 ID : **4410095182875**
Status : **Answered**
Chosen Option : **1**

Q.23 What should come in place of the question mark (?) in the given series?

2 15 41 80 132 ? 275

Ans
✘ 1. 189
✘ 2. 191
✔ 3. 197
✘ 4. 190

Question ID : **4410091312772**
Option 1 ID : **4410095182795**
Option 2 ID : **4410095182796**
Option 3 ID : **4410095182794**
Option 4 ID : **4410095182793**
Status : **Answered**
Chosen Option : **3**

Q.24 Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north. Only three people sit between D and E. G sits to the immediate left of E. No one sits to the right of C. Only two people sit between C and G. B sits to the immediate right of A. How many people sit between A and F?

Ans
✘ 1. 4
✘ 2. 2
✔ 3. 3
✘ 4. 1

Question ID : **4410091313790**
Option 1 ID : **4410095186862**
Option 2 ID : **4410095186860**
Option 3 ID : **4410095186861**
Option 4 ID : **4410095186859**
Status : **Answered**
Chosen Option : **3**

Q.25 Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster 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. PLFB
✓ 2. IEYV
✗ 3. XTNJ
✗ 4. HDXT

Question ID : **4410091313870**
Option 1 ID : **4410095187180**
Option 2 ID : **4410095187179**
Option 3 ID : **4410095187181**
Option 4 ID : **4410095187182**
Status : **Answered**
Chosen Option : **2**

Q.26 CLOD is related to AHLX in a certain way based on the English alphabetical order. In the same way, UVCF is related to SRZZ. To which of the following options is OJTN related, following the same logic?

Ans
✗ 1. MHQF
✓ 2. MFQH
✗ 3. MFHQ
✗ 4. MHFQ

Question ID : **4410091313866**
Option 1 ID : **4410095187165**
Option 2 ID : **4410095187163**
Option 3 ID : **4410095187164**
Option 4 ID : **4410095187166**
Status : **Answered**
Chosen Option : **2**

Q.27 What should come in place of the question mark (?) in the given series based on the English alphabetical order?

HSM OMR VGW CAB ?

Ans
✗ 1. JGU
✗ 2. JGI
✗ 3. JIG
✓ 4. JUG

Question ID : **441009756225**
Option 1 ID : **4410092978895**
Option 2 ID : **4410092978896**
Option 3 ID : **4410092978893**
Option 4 ID : **4410092978894**
Status : **Answered**
Chosen Option : **4**

Q.28 Each of A, B, G, H, W, X and Y has an exam on a different day of a week starting from Monday and ending on Sunday of the same week.
Only three people have exams between W and A. Only three people have exams between B and Y. G has exam on some day before A and on some day after H. Only X has exam before Y.
How many people have exams after W?

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

Question ID : **4410091313745**
Option 1 ID : **4410095186682**
Option 2 ID : **4410095186681**
Option 3 ID : **4410095186679**
Option 4 ID : **4410095186680**
Status : **Answered**
Chosen Option : **3**

Q.29 In a certain code language, 'please come here' is coded as ' bz jq yr' and 'come school daily' is coded as 'gf pa jq'. How is 'come' coded in that language?

Ans
✗ 1. bz
✓ 2. jq
✗ 3. yr
✗ 4. gf

Question ID : **441009759073**
Option 1 ID : **4410092990286**
Option 2 ID : **4410092990285**
Option 3 ID : **4410092990287**
Option 4 ID : **4410092990288**
Status : **Answered**
Chosen Option : **2**

Q.30 D ranked 41st from the bottom and 12th from the top in his class. How many students are there in his class?

Ans
✗ 1. 51
✗ 2. 54
✓ 3. 52
✗ 4. 53

Question ID : **4410091313927**
Option 1 ID : **4410095187409**
Option 2 ID : **4410095187407**
Option 3 ID : **4410095187410**
Option 4 ID : **4410095187408**
Status : **Answered**
Chosen Option : **3**

Section : **Branch Specific (Electrical)**

Q.1 **Which of the following factors increases the pressure on a penstock in a hydro-electric power station?**

Ans
✗ 1. Negative pressure due to increase in load
✗ 2. Constant water temperature
✗ 3. Reduced water flow
✓ 4. Water hammer due to decrease in load

Question ID : **441009154480**
Option 1 ID : **441009613086**
Option 2 ID : **441009613088**
Option 3 ID : **441009613089**
Option 4 ID : **441009613087**
Status : **Answered**
Chosen Option : **4**

Q.2 **Isometric view is how an object is _____, while isometric projection is how an object is _____.**

Ans
✓ 1. viewed; drawn
✗ 2. viewed; viewed
✗ 3. drawn; drawn
✗ 4. drawn; viewed

Question ID : **441009161094**
Option 1 ID : **441009638045**
Option 2 ID : **441009638047**
Option 3 ID : **441009638048**
Option 4 ID : **441009638046**
Status : **Answered**
Chosen Option : **1**

Q.3 **The steady-state speed of a synchronous motor is _____.**

Ans
✗ 1. directly proportional to the load
✓ 2. constant and independent of load torque
✗ 3. inversely proportional to the load
✗ 4. dependent on the rotor current

Question ID : **441009165404**
Option 1 ID : **441009655011**
Option 2 ID : **441009655010**
Option 3 ID : **441009655008**
Option 4 ID : **441009655009**
Status : **Answered**
Chosen Option : **2**

Q.4 Which of the following accurately represents the standard output voltage levels delivered by secondary distribution substations in most urban residential areas in India?

Ans
✗ 1. 33 kV three-phase or 11 kV single-phase
✗ 2. 11 kV three-phase or 6.6 kV single-phase
✗ 3. 132 kV three-phase or 66 kV single-phase
✓ 4. 415 V three-phase or 240 V single-phase

Question ID : **441009154415**
Option 1 ID : **441009612830**
Option 2 ID : **441009612833**
Option 3 ID : **441009612832**
Option 4 ID : **441009612831**
Status : **Answered**
Chosen Option : **4**

Q.5 The continuity equation for incompressible fluid is given as _____. (Consider A_1 and A_2 are the cross-sectional areas of the pipe or channel at two different points. V_1 and V_2 are the velocities of the fluid at those two points.)

Ans
✗ 1. $\frac{A_1}{A_2} = \frac{V_1}{V_2}$
✗ 2. $\frac{A_1}{A_2} = \left(\frac{V_1}{V_2}\right)^2$
✓ 3. $\frac{A_1}{A_2} = \frac{V_2}{V_1}$
✗ 4. $\frac{A_1}{A_2} = \left(\frac{V_2}{V_1}\right)^2$

Question ID : **441009269562**
Option 1 ID : **4410091047310**
Option 2 ID : **4410091047312**
Option 3 ID : **4410091047311**
Option 4 ID : **4410091047313**
Status : **Answered**
Chosen Option : **3**

Q.6 If a voltage phasor is V=100∠0° and current phasor is I=10∠45°, what is the power factor?

Ans
✓ 1. cos(45°) leading
✗ 2. cos(0°) leading
✗ 3. cos(90°) leading
✗ 4. cos(30°) leading

Question ID : **441009183166**
Option 1 ID : **441009724074**
Option 2 ID : **441009724075**
Option 3 ID : **441009724077**
Option 4 ID : **441009724076**
Status : **Answered**
Chosen Option : **1**

Q.7 **Based on the following statements, select the correct option.**

Statement I: The total inductance in a series opposing configuration can never be greater than the inductance of the largest coil.
Statement II: In series opposing, the inductance of each coil works against the other, reducing the total inductance.

Ans
✗ 1. Both Statement I and Statement II are false.
✓ 2. Both Statement I and Statement II are true.
✗ 3. Statement I is false, Statement II is true.
✗ 4. Statement I is true, Statement II is false.

Question ID : **441009162543**
Option 1 ID : **441009643825**
Option 2 ID : **441009643824**
Option 3 ID : **441009643827**
Option 4 ID : **441009643826**
Status : **Answered**
Chosen Option : **2**

Q.8 **In Electrical Estimation and Contracting, a valid quotation should always include which of the following?**

Ans
✗ 1. Site photos
✓ 2. Terms of payment and validity period
✗ 3. Contractor's personal opinion
✗ 4. Completion certificate

Question ID : **441009181794**
Option 1 ID : **441009718686**
Option 2 ID : **441009718685**
Option 3 ID : **441009718683**
Option 4 ID : **441009718684**
Status : **Answered**
Chosen Option : **4**

Q.9 **What is the value of the phase difference between the input and output waveforms for the Common Source configuration of FET?**

Ans
✗ 1. 0°
✗ 2. 270°
✗ 3. 90°
✓ 4. 180°

Question ID : **441009207498**
Option 1 ID : **441009815988**
Option 2 ID : **441009815990**
Option 3 ID : **441009815991**
Option 4 ID : **441009815989**
Status : **Answered**
Chosen Option : **4**

Q.10 Select the correct option regarding the following two statements labelled Assertion (A) and Reason (R).

Assertion (A): Mutual inductance is zero if the two coils are placed far apart.
Reason (R): Magnetic flux from one coil does not link with the second coil if there is a large separation between them.

Ans
✗ 1. A is false, R is true.
✓ 2. Both A and R are true, and R is the correct explanation of A.
✗ 3. A is true, R is false.
✗ 4. Both A and R are true, but R is not the correct explanation of A.

Question ID : **441009162380**
Option 1 ID : **441009643175**
Option 2 ID : **441009643172**
Option 3 ID : **441009643174**
Option 4 ID : **441009643173**
Status : **Answered**
Chosen Option : **2**

Q.11 Consider the following statements and select the correct option.

