



COAL INDIA LIMITED
(A Govt. of India Undertaking)
(A Maharatna Company)

Recruitment of Management Trainees through Computer Based Test (CBT-26)

Participant ID	
Participant Name	
Test Center Name	
Test Date	24/08/2026
Test Time	9:00 AM - 12:00 PM
Subject	Electrical

Section : Part 1 General Knowledge Awareness

Q.1 Kamarajar Port, India's only major port set up as a public company, was earlier known by which name?

- Ans ☒ A. Ennore Port
- ☐ B. Cochin Port
- ☐ C. Paradip Port
- ☐ D. Mundra Port

Question ID : 4410092215547
Option 1 ID : 4410098718326
Option 2 ID : 4410098718329
Option 3 ID : 4410098718327
Option 4 ID : 4410098718328
Status : Answered
Chosen Option : C

Q.2 Under the EASE 8.0 reform agenda for Public Sector Banks in FY 2025–26, which of the following sets correctly represents the four R.I.S.E. themes?

- Ans ☒ A. Risk & Resilience, Innovation, Socio-economic Impact and Excellence
- ☒ B. Restructuring & Relief, Insurance, Subsidy Execution and Equity
- ☒ C. Revenue & Recovery, Inclusion, Savings Expansion and Efficiency
- ☒ D. Regulation & Ratings, Investment, Security Enhancement and Exports

Question ID : 4410092215759
Option 1 ID : 4410098719177
Option 2 ID : 4410098719176
Option 3 ID : 4410098719174
Option 4 ID : 4410098719175
Status : Answered
Chosen Option : C

Q.3 What was the theme of World Health Day 2026?

- Ans ☒ A. Together for health. Stand with science
- ☒ B. Health for all through stronger hospitals
- ☒ C. Better medicines for a safer world
- ☒ D. Universal care for every community

Question ID : 4410092215757
Option 1 ID : 4410098719166
Option 2 ID : 4410098719167
Option 3 ID : 4410098719169
Option 4 ID : 4410098719168
Status : Answered
Chosen Option : A

Q.4 Mehrunnisa received which title after marrying Emperor Jahangir in 1611?

- Ans ☒ A. Mumtaz Mahal
- ☒ B. Roshanara Begum
- ☒ C. Jahanara Begum
- ☒ D. Nur Jahan

Question ID : 4410092215630
Option 1 ID : 4410098718659
Option 2 ID : 4410098718661
Option 3 ID : 4410098718660
Option 4 ID : 4410098718658
Status : Answered
Chosen Option : C

Q.5 In 2015, the Planning Commission of India was replaced by which institution as the government's premier policy think tank?

- Ans ☒ A. Fiscal Policy Board
- ☒ B. National Development Council
- ☒ C. Finance Commission
- ☒ D. NITI Aayog

Question ID : 4410092215967
Option 1 ID : 4410098720005
Option 2 ID : 4410098720004
Option 3 ID : 4410098720002
Option 4 ID : 4410098720003
Status : Answered
Chosen Option : D

Q.6 A hospital's IT administrator must ensure that all departments can run their required applications, like medical record software, without interference. Which action best demonstrates an understanding of the difference between system software and application software?

- Ans ☒ A. Installing new medical record applications
- ☒ B. Allowing users to install any medical software they want
- ☒ C. Configuring the operating system to allocate resources efficiently so all applications function smoothly
- ☒ D. Updating antivirus software on all computers

Question ID : 4410091810466
Option 1 ID : 4410097137910
Option 2 ID : 4410097137909
Option 3 ID : 4410097137911
Option 4 ID : 4410097137912
Status : Answered
Chosen Option : C

Q.7 The World Trade Organization (WTO) came into existence following the conclusion of which major round of multilateral trade negotiations?

- Ans ☒ A. The Doha Round
- ☒ B. The Uruguay Round
- ☒ C. The Kennedy Round
- ☒ D. The Tokyo Round

Question ID : 4410092216050
Option 1 ID : 4410098720334
Option 2 ID : 4410098720337
Option 3 ID : 4410098720336
Option 4 ID : 4410098720335
Status : Answered
Chosen Option : C

Q.8 Which type of soil forms the entire Northern Plains of India, has been deposited by the Indus, Ganga, and Brahmaputra river systems, and generally contains adequate proportions of potash, phosphoric acid, and lime?

- Ans ☒ A. Laterite soil
- ☒ B. Alluvial soil
- ☒ C. Black soil
- ☒ D. Red soil

Question ID : 4410092215737
Option 1 ID : 4410098719086
Option 2 ID : 4410098719088
Option 3 ID : 4410098719089
Option 4 ID : 4410098719087
Status : Answered
Chosen Option : B

Q.9 The 74th Constitutional Amendment Act of India, 1992, primarily deals with which of the following?

- Ans ☒ A. Reservation in Higher Education
- ☒ B. Panchayati Raj Institutions
- ☒ C. Delimitation of Parliamentary Constituencies
- ☒ D. Urban Local Bodies

Question ID : 4410092215953
Option 1 ID : 4410098719948
Option 2 ID : 4410098719946
Option 3 ID : 4410098719949
Option 4 ID : 4410098719947
Status : Answered
Chosen Option : C

Q.10 The Neela Chakra on top of the Lord Jagannath Temple in Puri, Odisha is made of eight metals; which of the following metals is NOT included in the eight metals?

- Ans ☒ A. Silver
- ☒ B. Gold
- ☒ C. Copper
- ☒ D. Platinum

Question ID : 4410091576320
Option 1 ID : 4410096226053
Option 2 ID : 4410096226050
Option 3 ID : 4410096226051
Option 4 ID : 4410096226052
Status : Answered
Chosen Option : D

Q.11 In which year was the 'Make in India' initiative launched?

- Ans ☒ A. 2012
☒ B. 2018
☒ C. 2014
☒ D. 2016

Question ID : 4410092216045
Option 1 ID : 4410098720314
Option 2 ID : 4410098720316
Option 3 ID : 4410098720317
Option 4 ID : 4410098720315
Status : Answered
Chosen Option : C

Q.12 The sale of government equity in Public Sector Undertakings to private or public investors, undertaken as part of the 1991 reforms, is referred to as:

- Ans ☒ A. Deregulation
☒ B. Nationalisation
☒ C. Devaluation
☒ D. Disinvestment

Question ID : 4410092215968
Option 1 ID : 4410098720008
Option 2 ID : 4410098720006
Option 3 ID : 4410098720009
Option 4 ID : 4410098720007
Status : Answered
Chosen Option : A

Q.13 At the Khelo India Winter Games 2026, which Olympic sport made its debut in the Ladakh leg of the event?

- Ans ☒ A. Alpine skiing
☒ B. Figure skating
☒ C. Snowboarding
☒ D. Ice hockey

Question ID : 4410092215766
Option 1 ID : 4410098719205
Option 2 ID : 4410098719202
Option 3 ID : 4410098719204
Option 4 ID : 4410098719203
Status : Answered
Chosen Option : D

Q.14 Under which Article of the Indian Constitution can the President proclaim a National Emergency on grounds of war or armed rebellion?

- Ans ☒ A. Article 356
- ☒ B. Article 352
- ☒ C. Article 368
- ☒ D. Article 360

Question ID : 4410092215566
Option 1 ID : 4410098718404
Option 2 ID : 4410098718405
Option 3 ID : 4410098718402
Option 4 ID : 4410098718403
Status : Answered
Chosen Option : A

Q.15 In Rachana Gangu v. Union of India, decided in March 2026, the Supreme Court directed the Union Government to formulate which policy?

- Ans ☒ A. National public health audit policy for all private vaccination centres
- ☒ B. No-fault compensation policy for serious COVID-19 vaccine adverse events
- ☒ C. Uniform medical insurance policy for all government vaccination beneficiaries
- ☒ D. Central negligence liability policy against all vaccine manufacturers

Question ID : 4410092215768
Option 1 ID : 4410098719212
Option 2 ID : 4410098719210
Option 3 ID : 4410098719211
Option 4 ID : 4410098719213
Status : Answered
Chosen Option : B

Q.16 According to World Weather Attribution's 2026 analysis, what scientific issue became a major concern during the FIFA World Cup 2026?

- Ans ☒ A. Earthquake risk in host cities
- ☒ B. Ocean acidification near stadiums
- ☒ C. Extreme heat linked to climate change
- ☒ D. Volcanic ash disrupting air routes

Question ID : 4410092215753
Option 1 ID : 4410098719150
Option 2 ID : 4410098719153
Option 3 ID : 4410098719151
Option 4 ID : 4410098719152
Status : Answered
Chosen Option : C

Q.17 Bal Gangadhar Tilak, who introduced a public festival in 1893 to promote nationalist consciousness and public participation in Maharashtra, is associated with which festival?

Ans ☒ A. Ganapati Festival

☒ B. Onam

☒ C. Durga Puja

☒ D. Pongal

Question ID : 4410092215637

Option 1 ID : 4410098718687

Option 2 ID : 4410098718689

Option 3 ID : 4410098718686

Option 4 ID : 4410098718688

Status : Answered

Chosen Option : B

Q.18 Under the Union Budget 2026–27, the Government proposed a phased outlay of ₹980 crore over three years for which social-sector objective?

Ans ☒ A. Upgrading sports hostels for rural youth training

☒ B. Digitising anganwadi nutrition delivery systems

☒ C. Expanding allied and healthcare professionals' education

☒ D. Establishing residential schools in border districts

Question ID : 4410092215773

Option 1 ID : 4410098719230

Option 2 ID : 4410098719231

Option 3 ID : 4410098719233

Option 4 ID : 4410098719232

Status : Answered

Chosen Option : B

Q.19 Johads are primarily used for which purpose in the Great Indian Desert?

Ans ☒ A. Navigation

☒ B. Salt extraction

☒ C. Hydroelectric power generation

☒ D. Rainwater harvesting

Question ID : 4410092215736

Option 1 ID : 4410098719083

Option 2 ID : 4410098719082

Option 3 ID : 4410098719084

Option 4 ID : 4410098719085

Status : Answered

Chosen Option : B

Q.20 Which pair of subjects falls under the Concurrent List of the Seventh Schedule, allowing both Parliament and State Legislatures to legislate on it?

- Ans ☒ A. Education and Forests
- ☒ B. Foreign Affairs and Defence
- ☒ C. Railways and Ports Sector
- ☒ D. Currency and Coinage

Question ID : 4410092339446
Option 1 ID : 4410099199880
Option 2 ID : 4410099199882
Option 3 ID : 4410099199883
Option 4 ID : 4410099199881
Status : Answered
Chosen Option : B

Q.21 Who discovered X-rays and reported this discovery in December 1895?

- Ans ☒ A. Wilhelm Conrad Röntgen
- ☒ B. JJ Thomson
- ☒ C. Ernest Rutherford
- ☒ D. Marie Curie

Question ID : 4410092216506
Option 1 ID : 4410098722159
Option 2 ID : 4410098722160
Option 3 ID : 4410098722161
Option 4 ID : 4410098722158
Status : Answered
Chosen Option : B

Q.22 Which type of power plant generates electricity from the kinetic energy of falling or flowing water?

- Ans ☒ A. Geothermal Plant
- ☒ B. Thermal Power Plant
- ☒ C. Nuclear Power Plant
- ☒ D. Hydroelectric Plant

Question ID : 4410092215543
Option 1 ID : 4410098718311
Option 2 ID : 4410098718312
Option 3 ID : 4410098718313
Option 4 ID : 4410098718310
Status : Answered
Chosen Option : D

Q.23 Which combination of security tools would best protect confidential files from both external network attacks and unauthorized local access?

- Ans ☒ A. Antivirus and password manager
- ☒ B. Firewall and encryption tool
- ☒ C. Antivirus and encryption tool
- ☒ D. Firewall and password manager

Question ID : 4410091838583
Option 1 ID : 4410097247891
Option 2 ID : 4410097247892
Option 3 ID : 4410097247893
Option 4 ID : 4410097247890
Status : Answered
Chosen Option : B

Q.24 The Indian National Congress, founded in December 1885, was established under the guidance of which retired British civil servant, who also served as its first General Secretary?

- Ans ☒ A. William Wedderburn
- ☒ B. Allan Octavian Hume
- ☒ C. Henry Cotton
- ☒ D. George Yule

Question ID : 4410092215638
Option 1 ID : 4410098718691
Option 2 ID : 4410098718690
Option 3 ID : 4410098718692
Option 4 ID : 4410098718693
Status : Not Answered
Chosen Option : --

Q.25 In which year was the “Ek Ped Maa Ke Naam” campaign launched by Prime Minister Narendra Modi?

- Ans ☒ A. 2023
- ☒ B. 2025
- ☒ C. 2024
- ☒ D. 2022

Question ID : 4410092215624
Option 1 ID : 4410098718635
Option 2 ID : 4410098718637
Option 3 ID : 4410098718636
Option 4 ID : 4410098718634
Status : Not Answered
Chosen Option : --

Q.1 A student has an average score of 75 in 4 subjects. After the score of a 5th subject is included, the student's average score becomes 78. What score did the student obtain in the 5th subject?

- Ans ☒ A. 95
☒ B. 90
☒ C. 84
☒ D. 78

Question ID : 4410092200565
Option 1 ID : 4410098659434
Option 2 ID : 4410098659432
Option 3 ID : 4410098659435
Option 4 ID : 4410098659433
Status : Answered
Chosen Option : B

Q.2 A chef prepares a premium hemispherical chocolate dessert that is packed with exactly two-thirds of liquid caramel sauce. If the diameter of each dessert is 42 mm and the price of one cubic mm of caramel sauce is 50 paisa, then the total cost of the caramel sauce used to make 50 of these desserts is:

- Ans ☒ A. ₹3,23,400
☒ B. ₹3,45,680
☒ C. ₹3,57,600
☒ D. ₹3,38,000

Question ID : 4410092200615
Option 1 ID : 4410098659635
Option 2 ID : 4410098659633
Option 3 ID : 4410098659634
Option 4 ID : 4410098659632
Status : Answered
Chosen Option : A

Q.3 An apparel manufacturing unit operates identical eco-friendly looms to fulfill global export orders. If 12 looms running simultaneously can weave a total of 360 metres of fabric in 6 days, how many metres of fabric can 15 looms weave in 8 days?

- Ans ☒ A. 600
☒ B. 550
☒ C. 500
☒ D. 650

Question ID : 4410092200592
Option 1 ID : 4410098659542
Option 2 ID : 4410098659541
Option 3 ID : 4410098659540
Option 4 ID : 4410098659543
Status : Answered
Chosen Option : A

Q.4 The difference between the present ages of Lata and Smita is 29 years. Five years ago, the sum of their ages was 39 years. If Lata is older than Smita, what is Smita's present age (in years)?

Ans  A. 10

 B. 7

 C. 1

 D. 11

Question ID : 4410091220104

Option 1 ID : 4410094813839

Option 2 ID : 4410094813842

Option 3 ID : 4410094813840

Option 4 ID : 4410094813841

Status : Answered

Chosen Option : A

Q.5 Let x be a positive integer. If the Highest Common Factor of the fractions $\frac{x}{2}$ and $\frac{6}{4}$ is exactly equal to their Least Common Multiple, then the value of x is:

Ans  A. 2

 B. 3

 C. 4

 D. 1

Question ID : 4410092200577

Option 1 ID : 4410098659481

Option 2 ID : 4410098659482

Option 3 ID : 4410098659483

Option 4 ID : 4410098659480

Status : Answered

Chosen Option : B

Q.6 In a custom board game, two players, Kevin and Maya, roll their respective biased dice simultaneously in sequential rounds until a winner is decided. Kevin rolls a "Star" with a probability of $\frac{1}{3}$, while Maya rolls a "Star" with a probability of $\frac{2}{7}$, independent of each other. A player wins the game immediately in any given round if their die lands on a "Star" while the opponent's die does not. Conversely, if both players roll a "Star" or if both fail to do so, the round is declared a draw and they proceed to an identical next round. The probability that Maya ultimately wins the game is:

- Ans
- ☒ A. $\frac{3}{8}$
 - ☒ B. $\frac{4}{9}$
 - ☒ C. $\frac{1}{2}$
 - ☒ D. $\frac{2}{7}$

Question ID : 4410092200606

Option 1 ID : 4410098659596

Option 2 ID : 4410098659597

Option 3 ID : 4410098659599

Option 4 ID : 4410098659598

Status : Marked For Review

Chosen Option : B

Q.7 If $X \div 9 = \frac{1}{1.5} \times \left\{ \frac{5}{6} \div 1 \frac{1}{4} \text{ of } \frac{2}{3} \right\} \div 3$, then the value of X is:

- Ans
- ☒ A. 3
 - ☒ B. 1
 - ☒ C. 2
 - ☒ D. 4

Question ID : 4410092200574

Option 1 ID : 4410098659470

Option 2 ID : 4410098659468

Option 3 ID : 4410098659469

Option 4 ID : 4410098659471

Status : Answered

Chosen Option : C

Q.8 A plant produces Smartphones and Tablets in the initial ratio of 3 : 2. To meet holiday demand, the plant increases the production of Smartphones by 40%. By what percentage must the production of Tablets be increased so that the new production ratio of Smartphones to Tablets becomes exactly 7 : 4?

- Ans ☒ A. 25%
☒ B. 18%
☒ C. 20%
☒ D. 15%

Question ID : 4410092200583
Option 1 ID : 4410098659507
Option 2 ID : 4410098659505
Option 3 ID : 4410098659506
Option 4 ID : 4410098659504
Status : Answered
Chosen Option : C

Q.9 A solid toy is shaped as a right circular cylinder with a hemisphere on one base and a cone on the other. The cylindrical part has a diameter of 12 cm and its height is 1.5 times of radius of base. The hemispherical and conical parts share the same radius as the cylinder. If the height of the conical part is K cm and the total cost of making this toy at the rate of ₹21 per cubic cm is ₹37,224, then the value of K is: $\left(\text{Use } \pi = \frac{22}{7} \right)$

- Ans ☒ A. 9
☒ B. 8
☒ C. 6
☒ D. 7

Question ID : 4410092200609
Option 1 ID : 4410098659611
Option 2 ID : 4410098659610
Option 3 ID : 4410098659608
Option 4 ID : 4410098659609
Status : Marked For Review
Chosen Option : A

Q.10 A person travelled 10 km, 15 km and x km, in 15, 12 and 13 minutes, respectively. If their average speed is 67.5 kmph, then find the value of x.

- Ans ☒ A. 22
☒ B. 21.5
☒ C. 18.7
☒ D. 20

Question ID : 441009461836
Option 1 ID : 4410091805772
Option 2 ID : 4410091805769
Option 3 ID : 4410091805771
Option 4 ID : 4410091805770
Status : Answered
Chosen Option : D

Q.11 The cost of a washing machine is 25% less than the cost of a television. If the cost of the washing machine increases by 80% and that of the TV decreases by 16%, then what is the percentage change in the total cost of 6 washing machines and 9 televisions? Ans  A. Increase by 10%  B. Increase by 16%  C. Decrease by 9%  D. Decrease by 14%	Question ID : 441009560864 Option 1 ID : 4410092198725 Option 2 ID : 4410092198723 Option 3 ID : 4410092198726 Option 4 ID : 4410092198724 Status : Answered Chosen Option : B
Q.12 A sum, when invested at 20% simple interest per annum, amounts to ₹8,160 after 4 years. What is the simple interest (in ₹, rounded off to two decimal places) on the same sum at the same rate in 2 years? Ans  A. 1,813.33  B. 906.665  C. 7,253.32  D. 3,626.66	Question ID : 441009568331 Option 1 ID : 4410092228444 Option 2 ID : 4410092228446 Option 3 ID : 4410092228447 Option 4 ID : 4410092228445 Status : Answered Chosen Option : A
Q.13 In a division sum, the divisor is 17 times the quotient and 8 times the remainder. If the remainder is 51, what is the dividend? Ans  A. 9840  B. 9846  C. 9842  D. 9843	Question ID : 441009559909 Option 1 ID : 4410092194905 Option 2 ID : 4410092194906 Option 3 ID : 4410092194904 Option 4 ID : 4410092194903 Status : Answered Chosen Option : D

Q.14 A wholesale trader purchases a certain number of identical gadgets. He sells 40% of the gadgets at a profit of 25%, and 50% of the remaining gadgets at a loss of 10%. If he sells the final left-over gadgets at his exact cost price, then the overall net profit percentage on the entire transaction is:

- Ans  A. 12%
-  B. 7%
-  C. 10%
-  D. 5%

Question ID : 4410092200586
Option 1 ID : 4410098659518
Option 2 ID : 4410098659516
Option 3 ID : 4410098659517
Option 4 ID : 4410098659519
Status : Answered
Chosen Option : B

Q.15 The total time (T, in hours) required to transport a heavy cargo shipment across a fixed shipping lane varies inversely as the square root of the engine horsepower H of the cargo ship. When a ship with an engine capacity of 100 horsepower is used, the transit takes exactly 24 hours. If the logistics company switches to a more powerful freight ship equipped with a 400 horsepower engine, how many hours will the same transit take?

- Ans  A. 18
-  B. 12
-  C. 20
-  D. 16

Question ID : 4410092200598
Option 1 ID : 4410098659565
Option 2 ID : 4410098659564
Option 3 ID : 4410098659566
Option 4 ID : 4410098659567
Status : Answered
Chosen Option : B

Q.16 A solid metallic sphere of diameter 32 cm is melted and drawn into a wire of uniform cross-section. If the radius of the wire is 8 cm, then find the length (in cm) of the wire.1456

Ans ☒ A. $72\frac{1}{2}$

☒ B. $85\frac{1}{3}$

☒ C. $75\frac{1}{3}$

☒ D. $80\frac{1}{2}$

Question ID : 441009601147
Option 1 ID : 4410092359705
Option 2 ID : 4410092359708
Option 3 ID : 4410092359706
Option 4 ID : 4410092359707
Status : Answered
Chosen Option : B

Q.17 A logistics company analyzes delivery times (in hours) for five remote locations: 12.4, 14.1, 13.7, 19.2, and 16.6. A manager mistakenly computes the mean deviation from the highest value rather than from the mean. Which of the following best describes the impact of this error on the interpretation of variability in delivery times?

Ans ☒ A. It artificially inflates the metric, falsely implying that delivery times are much more volatile and inconsistent than they actually are.

☒ B. It minimizes the metric, falsely implying that the deliveries are highly consistent and tightly clustered around a central value.

☒ C. The metric simply shifts by a flat scalar value equal to the range, keeping the internal proportions intact.

☒ D. It has no impact on the interpretation of variability because absolute distances remain proportionally constant.

Question ID : 4410092200601
Option 1 ID : 4410098659576
Option 2 ID : 4410098659577
Option 3 ID : 4410098659579
Option 4 ID : 4410098659578
Status : Answered
Chosen Option : A

Q.18 As part of a final selection trial, three candidates—A, B, and C—are assigned a technical task. Working independently, Candidate A can complete the task in 24 days, Candidate B in 32 days, and Candidate C in 60 days. They begin working on the task simultaneously. However, Candidate A leaves the trial after 6 days, and Candidate B leaves after working for a total of 8 days. Candidate C continues alone to finish the assignment. How many additional days are required by Candidate C to complete the remaining work?

- Ans ☐ A. 20.5 days
- ☐ B. 15 days
- ☐ C. 17.5 days
- ☒ D. 22 days

Question ID : 4410092200602
Option 1 ID : 4410098659583
Option 2 ID : 4410098659580
Option 3 ID : 4410098659582
Option 4 ID : 4410098659581
Status : Answered
Chosen Option : D

Q.19 Four venture capitalists evaluate their quarterly portfolio performance based on the ratio of returns received to their initial capital investments. The recorded performance ratios are as follows:
Investor A - 11:80
Investor B - 7 : 50
Investor C - 13 : 90
Investor D - 9 : 65
Which investor received the lowest return percentage on their investment?

- Ans ☐ A. Investor D
- ☐ B. Investor B
- ☐ C. Investor C
- ☒ D. Investor A

Question ID : 4410092200595
Option 1 ID : 4410098659555
Option 2 ID : 4410098659553
Option 3 ID : 4410098659554
Option 4 ID : 4410098659552
Status : Answered
Chosen Option : D

Q.20 If the compound interest earned on a sum in 2 years at a rate of 10 percent per annum is ₹210, then the principal amount (in ₹) is:

- Ans ☒ A. 1,150
☒ B. 1,200
☒ C. 950
☒ D. 1,000

Question ID : 4410092200571
Option 1 ID : 4410098659458
Option 2 ID : 4410098659457
Option 3 ID : 4410098659456
Option 4 ID : 4410098659459
Status : Answered
Chosen Option : D

Q.21 A wholesaler purchases 500 kg of flour but actually receives 10% more quantity because of a faulty weighing machine used by the supplier. He then sells the flour at 5% above cost price. During the sale, his weighing machine delivers 8% less quantity than the indicated weight. What is his overall profit percentage (rounded off to one decimal place)?

- Ans ☒ A. 18.5%
☒ B. 12.5%
☒ C. 22.5%
☒ D. 25.5%

Question ID : 4410092200589
Option 1 ID : 4410098659529
Option 2 ID : 4410098659528
Option 3 ID : 4410098659530
Option 4 ID : 4410098659531
Status : Answered
Chosen Option : D

Q.22 A cyclist starts from point P and rides towards point Q, which is 120 km away. For the first 40 km, the cyclist travels at 12 km/h. For the next 50 km, the cyclist travels at 10 km/h. For the remaining distance, the cyclist increases speed by 20% over the previous speed. What is the average speed (in km/h) of the cyclist for the entire journey? (Rounded off to two decimal places)

- Ans ☒ A. 10.80
☒ B. 11.80
☒ C. 11.55
☒ D. 11.08

Question ID : 4410091580886
Option 1 ID : 4410096244907
Option 2 ID : 4410096244910
Option 3 ID : 4410096244909
Option 4 ID : 4410096244908
Status : Answered
Chosen Option : C

Q.23 Simplify: $\sqrt[3]{99^3 - 88^3 - 11^3}$

- Ans ☒ A. 54
☒ B. 66
☒ C. 99
☒ D. 78

Question ID : 4410092200580
Option 1 ID : 4410098659492
Option 2 ID : 4410098659493
Option 3 ID : 4410098659495
Option 4 ID : 4410098659494
Status : Answered
Chosen Option : B

Q.24 An academic admissions panel calculates a candidate's final selection score as the weighted average of four components: Mathematics, Physics, Chemistry, and a Personal Interview. Chemistry carries a weight of 40% of the total score. The remaining 60% is distributed among the other three components such that the weight assigned to Physics is twice the weight assigned to the Personal Interview, and the weight assigned to Mathematics is equal to the combined weights of Physics and the Personal Interview. If a candidate scores 80 in Mathematics, 70 in Physics, 85 in Chemistry, and 90 in the Personal Interview, what is the candidate's final weighted average score?