Statement I: The capacitance of a capacitor is directly proportional to the area of the plates and the dielectric constant of the material.
Statement II: The capacitance of a capacitor decreases as the distance between the plates increases.

Ans
✗ 1. Statement I is false, while statement II is true.
✓ 2. Both statements are true.
✗ 3. Both statements are false.
✗ 4. Statement I is true, while statement II is false.

Question ID : **441009171029**
Option 1 ID : **441009677024**
Option 2 ID : **441009677022**
Option 3 ID : **441009677021**
Option 4 ID : **441009677023**
Status : **Answered**
Chosen Option : **2**

Q.12 निम्नलिखित में से कौन-सा, किसी परियोजना की लागत का घटक नहीं है?

Ans
✓ 1. निस्तारण मूल्य
✗ 2. आकस्मिकता
✗ 3. प्रत्यक्ष लागत
✗ 4. ऊपरी लागत

Question ID : **441009181768**
Option 1 ID : **441009718581**
Option 2 ID : **441009718582**
Option 3 ID : **441009718579**
Option 4 ID : **441009718580**
Status : **Answered**
Chosen Option : **2**

Q.13 Two rain drops reach the earth with their terminal velocities in the ratio of 9 : 4. The ratio of their radii is:

Ans
✗ 1. 9 : 4
✗ 2. 4 : 9
✓ 3. 3 : 2
✗ 4. 2 : 3

Question ID : **441009269567**
Option 1 ID : **4410091047332**
Option 2 ID : **4410091047333**
Option 3 ID : **4410091047330**
Option 4 ID : **4410091047331**
Status : **Answered**
Chosen Option : **4**

Q.14 A current source of 5 A in parallel with a 4 Ω resistor is converted into an equivalent voltage source. What will be the voltage and resistance of the equivalent voltage source?

Ans
✗ 1. 5 V in series with 4 Ω
✓ 2. 20 V in series with 4 Ω
✗ 3. 4 V in series with 5 Ω
✗ 4. 9 V in series with 1 Ω

Question ID : **441009174170**
Option 1 ID : **441009689084**
Option 2 ID : **441009689085**
Option 3 ID : **441009689086**
Option 4 ID : **441009689087**
Status : **Answered**
Chosen Option : **2**

Q.15 The use of a split-ring commutator in a DC generator results in:

Ans
✓ 1. direct current output
✗ 2. pure sinusoidal output
✗ 3. continuous alternating output
✗ 4. square wave AC

Question ID : **441009293906**
Option 1 ID : **4410091142488**
Option 2 ID : **4410091142486**
Option 3 ID : **4410091142487**
Option 4 ID : **4410091142489**
Status : **Answered**
Chosen Option : **1**

Q.16 The working principle of a DC generator is primarily based on which of the following?

Ans
✗ 1. Newton's Law
✗ 2. Ohm's Law
✗ 3. Law of Thermodynamics
✓ 4. Faraday's Law of Electromagnetic Induction

Question ID : **441009370479**
Option 1 ID : **4410091447836**
Option 2 ID : **4410091447833**
Option 3 ID : **4410091447835**
Option 4 ID : **4410091447834**
Status : **Answered**
Chosen Option : **4**

Q.17 In an indirect arc furnace, how is heat primarily transferred to the charge?

Ans
✗ 1. By conduction from electrodes to the entire charge
✗ 2. By direct current flow through the charge
✗ 3. By convection from the furnace walls to the charge
✓ 4. By radiation from the arc to the top layer, followed by conduction within the charge

Question ID : **441009189712**
Option 1 ID : **441009748050**
Option 2 ID : **441009748049**
Option 3 ID : **441009748052**
Option 4 ID : **441009748051**
Status : **Answered**
Chosen Option : **4**

Q.18 What is the function of the no-voltage coil in a starter?

Ans
✗ 1. To increase the back EMF
✓ 2. To ensure the motor disconnects when the supply fails
✗ 3. To increase the speed
✗ 4. To protect from high temperature

Question ID : **441009370517**
Option 1 ID : **4410091447983**
Option 2 ID : **4410091447982**
Option 3 ID : **4410091447984**
Option 4 ID : **4410091447981**
Status : **Answered**
Chosen Option : **2**

Q.19 In a tuned circuit containing a resistor, an inductor and a capacitor in series, what happens at the resonant frequency?

Ans
✗ 1. The capacitive reactance becomes maximum.
✗ 2. The total impedance is purely inductive.
✓ 3. The inductive and capacitive reactances are equal in magnitude but opposite in phase.
✗ 4. The inductive reactance becomes zero.

Question ID : **441009181279**
Option 1 ID : **441009716630**
Option 2 ID : **441009716632**
Option 3 ID : **441009716631**
Option 4 ID : **441009716629**
Status : **Answered**
Chosen Option : **3**

Q.20 उर्मिलन उपकरण (crimping tool) का उपयोग निम्नलिखित में से किसके लिए किया जाता है?

Ans
✓ 1. तारों से कनेक्टर जोड़ने के लिए
✗ 2. तारों को काटने के लिए
✗ 3. तारों को वियोजित करने के लिए
✗ 4. तारों को मोड़ने के लिए

Question ID : **441009206644**
Option 1 ID : **441009812641**
Option 2 ID : **441009812639**
Option 3 ID : **441009812642**
Option 4 ID : **441009812640**
Status : **Answered**
Chosen Option : **2**

Q.21 If the value of the Reynolds number is less than 1900, then:

Ans
✗ 1. the liquid follows neither turbulent flow nor laminar flow
✗ 2. the liquid is converting from laminar flow to turbulent flow
✓ 3. the liquid follows laminar flow
✗ 4. the liquid follows turbulent flow

Question ID : **441009267172**
Option 1 ID : **4410091037951**
Option 2 ID : **4410091037950**
Option 3 ID : **4410091037949**
Option 4 ID : **4410091037948**
Status : **Answered**
Chosen Option : **3**

Q.22 Distance between two feeders is _____ for a 400 A current capacity busbar.

Ans
✗ 1. 1 cm
✗ 2. 15 cm
✗ 3. 5 cm
✓ 4. 10 cm

Question ID : **441009206625**
Option 1 ID : **441009812574**
Option 2 ID : **441009812577**
Option 3 ID : **441009812575**
Option 4 ID : **441009812576**
Status : **Answered**
Chosen Option : **2**

Q.23 The barrier energy of a silicon diode at room temperature is approximately:

Ans
✗ 1. 1.1 V
✓ 2. 0.7 V
✗ 3. 0.1 V
✗ 4. 0.3 V

Question ID : **441009229465**
Option 1 ID : **441009897433**
Option 2 ID : **441009897432**
Option 3 ID : **441009897430**
Option 4 ID : **441009897431**
Status : **Answered**
Chosen Option : **2**

Q.24 In a magnetic circuit, if the magnetic flux density is doubled, how does the energy stored per unit volume change?

Ans
✗ 1. It remains the same.
✓ 2. It is quadrupled.
✗ 3. It is halved.
✗ 4. It is doubled.

Question ID : **441009162582**
Option 1 ID : **441009643981**
Option 2 ID : **441009643982**
Option 3 ID : **441009643980**
Option 4 ID : **441009643983**
Status : **Answered**
Chosen Option : **4**

Q.25 Which of the following statements is true about bare electrodes used in welding?

Ans
✗ 1. They are coated to improve arc stability and reduce starting problems.
✗ 2. They typically require welding currents between 60 to 120 amperes.
✗ 3. They are operated at higher welding voltages and offer easy arc striking.
✓ 4. They are run at lower welding voltages, and arc starting is more difficult.

Question ID : **441009189896**
Option 1 ID : **441009748664**
Option 2 ID : **441009748662**
Option 3 ID : **441009748661**
Option 4 ID : **441009748663**
Status : **Answered**
Chosen Option : **2**

Q.26 Which type of motor is commonly used in gearless traction elevator machines?

Ans
✗ 1. Universal motor
✓ 2. Permanent magnet synchronous motor
✗ 3. Stepper motor
✗ 4. Squirrel cage induction motor

Question ID : **441009192196**
Option 1 ID : **441009757345**
Option 2 ID : **441009757344**
Option 3 ID : **441009757343**
Option 4 ID : **441009757342**
Status : **Answered**
Chosen Option : **4**

Q.27 Which of the following statements about Norton's Theorem is NOT true?

Ans
✗ 1. Norton's Theorem is applicable only to linear and bilateral networks.
✓ 2. Norton's and Thevenin's equivalents cannot be converted into each other.
✗ 3. Norton's equivalent circuit consists of a current source in parallel with a resistance.
✗ 4. Norton's equivalent resistance is found by deactivating all independent sources.

Question ID : **441009174717**
Option 1 ID : **441009691121**
Option 2 ID : **441009691123**
Option 3 ID : **441009691122**
Option 4 ID : **441009691124**
Status : **Answered**
Chosen Option : **4**

Q.28 What is the operating principle of an isolation transformer?

Ans
✗ 1. Electrostatic induction
✗ 2. Electrical conduction
✓ 3. Electromagnetic induction
✗ 4. Capacitive coupling

Question ID : **441009370745**
Option 1 ID : **4410091448881**
Option 2 ID : **4410091448882**
Option 3 ID : **4410091448883**
Option 4 ID : **4410091448884**
Status : **Answered**
Chosen Option : **3**

Q.29 Consider the following statements and select the correct option.

Statement 1: The Superposition Theorem is applicable only to linear circuits with multiple sources.
Statement 2: The Superposition Theorem allows the analysis of a circuit by considering one source at a time while replacing all other sources with their internal impedance (voltage sources replaced by short circuits, and current sources replaced by open circuits).