- Ans ☒ A. 78
☒ B. 87
☒ C. 81
☒ D. 75

Question ID : 4410092200568
Option 1 ID : 4410098659445
Option 2 ID : 4410098659446
Option 3 ID : 4410098659444
Option 4 ID : 4410098659447
Status : Answered
Chosen Option : C

Q.25 A concrete flood barrier is in the shape of a right prism. Its cross-section is an isosceles trapezoid with parallel sides of lengths 10 m and 22 m, and the two equal non-parallel sides each measure 10 m. The prism is 50 m long. Find the volume (in m³) of the prism.

- Ans ☒ A. 5800
☒ B. 6800
☒ C. 6200
☒ D. 6400

Question ID : 4410092200612
Option 1 ID : 4410098659620
Option 2 ID : 4410098659623
Option 3 ID : 4410098659621
Option 4 ID : 4410098659622
Status : Answered
Chosen Option : D

Q.1 Below are given two sets of numbers. In each set of numbers, a certain mathematical operation on the first number results in the second number. Similarly, a certain mathematical operation on the second number results in the third number and so on. Which of the given options follows the same set of operations as in the question?

(NOTE: A two/three digit number cannot be broken into individual digits for operations. E.g. if 37 is followed by 10, the operation cannot be 3+7 as a two-digit number cannot be broken into individual digits.)

63-21-84-77

69-23-92-85

- Ans  A. 75-25-105-93
-  B. 75-25-100-97
-  C. 75-25-100-93
-  D. 75-35-100-93

Question ID : 4410092226454

Option 1 ID : 4410098761143

Option 2 ID : 4410098761142

Option 3 ID : 4410098761141

Option 4 ID : 4410098761144

Status : Answered

Chosen Option : C

Q.2 Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north. Only five people sit between G and B. C sits fourth from the right end. E sits to the right of D but to left of C. F sits second to the left of G. How many people sit between A and D ?

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

Question ID : 44100973032

Option 1 ID : 441009290450

Option 2 ID : 441009290448

Option 3 ID : 441009290451

Option 4 ID : 441009290449

Status : Answered

Chosen Option : B

Q.3 What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?
 $92 - 106 + 21 \div 3 \times 3 = ?$

- Ans ☒ A. 178
☒ B. 175
☒ C. 176
☒ D. 177

Question ID : 441009384711
Option 1 ID : 4410091504497
Option 2 ID : 4410091504494
Option 3 ID : 4410091504495
Option 4 ID : 4410091504496
Status : Answered
Chosen Option : D

Q.4 C, H, Y, K and L have different heights. Only H is taller than L. Y is taller than K. Only two people have heights between C and H. How many people have heights between K and L?

- Ans ☒ A. One
☒ B. Two
☒ C. Four
☒ D. Three

Question ID : 4410091657285
Option 1 ID : 4410096544051
Option 2 ID : 4410096544052
Option 3 ID : 4410096544054
Option 4 ID : 4410096544053
Status : Answered
Chosen Option : B

Q.5 In a certain code,
'notebook marker folder' is coded as 'qx bv lt',
'folder envelope document' is coded as 'lt mp ry',
'document notebook register' is coded as 'mp qx hc'.
(All the codes are two-letter codes only.)
Which word is coded as ry?

- Ans ☒ A. marker
☒ B. folder
☒ C. document
☒ D. envelope

Question ID : 4410092226442
Option 1 ID : 4410098761096
Option 2 ID : 4410098761095
Option 3 ID : 4410098761094
Option 4 ID : 4410098761093
Status : Answered
Chosen Option : D

Q.6 TSFX is related to UQGV in a certain way based on the English alphabetical order. In the same way, EKWL is related to FIXJ. To which of the following is YXIR related, following the same logic?¹⁹⁵⁸

- Ans ☒ A. ZVJP
- ☒ B. XVKQ
- ☒ C. XWJO
- ☒ D. ZWJO

Question ID : 441009805369
Option 1 ID : 4410093175600
Option 2 ID : 4410093175602
Option 3 ID : 4410093175601
Option 4 ID : 4410093175599
Status : Answered
Chosen Option : A

Q.7 What should come in place of ‘?’ in the given series?
78 65 52 39 26 ?

- Ans ☒ A. 11
- ☒ B. 10
- ☒ C. 12
- ☒ D. 13

Question ID : 441009370802
Option 1 ID : 4410091449106
Option 2 ID : 4410091449105
Option 3 ID : 4410091449107
Option 4 ID : 4410091449108
Status : Answered
Chosen Option : D

Q.8 Adit starts from Point A and drives 5 km towards South. He then takes a left turn, drives 7 km, turns left and drives 11 km. He then takes a left turn and drives 12 km. He takes a final left turn, drives 6 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again?
(All turns are 90 degree turns only unless specified.)

- Ans ☒ A. 6 km to the east
- ☒ B. 5 km to the west
- ☒ C. 6 km to the west
- ☒ D. 5 km to the east

Question ID : 441009231936
Option 1 ID : 441009906201
Option 2 ID : 441009906200
Option 3 ID : 441009906202
Option 4 ID : 441009906199
Status : Answered
Chosen Option : B

Q.9 What should come in place of the question mark (?) in the given series based on the English alphabetical order?

YXZ UTV QPR MLN ?

- Ans  A. IHJ
-  B. IHG
-  C. HIJ
-  D. HIG

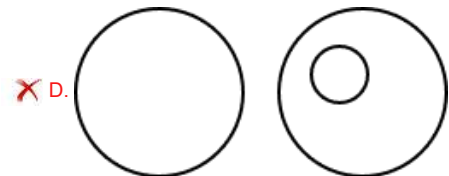
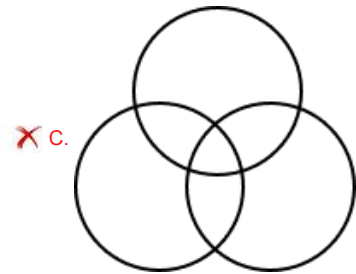
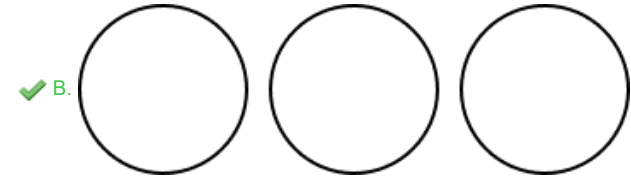
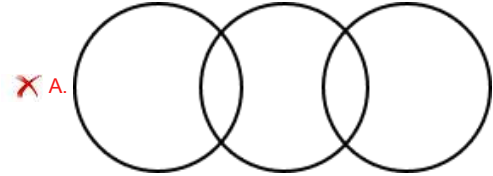
Question ID : 441009732385
Option 1 ID : 4410092883295
Option 2 ID : 4410092883292
Option 3 ID : 4410092883293
Option 4 ID : 4410092883294
Status : Answered

Chosen Option : A

Q.10 Select the Venn diagram that best illustrates the relationship between the following classes.

Steel, Chair, Table

Ans



Question ID : 4410092226450

Option 1 ID : 4410098761125

Option 2 ID : 4410098761126

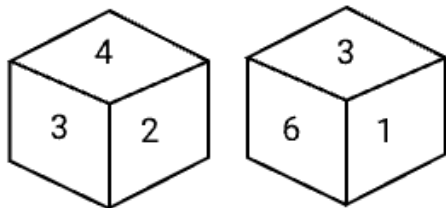
Option 3 ID : 4410098761128

Option 4 ID : 4410098761127

Status : Answered

Chosen Option : A

Q.11 Six numbers, 1, 2, 3, 4, 5 and 6, are written on different faces of a dice. Two different positions of the same dice are given below. Which is the number on the face opposite the face containing 1?



- Ans ☒ A. 3
☒ B. 2
☒ C. 4
☒ D. 6

Question ID : 4410092228079
Option 1 ID : 4410098766632
Option 2 ID : 4410098766635
Option 3 ID : 4410098766633
Option 4 ID : 4410098766634
Status : Answered
Chosen Option : C

Q.12 Anita is the mother of Rajesh. Rajesh is the brother of Suresh. Suresh is the father of Neha. Neha is the wife of Mohan. How is Anita related to Mohan?

- Ans ☒ A. Wife's father's sister
☒ B. Wife's mother's mother
☒ C. Wife's mother's sister
☒ D. Wife's father's mother

Question ID : 4410092226438
Option 1 ID : 4410098761078
Option 2 ID : 4410098761079
Option 3 ID : 4410098761080
Option 4 ID : 4410098761077
Status : Answered
Chosen Option : D

Q.13 Refer to the given number and symbol series and answer the question that follows. Counting to be done from left to right only. All numbers are single-digit numbers.

(Left) 1 * % 4 7 @ 2 \$ 5 & 8 Ω 6 # 3 * £ 9 (Right)

How many such symbols are there, each of which is immediately preceded by a number and also immediately followed by a number?

Ans ☒ A. More than two

☐ B. One

☐ C. Two

☐ D. None

Question ID : 441009807000
Option 1 ID : 4410093182126
Option 2 ID : 4410093182124
Option 3 ID : 4410093182125
Option 4 ID : 4410093182123
Status : Answered
Chosen Option : A

Q.14 Given below is a statement followed by two possible reasons numbered I and II. Read the statement carefully and decide which of the two explains the event/observation/information given in the statement.

Statement: Farming, as we all well know, is a uniquely challenging profession. For millennia, farmers have had to find creative solutions to a variety of ecological challenges. Because of this, they've become incredibly adaptable individuals over the years.

Reasons:

I. Famers are using new scientific techniques of farming.

II. Farmers are using water harvesting as a creative technique to face ecological challenges

Ans ☐ A. Only II is a possible reason.

☒ B. Both I and II are possible reasons.

☐ C. Only I is a possible reason.

☐ D. Neither I nor II is a possible reason.

Question ID : 441009477875
Option 1 ID : 4410091866906
Option 2 ID : 4410091866908
Option 3 ID : 4410091866905
Option 4 ID : 4410091866907
Status : Answered
Chosen Option : B

Q.15 In this question, a question is followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and select the appropriate answer.

Five research grants – Aspire, Catalyst, Elevate, Ignite and Propel – are awarded on five consecutive days from Monday to Friday. On which day is Elevate awarded?

(I) Elevate is awarded after Catalyst but before Propel.

(II) Aspire is awarded on Monday, Catalyst is awarded on Tuesday and Ignite is awarded on Friday.

- Ans ☒ A. Both statements I and II together (and not statement I alone or statement II alone) are sufficient to answer the question.
- ☒ B. Data in statement I alone is sufficient to answer the question while data in statement II is not.
- ☒ C. Data in statement II alone is sufficient to answer the question while data in statement I is not.
- ☒ D. Both statements I and II together are NOT sufficient to answer the question.

Question ID : 4410092226446
Option 1 ID : 4410098761109
Option 2 ID : 4410098761110
Option 3 ID : 4410098761111
Option 4 ID : 4410098761112
Status : Answered
Chosen Option : A

Q.16 Seven boxes, C, H, A, I, R, E and D, are kept one over the other but not necessarily in the same order.
Only three boxes are kept above C. Only one box is kept between D and C.
Only three boxes are kept between D and A. A is kept at some place above C.
I is kept immediately below A. H is kept at one of the places above E. R is not kept immediately above or below D.
Which box is kept at the lowermost position?

- Ans ☒ A. E
- ☒ B. C
- ☒ C. I
- ☒ D. A

Question ID : 4410091526447
Option 1 ID : 4410096028905
Option 2 ID : 4410096028902
Option 3 ID : 4410096028904
Option 4 ID : 4410096028903
Status : Answered
Chosen Option : A

Q.17 What should come in place of the question mark (?) in the given series?

9 13 21 33 49 ?

- Ans ☒ A. 71
☒ B. 64
☒ C. 69
☒ D. 66

Question ID : 4410091201891
Option 1 ID : 4410094741349
Option 2 ID : 4410094741346
Option 3 ID : 4410094741348
Option 4 ID : 4410094741347
Status : Answered
Chosen Option : C

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

Statements:
All mangoes are bulbs.
All eggs are bulbs.

Conclusions:
(I): Some mugs are eggs.
(II): All eggs are mugs.

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

Question ID : 44100929069
Option 1 ID : 441009115748
Option 2 ID : 441009115747
Option 3 ID : 441009115746
Option 4 ID : 441009115749
Status : Answered
Chosen Option : A

Q.19 Refer to the following letter, symbol series and answer the question.
Counting to be done from left to right only.

(Left) E J @ J T @ & # R Y N * G M € E £ J O # L K (Right)

How many such letters are there, each of which is immediately preceded by a symbol and also immediately followed by a symbol?¹¹⁸⁹³

- Ans
- ☒ A. 0
 - ☒ B. 3
 - ☒ C. 2
 - ☒ D. 1

Question ID : 441009701121
Option 1 ID : 4410092758516
Option 2 ID : 4410092758517
Option 3 ID : 4410092758515
Option 4 ID : 4410092758514
Status : Answered
Chosen Option : D

Q.20 Select the option that represents the correct order of the given words as they would appear in an English dictionary.

- 1. Advocate
- 2. Appended
- 3. Attacker
- 4. Audience
- 5. Attuning

- Ans
- ☒ A. 2, 1, 5, 4, 3
 - ☒ B. 2, 1, 3, 5, 4
 - ☒ C. 1, 3, 5, 2, 4
 - ☒ D. 1, 2, 3, 5, 4

Question ID : 441009189478
Option 1 ID : 441009747314
Option 2 ID : 441009747313
Option 3 ID : 441009747315
Option 4 ID : 441009747312
Status : Answered
Chosen Option : D

Q.21 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the one that does not belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- Ans ☒ A. PI – RM
☒ B. LA – NE
☒ C. SD – WG
☒ D. TQ – VU

Question ID : 44100910392
Option 1 ID : 44100941359
Option 2 ID : 44100941358
Option 3 ID : 44100941361
Option 4 ID : 44100941360
Status : Answered
Chosen Option : C

Q.22 An accurate clock shows 9:00 AM. By how many degrees will the hour hand rotate when the clock next shows 3:00 PM?

- Ans ☒ A. 150°
☒ B. 240°
☒ C. 180°
☒ D. 90°

Question ID : 4410092226434
Option 1 ID : 4410098761062
Option 2 ID : 4410098761063
Option 3 ID : 4410098761061
Option 4 ID : 4410098761064
Status : Answered
Chosen Option : C

Q.23 Seven boxes, C, H, A, N, G, E and D, are kept one over the other but not necessarily in the same order. Only four boxes are kept between N and A. Only C is kept above N. Only two boxes are kept between E and D. G is kept immediately above H. D is not kept immediately above G. How many boxes are kept between C and G?³⁷⁸⁷

- Ans ☒ A. Four
☒ B. Three
☒ C. One
☒ D. Two

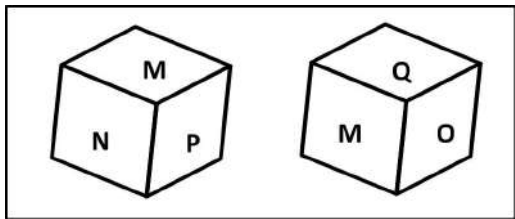
Question ID : 441009709956
Option 1 ID : 4410092793798
Option 2 ID : 4410092793797
Option 3 ID : 4410092793795
Option 4 ID : 4410092793796
Status : Answered
Chosen Option : B

Q.24 If 18 July 2000 was Tuesday, then what day was it on 27 June 2000?6323

- Ans ☒ A. Thursday
☒ B. Tuesday
☒ C. Monday
☒ D. Wednesday

Question ID : 441009726793
Option 1 ID : 4410092860927
Option 2 ID : 4410092860925
Option 3 ID : 4410092860924
Option 4 ID : 4410092860926
Status : Answered
Chosen Option : B

Q.25 Six letters, M, N, O, P, Q and R, are written on different faces of a dice. Two positions of this dice are shown in the given figure. Find the letter on the face opposite to R.



- Ans ☒ A. Q
☒ B. P
☒ C. N
☒ D. M

Question ID : 441009906534
Option 1 ID : 4410093579946
Option 2 ID : 4410093579947
Option 3 ID : 4410093579944
Option 4 ID : 4410093579945
Status : Answered
Chosen Option : D

Q.1 Select the option that can be used as a one-word substitute for 'a person who pretends to have virtues or moral beliefs'.

- Ans ☒ A. Apostate
☒ B. Misanthrope
☒ C. Pedant
☒ D. Hypocrite

Question ID : 4410092220695
Option 1 ID : 4410098738440
Option 2 ID : 4410098738441
Option 3 ID : 4410098738439
Option 4 ID : 4410098738438
Status : Answered
Chosen Option : D

Q.2 Correct the following sentence.

The team performed **remarkable** under pressure.

- Ans ☒ A. The team performed too remarkably under pressure.
☒ B. The team performed more remarkable under pressure.
☒ C. The team performed very remarkably under pressure.
☒ D. The team performed remarkably under pressure.

Question ID : 4410091602965
Option 1 ID : 4410096331159
Option 2 ID : 4410096331157
Option 3 ID : 4410096331156
Option 4 ID : 4410096331158
Status : Answered
Chosen Option : D

Q.3 Rectify the sentence by selecting the correct spelling of the word in bold from the options.

She was widely recognized for her **achievment** in the field of neuro-linguistics.

- Ans ☒ A. achievemnet
☒ B. achievement
☒ C. acheavement
☒ D. acheevmant

Question ID : 4410091349951
Option 1 ID : 4410095331949
Option 2 ID : 4410095331947
Option 3 ID : 4410095331948
Option 4 ID : 4410095331950
Status : Answered
Chosen Option : B

Q.4 Select the correct passive voice form of the given sentence.

Management expects attendees to have completed the survey before the seminar.

- Ans ☒ A. The survey is expected to complete before the seminar.
- ☒ B. The survey was expected to be completed before the seminar.
- ☒ C. The survey is expected to have been completed before the seminar.
- ☒ D. It is expected that attendees complete the survey before the seminar.

Question ID : 4410092220722
Option 1 ID : 4410098738547
Option 2 ID : 4410098738549
Option 3 ID : 4410098738548
Option 4 ID : 4410098738546
Status : Answered
Chosen Option : C

Q.5 Convert the following sentence from direct speech into the correct indirect speech form.

Direct: The professor warned the research scholars, "If you submit your doctoral theses without completing the mandatory ethical clearance, the examination board will reject them without review."

- Ans ☒ A. The professor warned the research scholars that if they submit their doctoral theses without completing the mandatory ethical clearance, the examination board will reject them without review.
- ☒ B. The professor warned the research scholars that if they had submitted their doctoral theses without completing the mandatory ethical clearance, the examination board would have rejected them without review.
- ☒ C. The professor warned the research scholars that if they submitted their doctoral theses without completing the mandatory ethical clearance, the examination board would reject them without review.
- ☒ D. The professor warned the research scholars that if they submitted their doctoral theses without completing the mandatory ethical clearance, the examination board had rejected them without review.

Question ID : 4410091848957
Option 1 ID : 4410097288060
Option 2 ID : 4410097288061
Option 3 ID : 4410097288059
Option 4 ID : 4410097288062
Status : Answered
Chosen Option : C

Q.6 Complete the sentence with the most appropriate option.

In _____ context of global economics, _____ role of technology cannot be ignored.

- Ans ☒ A. the; an
- ☒ B. a; a
- ☒ C. the; the
- ☒ D. the; a

Question ID : 4410091602490
Option 1 ID : 4410096329534
Option 2 ID : 4410096329535
Option 3 ID : 4410096329536
Option 4 ID : 4410096329537
Status : Answered
Chosen Option : C

Q.7 Select the sentence that is grammatically correct in its passive construction.

- Ans ☒ A. The policy was reported to have advised the CEO against prior notice.
- ☒ B. The CEO was reported having been advise against implementing the policy without prior notice.
- ☒ C. The CEO was reported to be had advised against implementing the policy without prior notice.
- ☒ D. The CEO was reported to have been advised against implementing the policy without prior notice.

Question ID : 4410092220723
Option 1 ID : 4410098738551
Option 2 ID : 4410098738552
Option 3 ID : 4410098738550
Option 4 ID : 4410098738553
Status : Answered
Chosen Option : D

Q.8 Rectify the sentence by selecting the correct spelling from the options:
The professor emphasised that the conclusion was **tenous**, resting on assumptions rather than empirical evidence

- Ans ☒ A. Tenuous
- ☒ B. Tenuous
- ☒ C. Teneous
- ☒ D. Tenoeus

Question ID : 4410091594069
Option 1 ID : 4410096296531
Option 2 ID : 4410096296532
Option 3 ID : 4410096296533
Option 4 ID : 4410096296530
Status : Answered
Chosen Option : C

Q.9 Select the appropriate meaning of the proverb from the options given.
Proverb: A Chain is Only as Strong as its Weakest Link

- Ans ☒ A. The longest-lasting materials make the strongest structures.
- ☒ B. Strength increases when all parts work independently.
- ☒ C. A strong leader can compensate for weak members in a team.
- ☒ D. The overall strength of a group depends on its most vulnerable member.

Question ID : 4410092093
Option 1 ID : 4410098310
Option 2 ID : 4410098309
Option 3 ID : 4410098311
Option 4 ID : 4410098312
Status : Answered
Chosen Option : D

Q.10 Identify the error in the given sentence and choose the option that rectifies it correctly.

Although the board is reviewing the merger proposal, several shareholders are desiring an immediate suspension of negotiations.

- Ans ☒ A. Although the board is reviewing the merger proposal, several shareholders holds a desire for an immediate suspension of negotiations.
- ☒ B. Although the board is reviewing the merger proposal, several shareholders are in desire of an immediate suspension of negotiations.
- ☒ C. Although the board is reviewing the merger proposal, several shareholders desire an immediate suspension of negotiations.
- ☒ D. Although the board is reviewing the merger proposal, several shareholders were desiring an immediate suspension of negotiations.

Question ID : 4410092220714
Option 1 ID : 4410098738517
Option 2 ID : 4410098738514
Option 3 ID : 4410098738515
Option 4 ID : 4410098738516
Status : Answered
Chosen Option : C

Q.11 Complete the sentence by choosing the best combination of options for the blanks, such that the sentence is grammatically correct.

It is __ (1) __ universal truth that the role of universities is not primarily to give you __ (2) __ aesthetically pleasing experience, but rather __ (3) __ intellectually stimulating one.

- Ans ☒ A. (1) an (2) a (3) an
- ☒ B. (1) a (2) an (3) a
- ☒ C. (1) an (2) an (3) an
- ☒ D. (1) a (2) an (3) an

Question ID : 441009165904
Option 1 ID : 441009656749
Option 2 ID : 441009656751
Option 3 ID : 441009656750
Option 4 ID : 441009656752
Status : Answered
Chosen Option : C

Q.12 Select the most appropriate synonym of the underlined word in the given sentence.

Her meticulous attention to detail impressed the hiring committee.

- Ans ☒ A. thorough
☒ B. relaxed
☒ C. average
☒ D. careless

Question ID : 441009291583
Option 1 ID : 4410091133171
Option 2 ID : 4410091133172
Option 3 ID : 4410091133173
Option 4 ID : 4410091133170
Status : Answered
Chosen Option : A

Q.13 Select the option that can be used as a one-word substitute for 'a person who collects stamps as a hobby'.

- Ans ☒ A. Cartographer
☒ B. Ornithologist
☒ C. Numismatist
☒ D. Philatelist

Question ID : 4410092220696
Option 1 ID : 4410098738445
Option 2 ID : 4410098738443
Option 3 ID : 4410098738442
Option 4 ID : 4410098738444
Status : Answered
Chosen Option : A

Q.14 Given the direct speech sentence: "Are you attending the seminar?" asked the professor. Which indirect form would best fit a scholarly article, maintaining the correct reporting verb and question structure?

- Ans ☒ A. The professor asked if I was attending the seminar.
☒ B. The professor asked am I attending the seminar.
☒ C. The professor inquired whether I attend the seminar.
☒ D. The professor said if I am attending the seminar.

Question ID : 4410092220686
Option 1 ID : 4410098738403
Option 2 ID : 4410098738402
Option 3 ID : 4410098738405
Option 4 ID : 4410098738404
Status : Answered
Chosen Option : A

Q.15 Identify the meaning of the given idiom from the options.

'Hoist with one's own petard'

- Ans ☒ A. Deposed from power by an internal uprising
☒ B. Defeated in a contest by an opponent using superior strategy
☒ C. Caught or harmed by one's own scheme
☒ D. Exposed and disgraced after a secret plot is revealed

Question ID : 4410092220715
Option 1 ID : 4410098738518
Option 2 ID : 4410098738521
Option 3 ID : 4410098738519
Option 4 ID : 4410098738520
Status : Answered
Chosen Option : C

Q.16 The following sentence has been split into segments. Identify the segment that contains an error.

(A) Before the independent judiciary commission released its landmark verdict on institutional accountability, / (B) civil society organisations / (C) had been monitor the proceedings / (D) for over eighteen months with considerable public attention

- Ans ☒ A. had been monitor the proceedings
☒ B. for over eighteen months with considerable public attention
☒ C. Before the independent judiciary commission released its landmark verdict on institutional accountability,
☒ D. civil society organisations

Question ID : 4410091848955
Option 1 ID : 4410097288053
Option 2 ID : 4410097288054
Option 3 ID : 4410097288051
Option 4 ID : 4410097288052
Status : Answered
Chosen Option : A

Q.17 A statement divided into different segments is given below. The first segment is fixed; rearrange the other segments to form a coherent statement.