Ans
✗ 1. Statement 1 is false, and Statement 2 is true.
✗ 2. Statement 1 is true, and Statement 2 is false.
✗ 3. Both Statement 1 and Statement 2 are false.
✓ 4. Both Statement 1 and Statement 2 are true.

Question ID : **441009167180**
Option 1 ID : **441009661873**
Option 2 ID : **441009661872**
Option 3 ID : **441009661874**
Option 4 ID : **441009661871**
Status : **Answered**
Chosen Option : **4**

Q.30 Which characteristic of induction motors makes the speed control via changing applied voltage inefficient?

Ans
✗ 1. Constant torque
✗ 2. Low starting torque
✗ 3. High power factor
✓ 4. Non-linear torque-speed relationship

Question ID : **441009373089**
Option 1 ID : **4410091457928**
Option 2 ID : **4410091457930**
Option 3 ID : **4410091457927**
Option 4 ID : **4410091457929**
Status : **Answered**
Chosen Option : **4**

Q.31 How are the primary and secondary windings arranged in an isolation transformer?

Ans
✗ 1. They are wound together without insulation.
✗ 2. They are wound on separate cores.
✗ 3. They are connected through a capacitor.
✓ 4. They are magnetically coupled but electrically isolated.

Question ID : **441009370735**
Option 1 ID : **4410091448844**
Option 2 ID : **4410091448841**
Option 3 ID : **4410091448842**
Option 4 ID : **4410091448843**
Status : **Answered**
Chosen Option : **4**

Q.32 What is the key difference in the operation of a two-stage biogas plant compared to a single-stage plant?

Ans
✗ 1. Use of chemical additives
✗ 2. Use of solar power
✗ 3. Increased retention time
✓ 4. Separate chambers for acid and methane formation

Question ID : **441009154470**
Option 1 ID : **441009613047**
Option 2 ID : **441009613046**
Option 3 ID : **441009613049**
Option 4 ID : **441009613048**
Status : **Answered**
Chosen Option : **4**

Q.33 In the output characteristics of an FET amplifier, the region where amplification occurs is the:

Ans
✗ 1. breakdown region
✓ 2. saturation region
✗ 3. ohmic region
✗ 4. cut-off region

Question ID : **441009212861**
Option 1 ID : **441009835619**
Option 2 ID : **441009835617**
Option 3 ID : **441009835618**
Option 4 ID : **441009835616**
Status : **Answered**
Chosen Option : **2**

Q.34 Consider the following statements and select the correct option.

Statement I: Resistors are used in electronic circuits to drop voltage across components.
Statement II: Voltage drop across a resistor depends on the current flowing through it.

Ans
✗ 1. Statement I is false, while statement II is true.
✓ 2. Both statements are true.
✗ 3. Statement I is true, while statement II is false.
✗ 4. Both statements are false.

Question ID : **441009170998**
Option 1 ID : **441009676899**
Option 2 ID : **441009676897**
Option 3 ID : **441009676898**
Option 4 ID : **441009676900**
Status : **Answered**
Chosen Option : **2**

Q.35 मूल लंबाई 'L' और अनुप्रस्थ-काट क्षेत्रफल 'A' वाले एक तार पर इसकी लंबाई के अनुदिश एक विरूपक बल 'F' लगाए जाने पर, तार की लंबाई में 'l' की वृद्धि हो जाती है। यदि तार के पदार्थ का यंग मापांक 'Y' हो, तो तानित तार की प्रत्यास्थ स्थितिज ऊर्जा क्या होगी?

Ans
1. $u = \frac{AY}{2L}$
2. $u = \frac{A^2Y}{2L}$
3. $u = \frac{AYl}{2L}$
4. $u = \frac{AYl^2}{2L}$

Question ID : **441009214615**
Option 1 ID : **441009842500**
Option 2 ID : **441009842503**
Option 3 ID : **441009842501**
Option 4 ID : **441009842502**
Status : **Answered**
Chosen Option : **4**

Q.36 Consider the following statements and select the correct option.

Statement I: In a series R-L circuit, the current always lags behind the voltage by a phase angle.
Statement II: The phase angle in a series R-L circuit depends on the ratio of inductive reactance to resistance.

Ans
1. Both Statement I and Statement II are true, but Statement II is not the correct explanation of Statement I.
2. Both Statement I and Statement II are true, and Statement II is the correct explanation of Statement I.
3. Statement I is true and Statement II is false.
4. Both statements I and II are false.

Question ID : **441009166982**
Option 1 ID : **441009661074**
Option 2 ID : **441009661073**
Option 3 ID : **441009661075**
Option 4 ID : **441009661076**
Status : **Answered**
Chosen Option : **2**

Q.37 The voltage across the inductor and capacitor at resonance is always _____.

Ans
1. zero
2. half of the supply voltage
3. infinite
4. equal and opposite

Question ID : **441009166970**
Option 1 ID : **441009661029**
Option 2 ID : **441009661032**
Option 3 ID : **441009661031**
Option 4 ID : **441009661030**
Status : **Answered**
Chosen Option : **4**

Q.38 Which of the following has maximum viscosity?

Ans
✔ 1. Glycerine
✘ 2. Blood
✘ 3. Water
✘ 4. Air

Question ID : **441009214542**
Option 1 ID : **441009842208**
Option 2 ID : **441009842209**
Option 3 ID : **441009842207**
Option 4 ID : **441009842206**
Status : **Answered**
Chosen Option : **1**

Q.39 Which of the following describes principle of operation of electrostatic instruments?

Ans
✔ 1. Electrostatic attraction or repulsion
✘ 2. Electromagnetic induction
✘ 3. Heating effect of current
✘ 4. Magnetic effect of current

Question ID : **441009176851**
Option 1 ID : **441009699299**
Option 2 ID : **441009699300**
Option 3 ID : **441009699298**
Option 4 ID : **441009699297**
Status : **Answered**
Chosen Option : **1**

Q.40 Consider the following statements and select the correct option.

Statement I: The admittance method is more efficient for solving complex parallel AC circuits than the impedance method.
Statement II: This is because admittances in parallel add algebraically like resistors in parallel.

Ans
✘ 1. Statement I is true, and Statement II is false.
✔ 2. Both statements are true, and Statement II is the correct explanation of Statement I.
✘ 3. Both statements are true, but Statement II is not the correct explanation of Statement I.
✘ 4. Both statements I and II are false.

Question ID : **441009166812**
Option 1 ID : **441009660411**
Option 2 ID : **441009660409**
Option 3 ID : **441009660410**
Option 4 ID : **441009660412**
Status : **Answered**
Chosen Option : **2**

Q.41 When a semiconductor is doped to increase electron concentration, how does the hole concentration change (according to the Mass Action Law)?

Ans
✗ 1. It becomes zero.
✓ 2. It decreases.
✗ 3. It increases.
✗ 4. It remains constant.

Question ID : **441009219252**
Option 1 ID : **441009860433**
Option 2 ID : **441009860432**
Option 3 ID : **441009860430**
Option 4 ID : **441009860431**
Status : **Answered**
Chosen Option : **2**

Q.42 How is the primary of the teaser transformer connected in the Scott connection?

Ans
✗ 1. Both ends are connected to the secondary of the main transformer.
✗ 2. It is connected to the high-voltage side of the main transformer.
✓ 3. One end is connected to one of the 3-phase line, and the other is connected to the centre tap of the main transformer.
✗ 4. It is connected to the centre tap of the 3-phase supply.

Question ID : **441009294015**
Option 1 ID : **4410091142991**
Option 2 ID : **4410091142992**
Option 3 ID : **4410091142989**
Option 4 ID : **4410091142990**
Status : **Answered**
Chosen Option : **3**

Q.43 In the context of tenders, EMD stands for:

Ans
✗ 1. Emergency Money Deposit
✓ 2. Earnest Money Deposit
✗ 3. Effective Market Dealing
✗ 4. Effective Money Deposit

Question ID : **441009206583**
Option 1 ID : **441009812435**
Option 2 ID : **441009812436**
Option 3 ID : **441009812433**
Option 4 ID : **441009812434**
Status : **Answered**
Chosen Option : **1**

Q.44 Read the given statements and select the most appropriate option.

Statements:
I: In direct resistance heating, current flows through external heating elements only.
II: The charge is not a part of the electric circuit.

Ans
✔ 1. Both statements are false
✘ 2. Both statements are true
✘ 3. Statement I is false, statement II is true
✘ 4. Statement I is true, statement II is false

Question ID : **441009166290**
Option 1 ID : **441009658339**
Option 2 ID : **441009658338**
Option 3 ID : **441009658341**
Option 4 ID : **441009658340**
Status : **Answered**
Chosen Option : **2**

Q.45 The efficiency of power transfer under maximum power transfer conditions is:

Ans
✘ 1. 25%
✘ 2. 100%
✘ 3. 0%
✔ 4. 50%

Question ID : **441009167256**
Option 1 ID : **441009662174**
Option 2 ID : **441009662171**
Option 3 ID : **441009662173**
Option 4 ID : **441009662172**
Status : **Answered**
Chosen Option : **4**

Q.46 Read the given statements carefully and select the correct option.

I) In the first angle projection, the object is between the observer and plane.
II) In the third angle projection, the plane is between the observer and object.

Ans
✘ 1. Only statement II is correct.
✘ 2. Both statement I and statement II are wrong.
✔ 3. Both statement I and statement II are correct.
✘ 4. Only statement I is correct.

Question ID : **441009160602**
Option 1 ID : **441009636253**
Option 2 ID : **441009636251**
Option 3 ID : **441009636250**
Option 4 ID : **441009636252**
Status : **Answered**
Chosen Option : **3**

Q.47 What is the main purpose of resistance switching in circuit breakers?