It is a formidable structure, / With reinforced steel walls (P) / That block out all sound (Q) / Lined with insulation panels (R) / Built to withstand high impact (S)

- Ans ☒ A. R P S Q
☒ B. Q S P R
☒ C. S Q R P
☒ D. P R Q S

Question ID : 4410092220699
Option 1 ID : 4410098738455
Option 2 ID : 4410098738454
Option 3 ID : 4410098738457
Option 4 ID : 4410098738456
Status : Answered
Chosen Option : C

Q.18 A sentence with a grammatical error is given here. Select the option that will rectify this error.

Between the two investment strategies, this one is the most effective.

- Ans ☒ A. Between the two investment strategies, this one is more effective.
- ☐ B. Among the two investment strategies, this one is most effective.
- ☐ C. Between the two investment strategies, this one is much effective.
- ☐ D. Between the two investment strategies, this one is effective.

Question ID : 4410091647806
Option 1 ID : 4410096507482
Option 2 ID : 4410096507483
Option 3 ID : 4410096507484
Option 4 ID : 4410096507481
Status : Answered
Chosen Option : B

Q.19 A statement divided into different segments is given below. The first segment is fixed; rearrange the other segments to form a coherent statement.

Advanced syntax structures, / Are typically mastered (P) / After extensive practice (Q) / By graduate-level students (R) / In academic settings (S)

- Ans ☐ A. Q P R S
- ☐ B. S Q P R
- ☐ C. R Q S P
- ☒ D. P R S Q

Question ID : 4410092220698
Option 1 ID : 4410098738451
Option 2 ID : 4410098738450
Option 3 ID : 4410098738452
Option 4 ID : 4410098738453
Status : Answered
Chosen Option : D

Q.20 A sentence with a grammatical error is given here. Select the option that will rectify this error.

Mrs. Sharma was looking for a less riskier investment option for her retirement portfolio.

- Ans ☐ A. Mrs. Sharma was looking for a lesser riskier option for her retirement portfolio.
- ☐ B. Mrs. Sharma was looking for a riskiest investment option for her retirement portfolio.
- ☒ C. Mrs. Sharma was looking for a less risky option for her retirement portfolio.
- ☐ D. Mrs. Sharma was looking for a least riskier investment option for her retirement portfolio.

Question ID : 4410091647807
Option 1 ID : 4410096507488
Option 2 ID : 4410096507485
Option 3 ID : 4410096507486
Option 4 ID : 4410096507487
Status : Answered
Chosen Option : C

Comprehension:

Read the given passage and answer the questions that follow.

The discoveries of feathered dinosaur fossils from the Jurassic and Cretaceous sediments of China and elsewhere document a diverse range of feather types, from monofilamentous structures to highly complex flight feathers. These findings reveal a general evolutionary trend of increasing complexity that led to the cladogenesis of birds. The widespread occurrence of foot feathers in Mesozoic theropods—ranging from short filamentous forms in basal species to large vaned feathers in more derived theropods, including early birds—clarifies feather-scale relationships and integumentary evolution linked to the origins of flight. It also suggests that bird flight likely evolved through a four-winged stage.

With numerous well-preserved dinosaur fossils spanning a wide range of geological periods, the morphological, functional, and temporal transition from ground-dwelling to flight-capable theropods is now one of the best-documented evolutionary transitions. At the same time, studies beyond palaeontology offer further insight into the evolution of key avian traits, including feathers, flight, endothermy, reproductive strategies, growth patterns, and a specialized pulmonary system. The defining features of modern birds largely evolved in a gradual, stepwise manner throughout theropod evolution. However, recent findings also indicate occasional bursts of morphological innovation, particularly near the origin of birds, along with a complex, mosaic distribution of traits across the theropod lineage. Research into bird origins thus serves as a model for integrating paleontological and neontological evidence to better understand major evolutionary transitions and guide future scientific inquiry.

SubQuestion No : 21

Q.21 What is the most appropriate title for the passage?

- Ans  A. The Role of China in Fossil Discoveries: An Analytical Study
-  B. The Sudden Emergence of Birds in Evolutionary History
-  C. Modern Birds and Their Unique Physiological Systems
-  D. Feathered Dinosaurs and the Gradual Evolution of Avian Traits

Question ID : 4410091867022

Option 1 ID : 4410097356281

Option 2 ID : 4410097356278

Option 3 ID : 4410097356280

Option 4 ID : 4410097356279

Status : Answered

Chosen Option : D

Comprehension:

Read the given passage and answer the questions that follow.

The discoveries of feathered dinosaur fossils from the Jurassic and Cretaceous sediments of China and elsewhere document a diverse range of feather types, from monofilamentous structures to highly complex flight feathers. These findings reveal a general evolutionary trend of increasing complexity that led to the cladogenesis of birds. The widespread occurrence of foot feathers in Mesozoic theropods—ranging from short filamentous forms in basal species to large vaned feathers in more derived theropods, including early birds—clarifies feather-scale relationships and integumentary evolution linked to the origins of flight. It also suggests that bird flight likely evolved through a four-winged stage.

With numerous well-preserved dinosaur fossils spanning a wide range of geological periods, the morphological, functional, and temporal transition from ground-dwelling to flight-capable theropods is now one of the best-documented evolutionary transitions. At the same time, studies beyond palaeontology offer further insight into the evolution of key avian traits, including feathers, flight, endothermy, reproductive strategies, growth patterns, and a specialized pulmonary system. The defining features of modern birds largely evolved in a gradual, stepwise manner throughout theropod evolution. However, recent findings also indicate occasional bursts of morphological innovation, particularly near the origin of birds, along with a complex, mosaic distribution of traits across the theropod lineage. Research into bird origins thus serves as a model for integrating paleontological and neontological evidence to better understand major evolutionary transitions and guide future scientific inquiry.

SubQuestion No : 22

Q.22 What is the structure of the passage?

- Ans
- ☒

A. Descriptive explanation followed by analytical synthesis and conclusion
- ☐

B. Problem–solution followed by a concluding argument
- ☐

C. Cause-and-effect discussion limited to climate change
- ☐

D. Chronological narration of fossil discoveries

Question ID : 4410091867023

Option 1 ID : 4410097356284

Option 2 ID : 4410097356282

Option 3 ID : 4410097356285

Option 4 ID : 4410097356283

Status : Answered

Chosen Option : A

Comprehension:

Read the given passage and answer the questions that follow.

The discoveries of feathered dinosaur fossils from the Jurassic and Cretaceous sediments of China and elsewhere document a diverse range of feather types, from monofilamentous structures to highly complex flight feathers. These findings reveal a general evolutionary trend of increasing complexity that led to the cladogenesis of birds. The widespread occurrence of foot feathers in Mesozoic theropods—ranging from short filamentous forms in basal species to large vaned feathers in more derived theropods, including early birds—clarifies feather-scale relationships and integumentary evolution linked to the origins of flight. It also suggests that bird flight likely evolved through a four-winged stage. With numerous well-preserved dinosaur fossils spanning a wide range of geological periods, the morphological, functional, and temporal transition from ground-dwelling to flight-capable theropods is now one of the best-documented evolutionary transitions. At the same time, studies beyond palaeontology offer further insight into the evolution of key avian traits, including feathers, flight, endothermy, reproductive strategies, growth patterns, and a specialized pulmonary system. The defining features of modern birds largely evolved in a gradual, stepwise manner throughout theropod evolution. However, recent findings also indicate occasional bursts of morphological innovation, particularly near the origin of birds, along with a complex, mosaic distribution of traits across the theropod lineage. Research into bird origins thus serves as a model for integrating paleontological and neontological evidence to better understand major evolutionary transitions and guide future scientific inquiry.

SubQuestion No : 23

Q.23 Which of the following best represents a real-world connection of the passage?

- Ans  A. Developing advanced technologies and aerodynamic models to improve artificial flight systems in aircraft
-  B. Using fossil evidence and interdisciplinary research to understand long-term biological evolution
-  C. Promoting tourism and educational awareness in fossil-rich regions to support conservation and research initiatives
-  D. Studying modern birds and their ecological roles to enhance sustainable agricultural productivity practices

Question ID : 4410091867024
Option 1 ID : 4410097356287
Option 2 ID : 4410097356286
Option 3 ID : 4410097356289
Option 4 ID : 4410097356288
Status : Answered
Chosen Option : B

Comprehension:

Read the given passage and answer the questions that follow.

The discoveries of feathered dinosaur fossils from the Jurassic and Cretaceous sediments of China and elsewhere document a diverse range of feather types, from monofilamentous structures to highly complex flight feathers. These findings reveal a general evolutionary trend of increasing complexity that led to the cladogenesis of birds. The widespread occurrence of foot feathers in Mesozoic theropods—ranging from short filamentous forms in basal species to large vaned feathers in more derived theropods, including early birds—clarifies feather-scale relationships and integumentary evolution linked to the origins of flight. It also suggests that bird flight likely evolved through a four-winged stage. With numerous well-preserved dinosaur fossils spanning a wide range of geological periods, the morphological, functional, and temporal transition from ground-dwelling to flight-capable theropods is now one of the best-documented evolutionary transitions. At the same time, studies beyond palaeontology offer further insight into the evolution of key avian traits, including feathers, flight, endothermy, reproductive strategies, growth patterns, and a specialized pulmonary system. The defining features of modern birds largely evolved in a gradual, stepwise manner throughout theropod evolution. However, recent findings also indicate occasional bursts of morphological innovation, particularly near the origin of birds, along with a complex, mosaic distribution of traits across the theropod lineage. Research into bird origins thus serves as a model for integrating paleontological and neontological evidence to better understand major evolutionary transitions and guide future scientific inquiry.

SubQuestion No : 24

Q.24 Choose the word that is opposite in meaning to “gradual” as used in the passage.

- Ans  A. Labyrinthine
-  B. Ephemeral
-  C. Saltatory
-  D. Anomalous

Question ID : 4410091867025
Option 1 ID : 4410097356290
Option 2 ID : 4410097356293
Option 3 ID : 4410097356292
Option 4 ID : 4410097356291
Status : Answered
Chosen Option : C

Comprehension:

Read the given passage and answer the questions that follow.

The discoveries of feathered dinosaur fossils from the Jurassic and Cretaceous sediments of China and elsewhere document a diverse range of feather types, from monofilamentous structures to highly complex flight feathers. These findings reveal a general evolutionary trend of increasing complexity that led to the cladogenesis of birds. The widespread occurrence of foot feathers in Mesozoic theropods—ranging from short filamentous forms in basal species to large vaned feathers in more derived theropods, including early birds—clarifies feather-scale relationships and integumentary evolution linked to the origins of flight. It also suggests that bird flight likely evolved through a four-winged stage. With numerous well-preserved dinosaur fossils spanning a wide range of geological periods, the morphological, functional, and temporal transition from ground-dwelling to flight-capable theropods is now one of the best-documented evolutionary transitions. At the same time, studies beyond palaeontology offer further insight into the evolution of key avian traits, including feathers, flight, endothermy, reproductive strategies, growth patterns, and a specialized pulmonary system. The defining features of modern birds largely evolved in a gradual, stepwise manner throughout theropod evolution. However, recent findings also indicate occasional bursts of morphological innovation, particularly near the origin of birds, along with a complex, mosaic distribution of traits across the theropod lineage. Research into bird origins thus serves as a model for integrating paleontological and neontological evidence to better understand major evolutionary transitions and guide future scientific inquiry.

SubQuestion No : 25

Q.25 Which of the following statements is best supported by the passage?

- Ans  A. It's clearly evident that bird flight evolved instantly without intermediate stages
-  B. As per research feathers first appeared only in modern birds
-  C. The transition from dinosaurs to birds is well documented through fossils
-  D. All bird characteristics appeared simultaneously in evolution

Question ID : 4410091867026
Option 1 ID : 4410097356294
Option 2 ID : 4410097356297
Option 3 ID : 4410097356296
Option 4 ID : 4410097356295
Status : Answered
Chosen Option : C

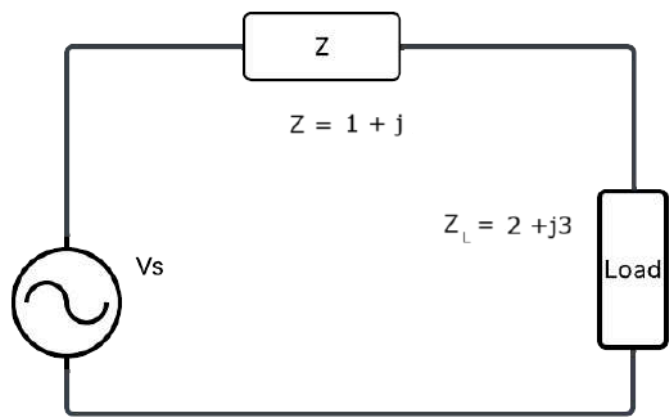
Section : Part 5 Domain Knowledge

Q.1 Which type of relay operates when the current exceeds a predetermined value?