Ans
✗ 1. To maintain constant voltage
✗ 2. To increase current flow during switching
✓ 3. To reduce arcing energy and aid arc extinction
✗ 4. To improve insulation strength

Question ID : **441009318769**
Option 1 ID : **4410091241363**
Option 2 ID : **4410091241360**
Option 3 ID : **4410091241361**
Option 4 ID : **4410091241362**
Status : **Answered**
Chosen Option : **3**

Q.48 Which of the following best describes the role of the control unit in a motor drive system?

Ans
✗ 1. Converts electrical energy into mechanical energy
✗ 2. Increases the input voltage for the power modulator
✓ 3. Controls the power modulator and provides protection commands
✗ 4. Supplies high current directly to the motor windings

Question ID : **441009189473**
Option 1 ID : **441009747293**
Option 2 ID : **441009747295**
Option 3 ID : **441009747294**
Option 4 ID : **441009747292**
Status : **Answered**
Chosen Option : **3**

Q.49 Which law governs the phenomenon of statically induced EMF?

Ans
✗ 1. Ampere's Law
✗ 2. Coulomb's Law
✓ 3. Faraday's Law of Induction
✗ 4. Lenz's Law

Question ID : **441009162559**
Option 1 ID : **441009643888**
Option 2 ID : **441009643891**
Option 3 ID : **441009643889**
Option 4 ID : **441009643890**
Status : **Answered**
Chosen Option : **4**

Q.50 In a Kelvin Double Bridge, if the ratio arms are equal and the standard resistor is 0.01 Ω, what is the value of the unknown resistance when the bridge is balanced?

Ans
✗ 1. 0.1 Ω
✗ 2. 0.02 Ω
✓ 3. 0.01 Ω
✗ 4. 0.005 Ω

Question ID : **441009176675**
Option 1 ID : **441009698608**
Option 2 ID : **441009698607**
Option 3 ID : **441009698606**
Option 4 ID : **441009698605**
Status : **Answered**
Chosen Option : **3**

Q.51 In a typical alternator, the damper winding consists of:

Ans
✗ 1. copper bars connected to a series of resistors
✗ 2. iron bars placed along the rotor periphery
✗ 3. permanent magnets attached to the rotor
✓ 4. copper bars short-circuited by heavy copper rings

Question ID : **441009356115**
Option 1 ID : **4410091390588**
Option 2 ID : **4410091390590**
Option 3 ID : **4410091390591**
Option 4 ID : **4410091390589**
Status : **Answered**
Chosen Option : **4**

Q.52 In an ideal parallel resonance circuit (loss-less L and C), what is the impedance at resonance?

Ans
✗ 1. Maximum but finite
✗ 2. Zero
✗ 3. Equal to resistance
✓ 4. Infinite

Question ID : **441009154537**
Option 1 ID : **441009613311**
Option 2 ID : **441009613310**
Option 3 ID : **441009613313**
Option 4 ID : **441009613312**
Status : **Answered**
Chosen Option : **4**

Q.53 What is the minimum internal diameter recommended for a GI pipe when passing a weatherproof or PVC-insulated cable through it?

Ans
✓ 1. 5.0 cm
✗ 2. 2.5 cm
✗ 3. 3.0 cm
✗ 4. 7.5 cm

Question ID : **441009181710**
Option 1 ID : **441009718349**
Option 2 ID : **441009718347**
Option 3 ID : **441009718348**
Option 4 ID : **441009718350**
Status : **Answered**
Chosen Option : **2**

Q.54 An electrodynamic wattmeter has a current coil carrying 5 A and a pressure coil connected across 100 V. The load has a power factor of 0.8 lagging, and the meter constant is 0.5 Nm per watt. What is the approximate deflecting torque produced in the instrument?

Ans
✔ 1. 200 Nm
✘ 2. 150 Nm
✘ 3. 100 Nm
✘ 4. 225 Nm

Question ID : **441009159050**
Option 1 ID : **441009631097**
Option 2 ID : **441009631096**
Option 3 ID : **441009631095**
Option 4 ID : **441009631098**
Status : **Answered**
Chosen Option : **3**

Q.55 In a series RLC circuit, if $X_L = 40\ \Omega$, $X_C = 40\ \Omega$, and $R = 25\Omega$, what is the impedance of the circuit?

Ans
✘ 1. 5 Ω
✘ 2. 40 Ω
✔ 3. 25 Ω
✘ 4. 0 Ω

Question ID : **441009152765**
Option 1 ID : **441009606220**
Option 2 ID : **441009606222**
Option 3 ID : **441009606221**
Option 4 ID : **441009606219**
Status : **Answered**
Chosen Option : **1**

Q.56 Based on the given statements, select the correct option.

Statement I: A reduction in the air gap of a magnetic circuit will increase the lifting power.
Statement II: The lifting power is directly proportional to the reluctance of the magnetic circuit.

Ans
✘ 1. Both Statement I and Statement II are true.
✔ 2. Statement I is true, Statement II is false.
✘ 3. Both Statement I and Statement II are false.
✘ 4. Statement I is false, Statement II is true.

Question ID : **441009162511**
Option 1 ID : **441009643696**
Option 2 ID : **441009643698**
Option 3 ID : **441009643697**
Option 4 ID : **441009643699**
Status : **Answered**
Chosen Option : **2**

Q.57 According to the Indian Electricity Rules, what is the maximum load permitted on a single light and fan sub-circuit in commercial buildings?

Ans
✗ 1. 1000 W
✗ 2. 500 W
✓ 3. 800 W
✗ 4. 1500 W

Question ID : **441009181874**
Option 1 ID : **441009719001**
Option 2 ID : **441009718999**
Option 3 ID : **441009719000**
Option 4 ID : **441009719002**
Status : **Answered**
Chosen Option : **3**

Q.58 In filament lamps, why should the oxidising temperature of a filament be higher than its operating temperature?

Ans
✗ 1. To ensure the filament operates at a lower voltage
✗ 2. To increase the filament's resistance for better performance
✓ 3. To prevent the oxidised layers from flaking off, thereby increasing filament life
✗ 4. To reduce the power consumption of the filament

Question ID : **441009189726**
Option 1 ID : **441009748092**
Option 2 ID : **441009748090**
Option 3 ID : **441009748091**
Option 4 ID : **441009748093**
Status : **Answered**
Chosen Option : **3**

Q.59 If an object has a length of 200 units in the real world, its isometric length will be _____.

Ans
✗ 1. 233.2 units
✓ 2. 163.2 units
✗ 3. 132.2 units
✗ 4. 263.2 units

Question ID : **441009160802**
Option 1 ID : **441009636939**
Option 2 ID : **441009636936**
Option 3 ID : **441009636937**
Option 4 ID : **441009636938**
Status : **Answered**
Chosen Option : **2**

Q.60 How does the pull-out torque compare to the full-load torque in synchronous motors?

Ans
✗ 1. Pull-out torque is typically less than full-load torque.
✓ 2. Pull-out torque is greater than full-load torque.
✗ 3. Pull-out torque is unrelated to full-load torque.
✗ 4. Pull-out torque is equal to full-load torque.

Question ID : **441009159213**
Option 1 ID : **441009631735**
Option 2 ID : **441009631737**
Option 3 ID : **441009631738**
Option 4 ID : **441009631736**
Status : **Answered**
Chosen Option : **1**

Q.61 In a simple circuit of two resistors in series connected to a DC voltage source, the current can be calculated using _____.

Ans
✔ 1. Kirchhoff's Voltage Law
✘ 2. Reciprocity Theorem
✘ 3. Kirchhoff's Current Law
✘ 4. Norton's Theorem

Question ID : **441009167250**
Option 1 ID : **441009662149**
Option 2 ID : **441009662150**
Option 3 ID : **441009662148**
Option 4 ID : **441009662147**
Status : **Answered**
Chosen Option : **1**

Q.62 How are the field coils in a synchronous motor excited?

Ans
✘ 1. By using alternating current (AC) source
✘ 2. Through mechanical commutation
✔ 3. By using a DC source (e.g.: a DC generator)
✘ 4. By capacitive discharge

Question ID : **441009159161**
Option 1 ID : **441009631535**
Option 2 ID : **441009631537**
Option 3 ID : **441009631536**
Option 4 ID : **441009631538**
Status : **Answered**
Chosen Option : **3**

Q.63 Consider a raindrop in air. Which of the following statements is/are correct?

A. The terminal velocity is directly proportional to the square of the radius of the sphere.
B. The terminal velocity is inversely proportional to the viscosity of the medium.

Ans
✔ 1. Both A and B
✘ 2. A only
✘ 3. Neither A nor B
✘ 4. B only

Question ID : **441009272348**
Option 1 ID : **4410091057965**
Option 2 ID : **4410091057963**
Option 3 ID : **4410091057966**
Option 4 ID : **4410091057964**
Status : **Answered**
Chosen Option : **1**

Q.64 As the load on a DC motor increases, the back EMF:

Ans
✗ 1. becomes zero
✗ 2. increases
✗ 3. remains constant
✓ 4. decreases

Question ID : **441009370566**
Option 1 ID : **4410091448170**
Option 2 ID : **4410091448169**
Option 3 ID : **4410091448171**
Option 4 ID : **4410091448172**
Status : **Answered**
Chosen Option : **2**

Q.65 What remains constant when measuring voltage regulation of an alternator?

Ans
✗ 1. Frequency and load
✓ 2. Field current and speed
✗ 3. Load and voltage
✗ 4. Current and torque

Question ID : **441009159153**
Option 1 ID : **441009631505**
Option 2 ID : **441009631504**
Option 3 ID : **441009631503**
Option 4 ID : **441009631506**
Status : **Answered**
Chosen Option : **3**

Q.66 Which of the following is NOT a consequence of neutral shift in an unbalanced load system?

Ans
✗ 1. Overheating of neutral conductor
✓ 2. Increased power factor
✗ 3. Voltage imbalance across the phases
✗ 4. Deformation of the load voltage

Question ID : **441009167147**
Option 1 ID : **441009661739**
Option 2 ID : **441009661741**
Option 3 ID : **441009661742**
Option 4 ID : **441009661740**
Status : **Answered**
Chosen Option : **1**

Q.67 What happens to the viscosity of a liquid if its temperature rises?

Ans
✗ 1. It remains constant.
✗ 2. It does not depend on the temperature.
✓ 3. It decreases rapidly.
✗ 4. It increases rapidly.

Question ID : **441009272052**
Option 1 ID : **4410091056788**
Option 2 ID : **4410091056785**
Option 3 ID : **4410091056787**
Option 4 ID : **4410091056786**
Status : **Answered**
Chosen Option : **3**

Q.68 What is the source of controlling torque in moving iron instruments?

Ans
✗ 1. Electromagnetic coils
✗ 2. Permanent magnets
✓ 3. Spring or gravity
✗ 4. Eddy currents

Question ID : **441009176889**
Option 1 ID : **441009699451**
Option 2 ID : **441009699449**
Option 3 ID : **441009699450**
Option 4 ID : **441009699452**
Status : **Answered**
Chosen Option : **3**

Q.69 निम्नलिखित में से कौन-सा कथन सही है?

Ans
✓ 1. प्रचक्रण करती हुई गतिशील गेंद पर, वायु द्वारा ऊपर की दिशा में बल लगता है।
✗ 2. प्रचक्रण करती हुई गतिशील गेंद पर, वायु द्वारा नीचे की दिशा में बल लगता है।
✗ 3. बिना प्रचक्रण करती हुई गतिशील गेंद पर, वायु द्वारा नीचे की दिशा में बल लगता है।
✗ 4. बिना प्रचक्रण करती हुई गतिशील गेंद पर, वायु द्वारा ऊपर की दिशा में बल लगता है।

Question ID : **441009214556**
Option 1 ID : **441009842264**
Option 2 ID : **441009842265**
Option 3 ID : **441009842262**
Option 4 ID : **441009842263**
Status : **Answered**
Chosen Option : **2**

Q.70 What is the basic principle of distance protection in transmission lines?

Ans
✗ 1. It monitors current flow only.
✓ 2. It calculates the impedance between the relay location and the fault point.
✗ 3. It measures the time taken by a fault wave to reach the relay.
✗ 4. It measures the temperature of the conductor.

Question ID : **441009318852**
Option 1 ID : **4410091241693**
Option 2 ID : **4410091241692**
Option 3 ID : **4410091241695**
Option 4 ID : **4410091241694**
Status : **Answered**
Chosen Option : **2**

Q.71 What is the usual coverage of Zone-1 in a distance protection relay?

Ans
✗ 1. 50% of the line
✓ 2. 80–90% of the protected line
✗ 3. 100% of the line
✗ 4. Entire substation

Question ID : **441009318905**
Option 1 ID : **4410091241905**
Option 2 ID : **4410091241906**
Option 3 ID : **4410091241904**
Option 4 ID : **4410091241907**
Status : **Answered**
Chosen Option : **2**

Q.72 At absolute zero temperature (T = 0 K), the Fermi-Dirac distribution becomes a:

Ans
✗ 1. parabolic function
✗ 2. linear function
✓ 3. step function
✗ 4. constant function

Question ID : **441009229277**
Option 1 ID : **441009896731**
Option 2 ID : **441009896729**
Option 3 ID : **441009896730**
Option 4 ID : **441009896732**
Status : **Answered**
Chosen Option : **2**

Q.73 Which part of the cathode ray tube is responsible for generating the electron beam?

Ans
✓ 1. Electron gun
✗ 2. Vertical deflection plates
✗ 3. Fluorescent screen
✗ 4. Aquadag coating

Question ID : **441009176721**
Option 1 ID : **441009698794**
Option 2 ID : **441009698793**
Option 3 ID : **441009698795**
Option 4 ID : **441009698796**
Status : **Answered**
Chosen Option : **4**

Q.74 In the ON state, an FET operates in which region?

Ans
✗ 1. Saturation region (active mode)
✗ 2. Cut-off region
✗ 3. Breakdown region
✓ 4. Ohmic/Linear region

Question ID : **441009212844**
Option 1 ID : **441009835572**
Option 2 ID : **441009835571**
Option 3 ID : **441009835574**
Option 4 ID : **441009835573**
Status : **Answered**
Chosen Option : **1**

Q.75 Moving iron (MI) instruments can be used for AC and DC because:

Ans
✗ 1. they are frequency-dependent
✗ 2. deflection depends on the direction of current
✗ 3. they are polarised
✓ 4. the deflecting torque is proportional to the square of the RMS value of the operating current

Question ID : **441009176915**
Option 1 ID : **441009699549**
Option 2 ID : **441009699550**
Option 3 ID : **441009699552**
Option 4 ID : **441009699551**
Status : **Answered**
Chosen Option : **4**

Q.76 In the isometric projection, isometric means _____.

Ans
✗ 1. weight measure
✗ 2. unequal measure
✓ 3. equal measure
✗ 4. line measure

Question ID : **441009160795**
Option 1 ID : **441009636915**
Option 2 ID : **441009636913**
Option 3 ID : **441009636912**
Option 4 ID : **441009636914**
Status : **Answered**
Chosen Option : **4**

Q.77 Which of the following materials has the highest band gap?

Ans
✗ 1. Copper
✗ 2. Germanium
✗ 3. Silicon
✓ 4. Diamond

Question ID : **441009207451**
Option 1 ID : **441009815796**
Option 2 ID : **441009815798**
Option 3 ID : **441009815797**
Option 4 ID : **441009815799**
Status : **Answered**
Chosen Option : **4**

Q.78 Which type of wiring is considered the most economical and suitable for temporary installations?

Ans
✓ 1. Cleat wiring
✗ 2. Batten wiring
✗ 3. Conduit wiring
✗ 4. Casing and capping wiring

Question ID : **441009181726**
Option 1 ID : **441009718412**
Option 2 ID : **441009718414**
Option 3 ID : **441009718411**
Option 4 ID : **441009718413**
Status : **Answered**
Chosen Option : **1**

Q.79 जब एक तुल्यकालिक मोटर का रोटर तुल्यकालिक चाल के निकट पहुँचने के बाद उत्तेजित होता है, तो क्या होता है?

Ans
✗ 1. रोटर कभी भी अतुल्यकालिक चाल प्राप्त नहीं कर पाता है
✓ 2. रोटर चुंबकीय रूप से स्टेटर से जुड़ जाता है
✗ 3. रोटर की चाल और बढ़ जाती है
✗ 4. मोटर रुक जाती है

Question ID : **441009356158**
Option 1 ID : **4410091390757**
Option 2 ID : **4410091390755**
Option 3 ID : **4410091390756**
Option 4 ID : **4410091390754**
Status : **Answered**
Chosen Option : **1**

Q.80 If three resistors, R1 = 6Ω, R2 = 3Ω, and R3 = 2Ω, are connected in parallel, the total resistance will be _____.

Ans
✔ 1. 1Ω
✘ 2. 3Ω
✘ 3. 2Ω
✘ 4. 6Ω

Question ID : **441009171538**
Option 1 ID : **441009678962**
Option 2 ID : **441009678964**
Option 3 ID : **441009678963**
Option 4 ID : **441009678965**
Status : **Answered**
Chosen Option : **1**

Q.81 In an isometric projection, the angles between the three axes are always _____.

Ans
✘ 1. 320°
✘ 2. 20°
✔ 3. 120°
✘ 4. 280°

Question ID : **441009160768**
Option 1 ID : **441009636825**
Option 2 ID : **441009636826**
Option 3 ID : **441009636823**
Option 4 ID : **441009636824**
Status : **Answered**
Chosen Option : **3**

Q.82 When a conductor moves through a magnetic field at an angle θ with the direction of the magnetic flux, the induced electromotive force (emf) is given by e = Blv sinθ. Which of the following correctly explains the variables in the equation?

Ans
✘ 1. B is the angle between the magnetic flux and conductor, l is the velocity, v is the magnetic flux density and θ is the length of the conductor.
✘ 2. B is the magnetic field strength, l is the speed of the conductor, v is the distance travelled by the conductor and θ is the angle between the velocity and magnetic flux.
✘ 3. B is the velocity of the conductor, l is the magnetic flux, v is the flux density and θ is the angle between the magnetic flux and conductor.
✔ 4. B is the magnetic flux density, l is the length of the conductor, v is the speed of the conductor and θ is the angle between the velocity and magnetic field direction.

Question ID : **441009188792**
Option 1 ID : **441009744634**
Option 2 ID : **441009744633**
Option 3 ID : **441009744632**
Option 4 ID : **441009744631**
Status : **Answered**
Chosen Option : **4**

Q.83 At which point on the V-Curve does the synchronous motor operate at unity power factor?

Ans
✗ 1. At the maximum armature current
✗ 2. At maximum field current
✗ 3. At zero field current
✓ 4. At the minimum armature current

Question ID : **441009159175**
Option 1 ID : **441009631592**
Option 2 ID : **441009631594**
Option 3 ID : **441009631593**
Option 4 ID : **441009631591**
Status : **Answered**
Chosen Option : **4**

Q.84 A conductor has a resistance of 10 ohms. If a DC voltage of 20 volts is applied across it, what is the magnitude of the current flowing through the conductor?