- Ans  A. Overcurrent relay
-  B. Buchholz relay
-  C. Differential relay
-  D. Distance relay

Question ID : 4410091160547
Option 1 ID : 4410094576741
Option 2 ID : 4410094576744
Option 3 ID : 4410094576743
Option 4 ID : 4410094576742
Status : Answered
Chosen Option : A

Q.2 Calculate the reactive power of the load circuit with the supply voltage of $V_s = 20 \angle 0^\circ$.



- Ans ☒ A. 48 VAR
☐ B. 12 VAR
☐ C. 24 VAR
☐ D. 10 VAR

Question ID : 4410091213814
Option 1 ID : 4410094788657
Option 2 ID : 4410094788660
Option 3 ID : 4410094788658
Option 4 ID : 4410094788659
Status : Answered
Chosen Option : A

Q.3 For a uniformly charged insulating sphere of total charge Q and radius R , which of the following statements about the electric field is correct?

- Ans ☐ A. The electric field inside is the same as that outside the sphere.
☐ B. The electric field outside the sphere decreases linearly with distance.
☐ C. The electric field inside the sphere is zero.
☒ D. The electric field inside the sphere varies linearly with distance from the center.

Question ID : 441009117576
Option 1 ID : 441009467487
Option 2 ID : 441009467488
Option 3 ID : 441009467485
Option 4 ID : 441009467486
Status : Answered
Chosen Option : D

Q.4 During steady-state operation of a direct current (DC) chopper with constant duty ratio, what is the effect on the limit of continuous conduction mode when the switching frequency is doubled while the load parameters remain unchanged?

- Ans ☒ A. The minimum load current required to maintain continuous conduction mode will decrease
- ☐ B. The peak-to-peak ripple magnitude of the load current will increase
- ☐ C. The duty ratio of the direct current chopper will automatically double
- ☐ D. The average output voltage of the direct current chopper will decrease

Question ID : 4410091715945

Option 1 ID : 4410096767619

Option 2 ID : 4410096767618

Option 3 ID : 4410096767617

Option 4 ID : 4410096767620

Status : Answered

Chosen Option : A

Q.5 Choose the correct statement for the reactive power of electrodynamicometer instrument (EDMI).

S1: If Q1, Q2 and Q3 are the individual phase reactive power, then the total reactive power (Q) of an unbalanced system is $Q = Q1+Q2+Q3$.

S2: In a four-wire system, unbalanced currents can flow through the neutral wire, which does not happen in a perfectly balanced system.

- Ans ☐ A. S1 only
- ☐ B. S1 and S2
- ☒ C. S2 only
- ☐ D. Neither S1 nor S2

Question ID : 4410091421675

Option 1 ID : 4410095615601

Option 2 ID : 4410095615602

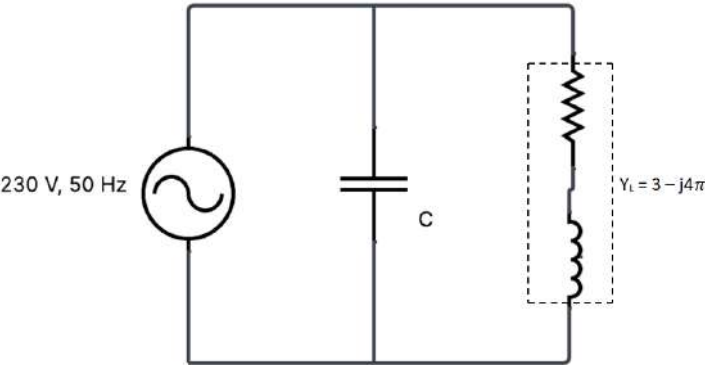
Option 3 ID : 4410095615600

Option 4 ID : 4410095615603

Status : Answered

Chosen Option : D

Q.6 Find the value of the capacitor given in the following parallel circuit at the resonance condition.



- Ans
- ☒ A. 1 F
 - ☒ B. 0.1 F
 - ☒ C. 0.04 F
 - ☒ D. 2 F

Question ID : 4410091215000
Option 1 ID : 4410094793403
Option 2 ID : 4410094793401
Option 3 ID : 4410094793402
Option 4 ID : 4410094793400
Status : Answered
Chosen Option : C

Q.7 What does the penalty factor in economic dispatch account for?

- Ans
- ☒ A. The ratio of total transmission losses to total power generated
 - ☒ B. The peak demand charges in transmission systems
 - ☒ C. The average transmission losses over a specific period
 - ☒ D. The incremental transmission losses with respect to power generation

Question ID : 441009688027
Option 1 ID : 4410092706136
Option 2 ID : 4410092706139
Option 3 ID : 4410092706138
Option 4 ID : 4410092706137
Status : Answered
Chosen Option : A

Q.8

Let $A = \begin{bmatrix} 6 & 0 \\ 0 & 2 \end{bmatrix}$ Consider the following statements about its eig

1. Eigenvectors corresponding to distinct eigenvalues are linearly independent
2. Any scalar multiple of an eigenvector is also an eigenvector
3. Eigenvectors corresponding to the same eigenvalue are always linearly dependent

Which of the above statements are true?



- Ans
- ☒ A. 2 and 3 only
 - ☒ B. 1, 2, and 3
 - ☒ C. 1 only
 - ☒ D. 1 and 2 only

Question ID : 4410091231042

Option 1 ID : 4410094857643

Option 2 ID : 4410094857644

Option 3 ID : 4410094857645

Option 4 ID : 4410094857642

Status : Answered

Chosen Option : D

Q.9 For a buck converter,

Given:

$f_s = 100 \text{ kHz}$,

$V_{in} = 12 \text{ V}$,

$V_o = 6 \text{ V}$,

$I_o = 2 \text{ A}$,

$L = 75 \mu\text{H}$

Find the ripple current in the inductor.

- Ans
- ☒ A. 0.33 A
 - ☒ B. 0.2 A
 - ☒ C. 0.3 A
 - ☒ D. 0.4 A

Question ID : 441009718662

Option 1 ID : 4410092828356

Option 2 ID : 4410092828353

Option 3 ID : 4410092828354

Option 4 ID : 4410092828355

Status : Answered

Chosen Option : B

Q.10 Which of the following devices operates as a double excited system?

- Ans ☒ A. Transformer
☒ B. Universal motor
☒ C. Synchronous motor
☒ D. Three-phase induction motor

Question ID : 44100995731
Option 1 ID : 441009380892
Option 2 ID : 441009380893
Option 3 ID : 441009380895
Option 4 ID : 441009380894
Status : Answered
Chosen Option : C

Q.11 Two linear time-invariant systems P and Q have the following closed-loop pole locations:

System P: poles at $s = -1 \pm j2$ and $s = -5$

System Q: poles at $s = -0.2 \pm j0.5$ and $s = -3$

Which of the following statements is most accurate?

- Ans ☒ A. Both systems are absolutely stable and equally stable relative to each other.
☒ B. System P is absolutely stable and more stable relative to Q, because its dominant poles lie further to the left in the s-plane.
☒ C. System Q is absolutely stable and more stable relative to P, because its dominant poles are closer to the $j\omega$ -axis.
☒ D. Both systems are marginally stable because they have complex conjugate poles.

Question ID : 4410091287443
Option 1 ID : 4410095081559
Option 2 ID : 4410095081560
Option 3 ID : 4410095081561
Option 4 ID : 4410095081562
Status : Answered
Chosen Option : B

Q.12 A discrete random variable Y models the number of successful tests out of four independent trials, each with a probability of success 0.25. What is the probability that Y takes the value 2?

- Ans ☒ A. 0.1406
☒ B. 0.2813
☒ C. 0.2109
☒ D. 0.4219

Question ID : 4410092311333
Option 1 ID : 4410099089955
Option 2 ID : 4410099089956
Option 3 ID : 4410099089953
Option 4 ID : 4410099089954
Status : Answered
Chosen Option : B

Q.13 In a standard 3-phase half-controlled (3-pulse) rectifier, if the input supply frequency is 50 Hz, the ripple frequency of the output voltage is:

- Ans ☒ A. 100 Hz
☒ B. 600 Hz
☒ C. 200 Hz
☒ D. 150 Hz

Question ID : 4410091711799
Option 1 ID : 4410096751414
Option 2 ID : 4410096751416
Option 3 ID : 4410096751415
Option 4 ID : 4410096751417
Status : Answered
Chosen Option : D

Q.14 A moving iron ammeter has resistance $0.1\ \Omega$ and full-scale 5 A. To extend it to 25 A, required shunt is:

- Ans ☒ A. $0.05\ \Omega$
☒ B. $0.5\ \Omega$
☒ C. $0.125\ \Omega$
☒ D. $0.025\ \Omega$

Question ID : 4410091350853
Option 1 ID : 4410095335527
Option 2 ID : 4410095335529
Option 3 ID : 4410095335528
Option 4 ID : 4410095335526
Status : Answered
Chosen Option : D

Q.15 Which of the following Excess-3 codes represents an invalid decimal digit?

- Ans ☒ A. 0011
☒ B. 1001
☒ C. 1110
☒ D. 0101

Question ID : 4410091863110
Option 1 ID : 4410097342638
Option 2 ID : 4410097342641
Option 3 ID : 4410097342640
Option 4 ID : 4410097342639
Status : Answered
Chosen Option : C

Q.16 The 2% settling time (T_s) for a second-order system for damping ratio ζ and frequency ω_n is approximately given by:

- Ans
- ☒ A. $\frac{4}{\zeta \omega_n}$
- ☐ B. $\frac{2}{\zeta \omega_n}$
- ☐ C. $\frac{3.2}{\zeta(\omega_n^2 - 1)}$
- ☐ D. $\frac{2}{\zeta(\omega_n^2 - 1)}$

Question ID : 4410091308115

Option 1 ID : 4410095164119

Option 2 ID : 4410095164120

Option 3 ID : 4410095164122

Option 4 ID : 4410095164121

Status : Answered

Chosen Option : A

Q.17 The Laplace Transform of signal $r(t) = t \cdot \sin(t)$ is _____

- Ans
- ☒ A. $\frac{2s}{(s^2 + 1)^2}$
- ☐ B. $\frac{1}{(s^2 + 1)^2}$
- ☐ C. $\frac{s}{2(s^2 + 1)^2}$
- ☐ D. $\frac{s}{(s^2 + 1)^2}$

Question ID : 4410091113516

Option 1 ID : 4410094390075

Option 2 ID : 4410094390074

Option 3 ID : 4410094390077

Option 4 ID : 4410094390076

Status : Answered

Chosen Option : A

Q.18 Two 10-V voltage sources, each with a 5-Ω series resistor, are connected in parallel. Using source transformation, find the equivalent source.

- Ans ☒ A. 20 V with 5 Ω series resistor
☒ B. 15 V with 5 Ω series resistor
☒ C. 10 V with 2.5 Ω series resistor
☒ D. 5 V with 5 Ω series resistor

Question ID : 4410091235294

Option 1 ID : 4410094874907

Option 2 ID : 4410094874909

Option 3 ID : 4410094874906

Option 4 ID : 4410094874908

Status : Answered

Chosen Option : C

Q.19 A _____ is a type of unsymmetrical fault where two of the three phases of a power system come into direct contact with each other, creating a short circuit. It does not involve the ground.

- Ans ☒ A. Symmetrical three-phase (L-L-L) Fault
☒ B. Single Line-to-Ground (L-G) Fault
☒ C. Line-to-Line (L-L) fault
☒ D. Double Line-to-Ground (L-L-G) Fault

Question ID : 4410091200038

Option 1 ID : 4410094733973

Option 2 ID : 4410094733971

Option 3 ID : 4410094733970

Option 4 ID : 4410094733972

Status : Answered

Chosen Option : C

Q.20 When a unit step input is applied to a unity feedback system, it has a closed-loop transfer function of the form:

$$T(s) = \frac{\omega_n^2}{s^2 + 2\zeta\omega_n s + \omega_n^2}.$$

If the system's peak time is measured to be $t_p=0.6s$ and the damping ratio is $\zeta=0.5$, which of the following options is the approximate value of the natural frequency, ω_n ? Take the value of $\sqrt{0.75} = 0.866$ for numerical calculations.

- Ans ☒ A. $\omega_n \approx 7 \text{ rad/s}$
☒ B. $\omega_n \approx 4 \text{ rad/s}$
☒ C. $\omega_n \approx 6 \text{ rad/s}$
☒ D. $\omega_n \approx 5 \text{ rad/s}$

Question ID : 4410091198147

Option 1 ID : 4410094726486

Option 2 ID : 4410094726483

Option 3 ID : 4410094726485

Option 4 ID : 4410094726484

Status : Answered

Chosen Option : B

Q.21 A discrete-time LTI system has impulse response $h[n] = (0.5)^n u[n]$. Determine whether the system is stable.