Ans
✗ 1. 1 A
✓ 2. 2 A
✗ 3. 1.5 A
✗ 4. 0.5 A

Question ID : **441009156733**
Option 1 ID : **441009622096**
Option 2 ID : **441009622098**
Option 3 ID : **441009622097**
Option 4 ID : **441009622095**
Status : **Answered**
Chosen Option : **2**

Q.85 तीन भिन्न-भिन्न द्रवों X, Y और Z के आयतन प्रत्यास्थता गुणांक क्रमश: B_x, B_y और B_z हैं तथा इनकी संपीड्यता क्रमश: k_x, k_y और k_z हैं। यदि $B_x < B_y < B_z$ हो, तो _____ होगा।

Ans
✗ 1. $k_x < k_y < k_z$
✓ 2. $k_x > k_y > k_z$
✗ 3. $k_y > k_z > k_x$
✗ 4. $k_x = k_y = k_z$

Question ID : **441009214580**
Option 1 ID : **441009842358**
Option 2 ID : **441009842359**
Option 3 ID : **441009842360**
Option 4 ID : **441009842361**
Status : **Answered**
Chosen Option : **2**

Q.86 Which of the following is a reason for preferring double-layer windings over single-layer windings in AC machines?

Ans
✗ 1. They require non-identical coils.
✗ 2. They are less economical.
✗ 3. They occupy more space.
✓ 4. They offer lower leakage reactance.

Question ID : **441009159192**
Option 1 ID : **441009631659**
Option 2 ID : **441009631660**
Option 3 ID : **441009631662**
Option 4 ID : **441009631661**
Status : **Answered**
Chosen Option : **4**

Q.87 Which statement is generally true about horizontal amplifiers in a CRO?

Ans
✗ 1. They process input signals from probes
✓ 2. They amplify the sweep signal from the time base
✗ 3. They are not required in digital oscilloscopes
✗ 4. They handle dual input channels

Question ID : **441009176753**
Option 1 ID : **441009698917**
Option 2 ID : **441009698919**
Option 3 ID : **441009698918**
Option 4 ID : **441009698920**
Status : **Answered**
Chosen Option : **1**

Q.88 What is the common voltage used for secondary distribution in the 3-phase system?

Ans
✗ 1. 450/230 V
✓ 2. 400/230 V
✗ 3. 440/220 V
✗ 4. 380/220 V

Question ID : **441009294026**
Option 1 ID : **4410091143032**
Option 2 ID : **4410091143030**
Option 3 ID : **4410091143029**
Option 4 ID : **4410091143031**
Status : **Answered**
Chosen Option : **3**

Q.89 What is the main effect of field failure in an alternator?

Ans
✗ 1. It leads to reverse power flow.
✓ 2. It causes the alternator to operate as an induction generator.
✗ 3. It increases terminal voltage.
✗ 4. It improves efficiency.

Question ID : **441009318868**
Option 1 ID : **4410091241758**
Option 2 ID : **4410091241757**
Option 3 ID : **4410091241756**
Option 4 ID : **4410091241759**
Status : **Answered**
Chosen Option : **2**

Q.90 If the resistance in a circuit is doubled and the voltage is kept constant, then the current will:

Ans
✗ 1. remain the same
✗ 2. quadruple
✓ 3. halve
✗ 4. double

Question ID : **441009169157**
Option 1 ID : **441009669601**
Option 2 ID : **441009669602**
Option 3 ID : **441009669600**
Option 4 ID : **441009669599**
Status : **Answered**
Chosen Option : **3**

Q.91 Which of the following is NOT a common application of resistors?

Ans
✗ 1. Filter circuit networks
✗ 2. Voltage regulation
✓ 3. Data storage in RAM
✗ 4. Power control circuits

Question ID : **441009192236**
Option 1 ID : **441009757522**
Option 2 ID : **441009757519**
Option 3 ID : **441009757521**
Option 4 ID : **441009757520**
Status : **Answered**
Chosen Option : **3**

Q.92 _____ is the basic thing to be known to convert an orthographic view into an isometric view of an object.

Ans
✗ 1. Object's colour
✓ 2. Object's dimensions
✗ 3. Object's weight
✗ 4. Object's strength

Question ID : **441009160647**
Option 1 ID : **441009636412**
Option 2 ID : **441009636411**
Option 3 ID : **441009636413**
Option 4 ID : **441009636414**
Status : **Answered**
Chosen Option : **2**

Q.93 Which of the following helps in explaining blood flow in arteries?

Ans
✗ 1. Both Bernoulli's principle and Torricelli's law
✗ 2. Neither Bernoulli's principle nor Torricelli's law
✓ 3. Bernoulli's principle only
✗ 4. Torricelli's law only

Question ID : **441009213549**
Option 1 ID : **441009838275**
Option 2 ID : **441009838276**
Option 3 ID : **441009838273**
Option 4 ID : **441009838274**
Status : **Answered**
Chosen Option : **3**

Q.94 What is an inter-turn fault in an alternator?

Ans
✔ 1. Short circuit between turns of the same winding
✘ 2. Open circuit in rotor
✘ 3. Overheating of stator
✘ 4. Short circuit between a phase and ground

Question ID : **441009318878**
Option 1 ID : **4410091241797**
Option 2 ID : **4410091241798**
Option 3 ID : **4410091241799**
Option 4 ID : **4410091241796**
Status : **Answered**
Chosen Option : **1**

Q.95 Which of the following is NOT usually included in a tender document?

Ans
✘ 1. Technical specifications
✔ 2. Final project report
✘ 3. Contract agreement
✘ 4. Bill of quantities (BOQ)

Question ID : **441009181779**
Option 1 ID : **441009718623**
Option 2 ID : **441009718626**
Option 3 ID : **441009718625**
Option 4 ID : **441009718624**
Status : **Answered**
Chosen Option : **2**

Q.96 डिसेबिलिटी ग्लेयर (Disability glare) से क्या तात्पर्य है?

Ans
✘ 1. चौंध के कारण रंगों में अंतर करना मुश्किल हो जाना
✔ 2. दृश्य क्षेत्र में अत्यधिक द्युति के कारण दृश्य प्रदर्शन में कमी
✘ 3. लंबे समय तक उच्च तीव्रता वाले प्रकाश के संपर्क में रहने के कारण दृष्टि का स्थायी ह्रास
✘ 4. दीप्त प्रकाश के कारण होने वाली अस्थायी दृश्य असुविधा

Question ID : **441009166433**
Option 1 ID : **441009658891**
Option 2 ID : **441009658890**
Option 3 ID : **441009658892**
Option 4 ID : **441009658893**
Status : **Answered**
Chosen Option : **1**

Q.97 Which of the following bridges is suitable for precise comparison of two nearly equal resistances?

Ans
✘ 1. Anderson Bridge
✔ 2. Wheatstone Bridge
✘ 3. Carey Foster Bridge
✘ 4. Kelvin Double Bridge

Question ID : **441009176684**
Option 1 ID : **441009698644**
Option 2 ID : **441009698642**
Option 3 ID : **441009698641**
Option 4 ID : **441009698643**
Status : **Answered**
Chosen Option : **2**

Q.98 When does an induction motor develop maximum torque?

Ans
✔ 1. When rotor reactance equals rotor resistance
✘ 2. When stator voltage is minimum
✘ 3. When slip is zero
✘ 4. When rotor reactance equals stator resistance

Question ID : **441009373103**
Option 1 ID : **4410091457984**
Option 2 ID : **4410091457986**
Option 3 ID : **4410091457985**
Option 4 ID : **4410091457983**
Status : **Answered**
Chosen Option : **1**

Q.99 Which of the following statements is/are correct?
A. Hydrostatic pressure is a vector quantity.
B. In a relation between pressure, height and density, height is inversely proportional to the density of air.

Ans
✘ 1. Only A
✘ 2. Neither A nor B
✘ 3. Both A and B
✔ 4. Only B

Question ID : **441009213102**
Option 1 ID : **441009836497**
Option 2 ID : **441009836500**
Option 3 ID : **441009836499**
Option 4 ID : **441009836498**
Status : **Answered**
Chosen Option : **3**

Q.10 0 In a magnetic circuit, the energy supplied is spent in two ways. Which of the following is true about the energy stored in the magnetic field?

Ans
✘ 1. All energy is lost as heat.
✘ 2. All energy creates magnetic flux.
✘ 3. Energy overcomes magnetic reluctance.
✔ 4. Part of the energy is stored as potential energy.

Question ID : **441009188775**
Option 1 ID : **441009744567**
Option 2 ID : **441009744569**
Option 3 ID : **441009744570**
Option 4 ID : **441009744568**
Status : **Answered**
Chosen Option : **4**

Q.10 The voltage supplied to consumers from a distribution sub-station is:
1

Ans
✗ 1. 11 kV, single-phase
✗ 2. 66 kV, 2-wire
✓ 3. 400 V, 3-phase, 4-wire
✗ 4. 230 V, 3-phase

Question ID : **441009293727**
Option 1 ID : **4410091141774**
Option 2 ID : **4410091141777**
Option 3 ID : **4410091141776**
Option 4 ID : **4410091141775**
Status : **Answered**
Chosen Option : **3**

Q.10 What component of a wind power plant increases the rotational speed of the rotor to a level suitable for electricity generation?
2

Ans
✗ 1. Brake system
✗ 2. Exciter
✗ 3. Controller
✓ 4. Gearbox

Question ID : **441009154475**
Option 1 ID : **441009613069**
Option 2 ID : **441009613066**
Option 3 ID : **441009613067**
Option 4 ID : **441009613068**
Status : **Answered**
Chosen Option : **4**

Q.10 What is the primary purpose of protective relays in a power grid?
3

Ans
✗ 1. To regulate voltage levels
✓ 2. To detect and isolate faults
✗ 3. To monitor system efficiency
✗ 4. To control power flow

Question ID : **441009154454**
Option 1 ID : **441009612984**
Option 2 ID : **441009612983**
Option 3 ID : **441009612982**
Option 4 ID : **441009612985**
Status : **Answered**
Chosen Option : **2**

Q.104 एक विस्तृत अनुमान में, आकस्मिकताओं (contingencies) के लिए प्रावधान सामान्यत: _____ तक होता है?

Ans
✗ 1. 22% से 25%
✓ 2. 3% से 5%
✗ 3. 18% से 20%
✗ 4. 10% से 15%

Question ID : **441009206568**
Option 1 ID : **441009812395**
Option 2 ID : **441009812392**
Option 3 ID : **441009812394**
Option 4 ID : **441009812393**
Status : **Answered**
Chosen Option : **2**

Q.105 Which of the following best describes the implication of a low utilisation factor in system design?

Ans
✗ 1. The generation system operates at peak capacity continuously.
✗ 2. The power system experiences a high average load most of the time.
✓ 3. There is significant unused installed capacity, leading to poor asset utilisation.
✗ 4. The system is optimised for high efficiency with minimal losses.

Question ID : **441009154466**
Option 1 ID : **441009613031**
Option 2 ID : **441009613030**
Option 3 ID : **441009613032**
Option 4 ID : **441009613033**
Status : **Answered**
Chosen Option : **1**

Q.106 Fluid pressure is influenced by which of the following?

A. Depth of the fluid
B. Density of the fluid

Ans
✗ 1. B only
✗ 2. A only
✓ 3. Both A and B
✗ 4. Neither A nor B

Question ID : **441009263939**
Option 1 ID : **4410091028207**
Option 2 ID : **4410091028206**
Option 3 ID : **4410091028208**
Option 4 ID : **4410091028209**
Status : **Answered**
Chosen Option : **1**

Q.10 Which is the most common type of fault in overhead transmission lines?
7

Ans
✔ 1. Line-to-ground fault
✘ 2. Double line-to-ground fault
✘ 3. Line-to-line fault
✘ 4. Three-phase symmetrical fault

Question ID : **441009318838**
Option 1 ID : **4410091241637**
Option 2 ID : **4410091241639**
Option 3 ID : **4410091241638**
Option 4 ID : **4410091241636**
Status : **Answered**
Chosen Option : **1**

Q.10 The range of electrostatic voltmeters can be extended by:
8

Ans
✔ 1. using a multiplier or potential divider
✘ 2. using a transformer
✘ 3. connecting a inductor in series
✘ 4. using a current coil

Question ID : **441009176867**
Option 1 ID : **441009699363**
Option 2 ID : **441009699361**
Option 3 ID : **441009699364**
Option 4 ID : **441009699362**
Status : **Answered**
Chosen Option : **1**

Q.10 Which of the following statements is FALSE regarding charge neutrality in semiconductors?
9

Ans
✘ 1. Ionised donor and acceptor concentrations contribute to the net charge.
✘ 2. In a compensated semiconductor, both donor and acceptor impurities exist.
✘ 3. In an intrinsic semiconductor, the number of positive and negative charges are equal.
✔ 4. An excess of electrons over holes in n-type semiconductor violates charge neutrality.

Question ID : **441009219247**
Option 1 ID : **441009860411**
Option 2 ID : **441009860412**
Option 3 ID : **441009860413**
Option 4 ID : **441009860410**
Status : **Answered**
Chosen Option : **4**

Q.11 Which of the following is a major advantage of PMMC instruments?
0

Ans
✗ 1. No controlling torque required
✗ 2. Can measure both AC and DC
✗ 3. Suitable for very high voltages
✓ 4. Uniform scale and high accuracy

Question ID : **441009176927**
Option 1 ID : **441009699600**
Option 2 ID : **441009699597**
Option 3 ID : **441009699599**
Option 4 ID : **441009699598**
Status : **Answered**
Chosen Option : **4**

Q.11 The armature winding of a DC generator is connected in:
1

Ans
✗ 1. series only
✗ 2. a closed circuit only
✓ 3. series or parallel with the field winding
✗ 4. parallel only

Question ID : **441009293868**
Option 1 ID : **4410091142334**
Option 2 ID : **4410091142337**
Option 3 ID : **4410091142336**
Option 4 ID : **4410091142335**
Status : **Answered**
Chosen Option : **3**

Q.11 If the item seems darker than the road surface, then it is known as:
2

Ans
✗ 1. image
✗ 2. reverse silhouette
✓ 3. forward silhouette
✗ 4. discernment

Question ID : **441009206658**
Option 1 ID : **441009812673**
Option 2 ID : **441009812676**
Option 3 ID : **441009812675**
Option 4 ID : **441009812674**
Status : **Answered**
Chosen Option : **1**

Q.11 3 In a parallel R-C circuit, the current through the resistor _____.

Ans
1. always zero
2. leads the voltage by 90°
3. is in phase with the voltage
4. lags the voltage by 90°

Question ID : **441009166705**
Option 1 ID : **441009659978**
Option 2 ID : **441009659975**
Option 3 ID : **441009659977**
Option 4 ID : **441009659976**
Status : **Answered**
Chosen Option : **2**

Q.11 4 The core losses in a DC motor primarily consist of _____.

Ans
1. bearing friction losses
2. hysteresis and eddy current losses
3. copper and mechanical losses
4. brush and commutator losses

Question ID : **441009370506**
Option 1 ID : **4410091447944**
Option 2 ID : **4410091447943**
Option 3 ID : **4410091447941**
Option 4 ID : **4410091447942**
Status : **Answered**
Chosen Option : **2**

Q.11 5 If a system has a connected load of 2000 kW but the maximum demand never exceeds 1500 kW, what is the demand factor?

Ans
1. 1.5
2. 0.25
3. 0.75
4. 1.00

Question ID : **441009154462**
Option 1 ID : **441009613015**
Option 2 ID : **441009613016**
Option 3 ID : **441009613014**
Option 4 ID : **441009613017**
Status : **Answered**
Chosen Option : **3**

Q.11 How many lumped resistances can be considered present in a standard Delta (Δ) or Star (Y) network configuration?

Ans
✗ 1. 4
✗ 2. 2
✗ 3. 5
✓ 4. 3

Question ID : **441009174210**
Option 1 ID : **441009689238**
Option 2 ID : **441009689236**
Option 3 ID : **441009689239**
Option 4 ID : **441009689237**
Status : **Answered**
Chosen Option : **4**

Q.11 What is the primary function of overload protection in motors?

Ans
✓ 1. To prevent the motor from overheating due to excessive current over time
✗ 2. To stop the motor from running in reverse
✗ 3. To prevent voltage surges
✗ 4. To reduce torque under load

Question ID : **441009318814**
Option 1 ID : **4410091241542**
Option 2 ID : **4410091241541**
Option 3 ID : **4410091241540**
Option 4 ID : **4410091241543**
Status : **Answered**
Chosen Option : **1**

Q.11 An object has three dimensions, width, height, and depth. In which orthographic view will the width and height of the object be clearly visible?

Ans
✗ 1. Bottom view
✗ 2. Side view
✓ 3. Front view
✗ 4. Top view

Question ID : **441009160567**
Option 1 ID : **441009636136**
Option 2 ID : **441009636135**
Option 3 ID : **441009636133**
Option 4 ID : **441009636134**
Status : **Answered**
Chosen Option : **3**

Q.11 Why is alternating current (AC) more widely used for electrical power generation, transmission and distribution compared to direct current (DC)?
9

Ans
✗ 1. Due to the ease of converting AC to DC
✗ 2. Because AC has a higher resistance
✗ 3. DC is more expensive to meter.
✓ 4. It is convenient to step up/down voltages for economical power transmission and distribution.

Question ID : **441009154432**
Option 1 ID : **441009612899**
Option 2 ID : **441009612898**
Option 3 ID : **441009612901**
Option 4 ID : **441009612900**
Status : **Answered**
Chosen Option : **4**

Q.12 Why are transformer cores laminated?
0

Ans
✗ 1. To increase weight
✓ 2. To reduce eddy current losses
✗ 3. To reduce hysteresis loss
✗ 4. To increase thermal conductivity

Question ID : **441009370665**
Option 1 ID : **4410091448568**
Option 2 ID : **4410091448567**
Option 3 ID : **4410091448566**
Option 4 ID : **4410091448565**
Status : **Answered**
Chosen Option : **2**

Q.12 Based on the following statements, select the correct option.
1

Statement 1: The half-power frequencies in a series resonating circuit correspond to the frequencies at which the power is half of its maximum value.
Statement 2: The bandwidth of a series resonating circuit is the difference between the half-power frequencies.

Ans
✓ 1. Both Statement 1 and Statement 2 are true.
✗ 2. Statement 1 is false, and Statement 2 is true.
✗ 3. Statement 1 is true, and Statement 2 is false.
✗ 4. Both Statement 1 and Statement 2 are false.

Question ID : **441009152267**
Option 1 ID : **441009604231**
Option 2 ID : **441009604234**
Option 3 ID : **441009604233**
Option 4 ID : **441009604232**
Status : **Answered**
Chosen Option : **1**

Q.12 Which of the following statements best explains the role of the conduction band in electrical conduction?

Ans
✗ 1. It prevents electrons from flowing.
✗ 2. It traps electrons to reduce conduction.
✓ 3. It contains electrons that can move freely and contribute to conduction.
✗ 4. It stores holes that carry current.