- Ans
- ☒ A. Unstable, since energy is infinite
 - ☒ B. Marginally stable, because of constant amplitude
 - ☒ C. Stable, since $|0.5| < 1$
 - ☒ D. Stable, because $\sum |h[n]| < \infty$

Question ID : 4410091426091

Option 1 ID : 4410095632952

Option 2 ID : 4410095632954

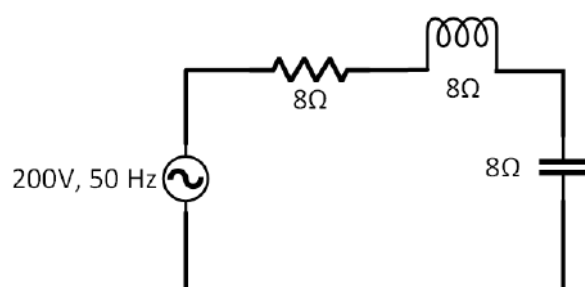
Option 3 ID : 4410095632951

Option 4 ID : 4410095632953

Status : Answered

Chosen Option : C

Q.22 Find the input power factor of the given series RLC circuit.



- Ans
- ☒ A. unity
 - ☒ B. $\frac{1}{\sqrt{2}}$
 - ☒ C. Zero
 - ☒ D. 0.5

Question ID : 4410091192844

Option 1 ID : 4410094705291

Option 2 ID : 4410094705294

Option 3 ID : 4410094705292

Option 4 ID : 4410094705293

Status : Answered

Chosen Option : A

Q.23 When a synchronous motor connected to weak grid experiences a sudden load increase, which damping phenomenon dominates first?

- Ans ☒ A. Magnetic saturation damping
- ☒ B. Mechanical inertia
- ☒ C. Excitation control loop
- ☒ D. Electrical damping by damper bars

Question ID : 4410091411221
Option 1 ID : 4410095573902
Option 2 ID : 4410095573903
Option 3 ID : 4410095573904
Option 4 ID : 4410095573901

Status : Answered
Chosen Option : A

Q.24 Two infinitely long straight line charges intersect perpendicularly at the origin:
• The first, with linear charge density λ_1 , lies along the x-axis
• The second, with linear charge density λ_2 , lies along the y-axis
Find the net electric field vector at the point P(a, a, 0).

- Ans ☒ A. $\frac{\lambda_1}{2\pi\epsilon_0 a} \mathbf{a}_y + \frac{\lambda_2}{2\pi\epsilon_0 a} \mathbf{a}_x$
- ☒ B. $\frac{\lambda_1}{2\pi\epsilon_0 a} \mathbf{a}_x + \frac{\lambda_2}{2\pi\epsilon_0 a} \mathbf{a}_y$
- ☒ C. $\frac{\lambda_1}{2\pi\epsilon_0 a} \mathbf{a}_x - \frac{\lambda_2}{2\pi\epsilon_0 a} \mathbf{a}_y$
- ☒ D. $\frac{\lambda_1 + \lambda_2}{2\pi\epsilon_0 a}$ (magnitude only)

Question ID : 4410091458204
Option 1 ID : 4410095761094
Option 2 ID : 4410095761093
Option 3 ID : 4410095761095
Option 4 ID : 4410095761092

Status : Not Attempted and Marked For Review
Chosen Option : --

Q.25 The transient voltage appearing across the circuit breaker contacts at the instant of arc extinction is called:

- Ans ☒ A. fault voltage
- ☒ B. re-striking voltage
- ☒ C. recovery voltage
- ☒ D. breaker surge voltage

Question ID : 441009329961
Option 1 ID : 4410091286293
Option 2 ID : 4410091286291
Option 3 ID : 4410091286290
Option 4 ID : 4410091286292

Status : Answered
Chosen Option : B

Q.26 In a control system, a process is regulated by both positive and negative feedback loops. Consider a system where the output $y(t)$ is governed by the differential equation,

$$\frac{dy}{dt} = k_1 y(t) - k_2 y^2(t)$$

where k_1 and k_2 are positive constants.

Which of the following statements accurately describes the roles of positive and negative feedback in this system?

- Ans ☒ A. The term $k_1 y(t)$ represents positive feedback, promoting exponential growth, while $k_2 y^2(t)$ represents negative feedback, stabilizing the system by limiting growth.
- ☐ B. The term $k_1 y(t)$ represents negative feedback, reducing the output, while $k_2 y^2(t)$ represents positive feedback, amplifying the output.
- ☐ C. The term $k_1 y(t)$ represents positive feedback, while $k_2 y^2(t)$ represents a second positive feedback loop, leading to runaway growth.
- ☐ D. Both $k_1 y(t)$ and $k_2 y^2(t)$ represent negative feedback, working together to stabilise the system.

Question ID : 44100948250

Option 1 ID : 441009192172

Option 2 ID : 441009192173

Option 3 ID : 441009192175

Option 4 ID : 441009192174

Status : Answered

Chosen Option : B

Q.27 Which of the following factors most directly reduces the efficiency of a long transmission line?

- Ans ☒ A. High line resistance
- ☐ B. High voltage
- ☐ C. Use of bundled conductors
- ☐ D. Use of low power factor loads

Question ID : 4410091160534

Option 1 ID : 4410094576690

Option 2 ID : 4410094576689

Option 3 ID : 4410094576691

Option 4 ID : 4410094576692

Status : Answered

Chosen Option : A

Q.28 What continuity correction is typically applied when using the normal approximation for the binomial distribution?

- Ans ☒ A. Multiply by 0.5
- ☒ B. Subtract 1 from the variance
- ☒ C. Add or subtract 0.5 to the discrete variable
- ☒ D. Add 1 to the mean

Question ID : 4410092311332
Option 1 ID : 4410099089952
Option 2 ID : 4410099089950
Option 3 ID : 4410099089951
Option 4 ID : 4410099089949
Status : Answered
Chosen Option : C

Q.29 In an auto-sequential commutated inverter, incomplete discharge of the commutation capacitor results in ____.

- Ans ☒ A. increase of inverter output voltage
- ☒ B. failure of commutation of the next thyristor
- ☒ C. reduction in commutation overlap
- ☒ D. reduction in DC link current

Question ID : 4410091412111
Option 1 ID : 4410095577473
Option 2 ID : 4410095577472
Option 3 ID : 4410095577474
Option 4 ID : 4410095577475
Status : Answered
Chosen Option : C

Q.30 What is the function of the turbulator in a low oil circuit breaker?

- Ans ☒ A. Controlling the arc by directing oil through vents
- ☒ B. Supporting the moving contact
- ☒ C. Cooling the arc using external air
- ☒ D. Preventing oil from vaporizing

Question ID : 441009329938
Option 1 ID : 4410091286200
Option 2 ID : 4410091286201
Option 3 ID : 4410091286198
Option 4 ID : 4410091286199
Status : Answered
Chosen Option : A

Q.31 Given two dielectric media with $\epsilon_1 > \epsilon_2$, and an electric displacement vector D_1 in medium 1 incident at an angle θ_1 with respect to the normal of the boundary, what can be said about the magnitudes of D_2 and E_2 in medium 2?

- Ans ☐ A. $D_2 > D_1$ and $E_2 < E_1$
☐ B. $D_2 < D_1$ and $E_2 < E_1$
☐ C. $D_2 > D_1$ and $E_2 > E_1$
☒ D. $D_2 < D_1$ and $E_2 > E_1$

Question ID : 4410091182694

Option 1 ID : 4410094664827

Option 2 ID : 4410094664825

Option 3 ID : 4410094664826

Option 4 ID : 4410094664828

Status : Answered

Chosen Option : B

Q.32 In a series RLC circuit, the natural frequency (in rad/sec) is given by

- Ans ☐ A. LC
☐ B. $\sqrt{LC}$
☒ C. $\frac{1}{\sqrt{LC}}$
☐ D. $\frac{1}{LC}$

Question ID : 441009678842

Option 1 ID : 4410092669573

Option 2 ID : 4410092669572

Option 3 ID : 4410092669570

Option 4 ID : 4410092669571

Status : Answered

Chosen Option : C

Q.33 For the equation $y'' - 4y' + 4y = 0$, what is the form of the general solution?

- Ans ☐ A. $y = Ae^{4x} + Be^{-4x}$
☐ B. $y = Ae^{2x}$
☒ C. $y = (A + Bx)e^{2x}$
☐ D. $y = Ae^{2x} + Be^{-2x}$

Question ID : 4410092311318

Option 1 ID : 4410099089896

Option 2 ID : 4410099089893

Option 3 ID : 4410099089895

Option 4 ID : 4410099089894

Status : Answered

Chosen Option : C

Q.34 Why are MI instruments less accurate for AC measurement?

- Ans ☒ A. High inductance
☒ B. Cannot detect polarity
☒ C. Cannot be calibrated
☒ D. Frequency-dependent errors

Question ID : 4410091160601
Option 1 ID : 4410094576959
Option 2 ID : 4410094576957
Option 3 ID : 4410094576960
Option 4 ID : 4410094576958
Status : Answered
Chosen Option : D

Q.35 A solid is bounded by $x^2 + y^2 \leq 4$, $0 \leq z \leq 3$. If the density at any point is $\delta(x, y, z) = z$, what is the mass of the solid?

- Ans ☒ A. 24π
☒ B. 36π
☒ C. 12π
☒ D. 18π

Question ID : 4410092311314
Option 1 ID : 4410099089880
Option 2 ID : 4410099089879
Option 3 ID : 4410099089877
Option 4 ID : 4410099089878
Status : Answered
Chosen Option : A

Q.36 An infinitely long line charge of density $\rho_l = 6 \mu\text{C/m}$ is placed along the z-axis. Coaxial with it is a thin cylindrical shell of radius $a = 1 \text{ m}$ carrying a uniform surface charge density $\rho_s = -(3/\pi) \mu\text{C/m}^2$. Using Gauss's law, determine the electric flux density **D** as a function of radial distance r .

- Ans ☒ A. $D = (6/\pi r) a_r \mu\text{C/m}^2$ for $0 < r < 1$; $D = 0$ for $r > 1$
☒ B. $D = (6/\pi r) a_r \mu\text{C/m}^2$ for $0 < r < 1$; $D = (3/\pi r) a_r \mu\text{C/m}^2$ for $r > 1$
☒ C. $D = (3/\pi r) a_r \mu\text{C/m}^2$ for $0 < r < 1$; $D = 0$ for $r > 1$
☒ D. $D = 0$ for $0 < r < 1$; $D = (3/\pi r) a_r \mu\text{C/m}^2$ for $r > 1$

Question ID : 4410091578648
Option 1 ID : 4410096235679
Option 2 ID : 4410096235681
Option 3 ID : 4410096235678
Option 4 ID : 4410096235680
Status : Answered
Chosen Option : B

Q.37 A system is stable if all closed-loop poles:

- Ans** ☒ A. Lie on the imaginary axis
☒ B. Are purely imaginary
☒ C. Lie on the left half of the s-plane
☒ D. Lie on the right half of the s-plane

Question ID : 4410091419350
Option 1 ID : 4410095606323
Option 2 ID : 4410095606326
Option 3 ID : 4410095606325
Option 4 ID : 4410095606324
Status : Answered
Chosen Option : C

Q.38 Which parameter can be varied using PWM to control inverter output?

- Ans** ☒ A. Load resistance
☒ B. Output waveform shape
☒ C. Output voltage amplitude
☒ D. Output frequency only

Question ID : 4410091160386
Option 1 ID : 4410094576106
Option 2 ID : 4410094576107
Option 3 ID : 4410094576108
Option 4 ID : 4410094576105
Status : Answered
Chosen Option : C

Q.39 Determine the Gray code of decimal number 43.

- Ans** ☒ A. 101011
☒ B. 010100
☒ C. 111110
☒ D. 110111

Question ID : 4410091506641
Option 1 ID : 4410095950915
Option 2 ID : 4410095950916
Option 3 ID : 4410095950917
Option 4 ID : 4410095950918
Status : Answered
Chosen Option : C

Q.40 Which law forms the basis of mesh analysis?

- Ans ☒ A. KCL
- ☒ B. Ohm's law
- ☒ C. Faraday's law
- ☒ D. KVL

Question ID : 4410091233971
Option 1 ID : 4410094869512
Option 2 ID : 4410094869513
Option 3 ID : 4410094869514
Option 4 ID : 4410094869511
Status : Answered
Chosen Option : D

Q.41 In the transient analysis of an inductor, which of the following statements is correct regarding the behaviour of inductor current at the instant of switching?

- Ans ☒ A. Inductor current always becomes zero immediately after the switch is opened.
- ☒ B. Inductor current and voltage both remain constant during switching.
- ☒ C. Inductor current cannot change instantaneously because that would require infinite voltage.
- ☒ D. Inductor current can change instantaneously if a high voltage is applied.

Question ID : 4410091183027
Option 1 ID : 4410094666168
Option 2 ID : 4410094666167
Option 3 ID : 4410094666166
Option 4 ID : 4410094666165
Status : Answered
Chosen Option : C

Q.42 Which component of Single-Phase Energy Meter (SPEM) controls the speed of the rotating disc?

- Ans ☒ A. Pressure coil
- ☒ B. Driving system
- ☒ C. Current coil
- ☒ D. Brake magnet

Question ID : 4410091161975
Option 1 ID : 4410094582468
Option 2 ID : 4410094582466
Option 3 ID : 4410094582469
Option 4 ID : 4410094582467
Status : Answered
Chosen Option : D

Q.43 A toroidal magnetic core of mean circumference $2\pi R$ and uniform cross-sectional area A is wound with N turns of a tightly coupled winding carrying current I . The core material is linear up to saturation, with relative permeability μ_r , beyond which the flux density cannot exceed B_{sat} . Assume fringing and leakage flux are negligible, and that the magnetic field is uniformly distributed within the core. Under these conditions, determine the critical value of current (i.e., the maximum permissible excitation current I_{max}) at which the flux density in the core just attains B_{sat} .