Question ID : **441009229254**
Option 1 ID : **441009896643**
Option 2 ID : **441009896644**
Option 3 ID : **441009896642**
Option 4 ID : **441009896641**
Status : **Answered**
Chosen Option : **3**

Q.12 Consider the following statement and select the correct option.

Statement: Inductors oppose sudden changes in current in a circuit.

Ans
✓ 1. True – Because an inductor generates a back EMF proportional to the rate of change of current
✗ 2. False – Inductors only oppose voltage
✗ 3. True – But only when used with resistors
✗ 4. False – Inductors allow sudden changes in current

Question ID : **441009171224**
Option 1 ID : **441009677789**
Option 2 ID : **441009677790**
Option 3 ID : **441009677792**
Option 4 ID : **441009677791**
Status : **Answered**
Chosen Option : **1**

Q.12 For a series RLC circuit at resonance, which relation is correct for bandwidth (in Hz)?

Ans
✓ 1. $B = \frac{R}{2\pi L}$
✗ 2. $B = \frac{2\pi L}{R}$
✗ 3. $B = \frac{1}{RC}$
✗ 4. $B = \frac{1}{2\pi\sqrt{LC}}$

Question ID : **441009152817**
Option 1 ID : **441009606425**
Option 2 ID : **441009606424**
Option 3 ID : **441009606426**
Option 4 ID : **441009606423**
Status : **Answered**
Chosen Option : **1**

Q.12 In a resistance oven, the heating element:
5

Ans
✗ 1. operates using an arc between two electrodes
✗ 2. uses an external fuel source to generate heat
✗ 3. directly contacts the workpiece
✓ 4. does not touch the workpiece, but heats through radiation and convection

Question ID : **441009166321**
Option 1 ID : **441009658465**
Option 2 ID : **441009658464**
Option 3 ID : **441009658462**
Option 4 ID : **441009658463**
Status : **Answered**
Chosen Option : **4**

Q.12 Which of the following is generally NOT included in an annual maintenance estimate?
6

Ans
✗ 1. Labour and material cost for maintenance
✓ 2. Cost of land acquisition
✗ 3. Replacement of old wiring
✗ 4. Repair of broken switches

Question ID : **441009181812**
Option 1 ID : **441009718754**
Option 2 ID : **441009718753**
Option 3 ID : **441009718751**
Option 4 ID : **441009718752**
Status : **Answered**
Chosen Option : **2**

Q.12 What is constant at every point in a feeder of secondary distribution?
7

Ans
✗ 1. Frequency
✗ 2. Power
✗ 3. Voltage
✓ 4. Current

Question ID : **441009154434**
Option 1 ID : **441009612907**
Option 2 ID : **441009612908**
Option 3 ID : **441009612906**
Option 4 ID : **441009612909**
Status : **Answered**
Chosen Option : **3**

Q.12 Magnetomotive force (MMF) in a magnetic circuit is defined as:
8

Ans
✗ 1. force on a current-carrying conductor
✗ 2. opposition to magnetic flux
✗ 3. energy stored in the magnetic field
✓ 4. work done in moving a unit magnetic pole through the circuit

Question ID : **441009188765**
Option 1 ID : **441009744530**
Option 2 ID : **441009744533**
Option 3 ID : **441009744531**
Option 4 ID : **441009744532**
Status : **Answered**
Chosen Option : **1**

Q.12 In a series RLC circuit, if ωL> 1/ωC, the current _____.
9

Ans
✗ 1. is zero
✗ 2. is in phase with voltage
✗ 3. leads the voltage
✓ 4. lags the voltage

Question ID : **441009152733**
Option 1 ID : **441009606094**
Option 2 ID : **441009606093**
Option 3 ID : **441009606091**
Option 4 ID : **441009606092**
Status : **Answered**
Chosen Option : **4**

Q.13 Which of the following will increase the inductance of a coil?
0

Ans
✓ 1. Increasing the coil's radius
✗ 2. Using a core with low permeability
✗ 3. Increasing the coil's length
✗ 4. Decreasing the number of turns

Question ID : **441009171136**
Option 1 ID : **441009677445**
Option 2 ID : **441009677447**
Option 3 ID : **441009677448**
Option 4 ID : **441009677446**
Status : **Answered**
Chosen Option : **1**

Q.13 A typical oscilloscope has a bandwidth of 20 MHz. What is the approximate rise time (in nanoseconds) that this oscilloscope can accurately measure?

Ans
✗ 1. 0.35
✗ 2. 7
✗ 3. 0.0175
✓ 4. 17.5

Question ID : **441009158813**
Option 1 ID : **441009630180**
Option 2 ID : **441009630181**
Option 3 ID : **441009630179**
Option 4 ID : **441009630182**
Status : **Answered**
Chosen Option : **2**

Q.13 Reluctance is a property of a material that opposes the creation of magnetic flux. What is the unit of reluctance?

Ans
✗ 1. Weber/Ampere-Turn
✗ 2. Ampere-Turns per Square Meter (AT/m²)
✓ 3. Ampere-Turns per Weber (AT/Wb)
✗ 4. Weber per Ampere-Turn (Wb/AT)

Question ID : **441009188767**
Option 1 ID : **441009744538**
Option 2 ID : **441009744540**
Option 3 ID : **441009744539**
Option 4 ID : **441009744541**
Status : **Answered**
Chosen Option : **3**

Q.13 Outlier analysis is a method used to _____.

Ans
✗ 1. calculate the average speed
✗ 2. identify best-performing systems
✗ 3. optimise the motor efficiency
✓ 4. detect errors or anomalies in data

Question ID : **441009165430**
Option 1 ID : **441009655110**
Option 2 ID : **441009655111**
Option 3 ID : **441009655109**
Option 4 ID : **441009655108**
Status : **Answered**
Chosen Option : **4**

Q.13 4 In the case of a magnetising armature reaction due to zero leading power factor load in an alternator, what adjustment is needed?

Ans
✗ 1. Increase the terminal voltage.
✗ 2. Increase the frequency of operation.
✗ 3. Increase field excitation current.
✓ 4. Decrease field excitation current.

Question ID : **441009159144**
Option 1 ID : **441009631467**
Option 2 ID : **441009631470**
Option 3 ID : **441009631468**
Option 4 ID : **441009631469**
Status : **Answered**
Chosen Option : **3**

Q.13 5 एक समतलीय परिपथ (planar circuit) को हल करने के लिए आवश्यक जाल समीकरणों की संख्या _____ के बराबर होती है।

Ans
✗ 1. लूपों की संख्या
✗ 2. नोडों की संख्या
✗ 3. शाखाओं की संख्या
✓ 4. स्वतंत्र जालों की संख्या

Question ID : **441009167283**
Option 1 ID : **441009662277**
Option 2 ID : **441009662275**
Option 3 ID : **441009662276**
Option 4 ID : **441009662278**
Status : **Answered**
Chosen Option : **1**

Q.13 6 What does specific consumption represent in lighting systems?

Ans
✓ 1. Ratio of electrical power input to luminous intensity, in watt per candela
✗ 2. Ratio of luminous flux to electrical power input, in lumen per watt
✗ 3. Ratio of luminous intensity to luminous flux, in candela per lumen
✗ 4. Ratio of power factor to voltage, in watt per volt

Question ID : **441009190082**
Option 1 ID : **441009749410**
Option 2 ID : **441009749409**
Option 3 ID : **441009749411**
Option 4 ID : **441009749412**
Status : **Answered**
Chosen Option : **1**

Q.13 7 If the speed of an air flow above the wing of a moving aircraft is v and below the wing is u, then which of the following options is correct for the dynamic lift?

Ans
1. v is equal to u
2. v is greater than u
3. u is greater than v
4. v is equal to −u

Question ID : **441009214559**
Option 1 ID : **441009842276**
Option 2 ID : **441009842274**
Option 3 ID : **441009842275**
Option 4 ID : **441009842277**
Status : **Answered**
Chosen Option : **3**

Q.13 8 Which of the following best explains the advantage of using Owen's Bridge circuit for inductance measurement?

Ans
1. It requires an additional standard inductor for measurement.
2. It enables accurate inductance measurement using non-inductive components.
3. It allows simultaneous measurement of resistance and capacitance.
4. It directly provides quality factor (Q) of the inductor.

Question ID : **441009158652**
Option 1 ID : **441009629535**
Option 2 ID : **441009629536**
Option 3 ID : **441009629537**
Option 4 ID : **441009629538**
Status : **Answered**
Chosen Option : **4**

Q.13 9 Why is the starting torque of a squirrel-cage induction motor generally low?

Ans
1. Because of high power factor at start
2. Because starting current is low
3. Because rotor current lags the rotor EMF significantly
4. Due to high rotor resistance

Question ID : **441009373108**
Option 1 ID : **4410091458006**
Option 2 ID : **4410091458004**
Option 3 ID : **4410091458005**
Option 4 ID : **4410091458003**
Status : **Answered**
Chosen Option : **2**

Q.14 0 **In a series RLC circuit with resistance R, inductive reactance XL and capacitive reactance XC, the current is maximum when:**

Ans

✔ 1. XL = XC, irrespective of the value of R

✘ 2. XL = 0, while XC and R are non-zero

✘ 3. R = 0, while both XL and XC are non-zero but unequal

✘ 4. XC = 0, while XL and R are non-zero

Question ID : **441009154540**
Option 1 ID : **441009613324**
Option 2 ID : **441009613322**
Option 3 ID : **441009613325**
Option 4 ID : **441009613323**
Status : **Answered**
Chosen Option : **1**

"