- Ans

✖

A.

$$I_{max} = \frac{2\pi R \mu_0 \mu_r B_{sat}}{N}$$

✖

B.

$$I_{max} = \frac{B_{sat} A}{\mu_0 \mu_r N}$$

✖

C.

$$I_{max} = \frac{NB_{sat}}{2\pi R \mu_0 \mu_r}$$

✔

D.

$$I_{max} = \frac{2\pi R B_{sat}}{\mu_0 \mu_r N}$$

Question ID : 4410091160032

Option 1 ID : 4410094574701

Option 2 ID : 4410094574700

Option 3 ID : 4410094574702

Option 4 ID : 4410094574699

Status : Answered

Chosen Option : D

Q.44 Which of the following is the effect on resonant peak if the damping ratio of a second order control system increases?

- Ans

✔

A.

Decreases

✖

B.

Become infinite

✖

C.

Increases

✖

D.

Remain constant

Question ID : 441009678825

Option 1 ID : 4410092669503

Option 2 ID : 4410092669505

Option 3 ID : 4410092669502

Option 4 ID : 4410092669504

Status : Answered

Chosen Option : A

Q.45 In potential transformer, the ratio error has importance in _____, while for _____, both ratio and phase angle errors are involved.

- Ans ☒ A. power measurement; current measurement
- ☒ B. voltage measurement; current measurement
- ☒ C. impedance measurement; power measurement
- ☒ D. voltage measurement; power measurement

Question ID : 4410091188139
Option 1 ID : 4410094686811
Option 2 ID : 4410094686812
Option 3 ID : 4410094686813
Option 4 ID : 4410094686810
Status : Answered
Chosen Option : D

Q.46 If three identical resistors of resistance R each are connected in a delta (Δ) configuration, what is the equivalent resistance of each branch when converted into a star (Y) configuration?

- Ans ☒ A. $R/4$
- ☒ B. $3R$
- ☒ C. $R/2$
- ☒ D. $R/3$

Question ID : 441009167775
Option 1 ID : 441009664144
Option 2 ID : 441009664145
Option 3 ID : 441009664142
Option 4 ID : 441009664143
Status : Answered
Chosen Option : D

Q.47 A chemical tank leaks fluid at a rate proportional to the amount present. If the initial quantity is 80 liters and after 1 hour only 60 liters remain, which linear first-order ODE correctly models this scenario?

- Ans ☒ A. $dy/dt = -k y^2, y(0) = 80$
- ☒ B. $dy/dt = -k y, y(0) = 80$
- ☒ C. $dy/dt = -k, y(0) = 80$
- ☒ D. $dy/dt = k y, y(0) = 80$

Question ID : 4410092311323
Option 1 ID : 4410099089915
Option 2 ID : 4410099089914
Option 3 ID : 4410099089916
Option 4 ID : 4410099089913
Status : Marked For Review
Chosen Option : A

Q.48 What is the average value of a signal $x(t)$ over interval $[0,T]$?

Ans

✓ A. $\frac{1}{T} \int_0^T x(t) dt$

✗ B. $\sqrt{\frac{1}{T} \int_0^T x(t) dt}$

✗ C. $\frac{1}{T} \int_0^T [x(t)]^2 dt$

✗ D. $T \int_0^T x(t) dt$

Question ID : 4410091354371

Option 1 ID : 4410095349665

Option 2 ID : 4410095349667

Option 3 ID : 4410095349666

Option 4 ID : 4410095349668

Status : Answered

Chosen Option : A

Q.49 Which statement is true about the torque on a dipole in a uniform electric field?

Ans

✓ A. It causes the dipole to rotate and align with the field.

✗ B. It creates a new dipole moment.

✗ C. It increases the dipole's charge.

✗ D. It always points in the direction of the field.

Question ID : 4410091138278

Option 1 ID : 4410094488191

Option 2 ID : 4410094488193

Option 3 ID : 4410094488192

Option 4 ID : 4410094488190

Status : Answered

Chosen Option : A

Q.50 What is the typical commutation frequency range of the smaller size and light weight four-quadrant transistor chopper?

Ans

✗ A. 50 to 100 Hz

✗ B. 500 to 1000 Hz

✗ C. 5 to 10 kHz

✓ D. 10 to 50 kHz

Question ID : 441009138428

Option 1 ID : 441009549947

Option 2 ID : 441009549948

Option 3 ID : 441009549949

Option 4 ID : 441009549950

Status : Answered

Chosen Option : B

Q.51 A protective relay is defined as an electrical device that is connected between the main circuit and the circuit breaker to:

- Ans ☒ A. measure the frequency of the system and regulate power flow
- ☒ B. monitor the system's voltage and adjust the current settings
- ☒ C. detect faults and initiate the operation of the circuit breaker to isolate the defective section
- ☒ D. detect faults and control the operation of the transformer

Question ID : 44100966254
Option 1 ID : 441009263965
Option 2 ID : 441009263963
Option 3 ID : 441009263964
Option 4 ID : 441009263962
Status : Answered
Chosen Option : C

Q.52 In a certain region, the current density is given by $J(r, t) = J_0 r e^{-\alpha t}$, where $J_0 > 0$, $\alpha > 0$, and r is the position vector. The charge density is zero at $t = 0$. For $t > 0$, how does the charge density $\rho(r, t)$ behave?

- Ans ☒ A. It remains zero for all time.
- ☒ B. It oscillates between positive and negative values.
- ☒ C. It becomes negative and decreases monotonically.
- ☒ D. It increases from zero and becomes positive.

Question ID : 4410091578678
Option 1 ID : 4410096235801
Option 2 ID : 4410096235804
Option 3 ID : 4410096235803
Option 4 ID : 4410096235802
Status : Not Answered
Chosen Option : --

Q.53 Choose the correct option for Static VAR Compensator.

Static VAR Compensator is used for:
1. Voltage control
2. Surge impedance compensation
3. Improving the overall power factor
4. Making the system unstable

- Ans ☒ A. Only 1, 2 and 3
- ☒ B. Only 1 and 4
- ☒ C. Only 2 and 3
- ☒ D. Only 1

Question ID : 4410091533933
Option 1 ID : 4410096058938
Option 2 ID : 4410096058936
Option 3 ID : 4410096058937
Option 4 ID : 4410096058935
Status : Answered
Chosen Option : A

Q.54 MOSFETs are preferred over BJT in IC technology because MOSFETs _____.

- Ans ☒ A. have high power dissipation
☒ B. are physically large
☒ C. require minimal chip area
☒ D. increase fabrication cost

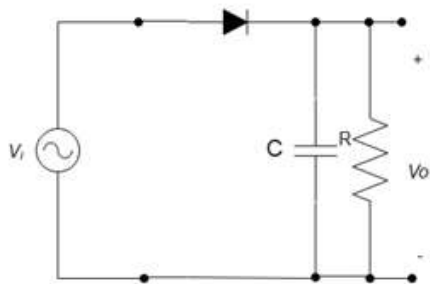
Question ID : 4410091185065
Option 1 ID : 4410094674372
Option 2 ID : 4410094674373
Option 3 ID : 4410094674374
Option 4 ID : 4410094674375
Status : Answered
Chosen Option : C

Q.55 Calibration of single-phase energy meter ensures:

- Ans ☒ A. low torque at no load
☒ B. reduction in voltage drop
☒ C. accuracy of energy reading
☒ D. high friction

Question ID : 4410091161967
Option 1 ID : 4410094582434
Option 2 ID : 4410094582437
Option 3 ID : 4410094582436
Option 4 ID : 4410094582435
Status : Answered
Chosen Option : C

Q.56 Consider a peak detector circuit in figure (Assume diode is ideal) fed by 50-Hz sinusoidal having peak value $V_p = 10$ V. Let the load resistance $R = 10$ K Ω . Determine the value of capacitance C (assume time constant RC value much higher than time period of sinusoidal V_i) that will result in peak to peak ripple of 2 V. V_i and V_o denote input and output voltages respectively.



- Ans ☒ A. 10 μ F
☐ B. 50 μ F
☐ C. 25 μ F
☐ D. 20 μ F

Question ID : 4410091262961

Option 1 ID : 4410094984796

Option 2 ID : 4410094984798

Option 3 ID : 4410094984795

Option 4 ID : 4410094984797

Status : **Not Attempted and Marked For Review**

Chosen Option : --

Q.57 Which of the following correctly defines a double excited magnetic system?

- Ans ☐ A. A system excited only by permanent magnets
☒ B. A magnetic system where two windings carry current
☐ C. A system with zero magnetic field
☐ D. A system using only one coil

Question ID : 4410091142503

Option 1 ID : 4410094504950

Option 2 ID : 4410094504951

Option 3 ID : 4410094504952

Option 4 ID : 4410094504953

Status : **Answered**

Chosen Option : **B**

Q.58 Choose the correct statement for the construction of a potential transformer.

S1: In potential transformer, there are thermal problems caused by overloads.

S2: Oil filled bushings are usually used for oil filled potential transformer.

- Ans ☒ A. only S1
- ☒ B. S1 and S2 both
- ☒ C. Neither S1 nor S2
- ☒ D. Only S2

Question ID : 4410091418110
Option 1 ID : 4410095601362
Option 2 ID : 4410095601363
Option 3 ID : 4410095601364
Option 4 ID : 4410095601361
Status : Answered
Chosen Option : B

Q.59 The Quasi-saturation region is commonly observed in which of the following devices?

- Ans ☒ A. LED
- ☒ B. MOSFET
- ☒ C. DIAC
- ☒ D. Diode

Question ID : 441009949802
Option 1 ID : 4410093752657
Option 2 ID : 4410093752656
Option 3 ID : 4410093752655
Option 4 ID : 4410093752654
Status : Answered
Chosen Option : C

Q.60 How does the starting current of a three-phase squirrel-cage induction motor compare with its rated current when the motor is started using the direct-on-line (DOL) starting method?

- Ans ☒ A. The starting current is several times greater than the rated current value
- ☒ B. The starting current varies randomly without following a definite pattern
- ☒ C. The starting current is always lower than the rated current value
- ☒ D. The starting current is approximately equal to the rated current value

Question ID : 4410091715866
Option 1 ID : 4410096767303
Option 2 ID : 4410096767304
Option 3 ID : 4410096767302
Option 4 ID : 4410096767301
Status : Answered
Chosen Option : A

Q.61 A single-phase half-wave controlled rectifier with an RL load ($R = 10 \Omega$, $L = 20 \text{ mH}$) is supplied by a 120 V, 50 Hz AC source. If the average output voltage E_{dc} is 25% of the maximum possible average output voltage $E_{dc, \max}$, then the value of $\cos \alpha$ is:

- Ans
- ☒ A. $\cos \alpha = \frac{3}{2}$
 - ☒ B. $\cos \alpha = \frac{-3}{4}$
 - ☒ C. $\cos \alpha = \frac{-1}{2}$
 - ☒ D. $\cos \alpha = -1$

Question ID : 4410091185361

Option 1 ID : 4410094675618

Option 2 ID : 4410094675619

Option 3 ID : 4410094675617

Option 4 ID : 4410094675620

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.62 Suppose $z = x^3y^2$, with x and y dependent on s . How do you express $\frac{dz}{ds}$ in terms of partial derivatives and chain rule?

- Ans
- ☒ A. $\frac{dz}{ds} = x^3 \frac{dx}{ds} + y^2 \frac{dy}{ds}$
 - ☒ B. $\frac{dz}{ds} = 3x^2y^2 \frac{dx}{ds} + 2x^3y \frac{dy}{ds}$
 - ☒ C. $\frac{dz}{ds} = 3x^2 \frac{dx}{ds} + 2y \frac{dy}{ds}$
 - ☒ D. $\frac{dz}{ds} = x^2y^2 \frac{dx}{ds} + x^3y \frac{dy}{ds}$

Question ID : 4410092311313

Option 1 ID : 4410099089875

Option 2 ID : 4410099089874

Option 3 ID : 4410099089873

Option 4 ID : 4410099089876

Status : Answered

Chosen Option : C

Q.63 Let the Bilateral Laplace Transform of a signal $f(t)$ be $F(s)$ with a Region of Convergence (ROC) $R_f: \sigma_1 < \text{Re}\{s\} < \sigma_2$. If $g(t) = f(-t)$, which of the following is the correct Laplace Transform, $G(s)$, and its corresponding ROC, R_g ?

- Ans ☒ A. $G(s) = -F(s)$, with $R_g: -\sigma_2 < \text{Re}\{s\} < -\sigma_1$.
☒ B. $G(s) = F(-s)$, with $R_g: \sigma_1 < \text{Re}\{s\} < \sigma_2$.
☒ C. $G(s) = F(-s)$, with $R_g: -\sigma_2 < \text{Re}\{s\} < -\sigma_1$.
☒ D. $G(s) = F(s)$, with $R_g: -\sigma_2 < \text{Re}\{s\} < -\sigma_1$.

Question ID : 4410091386904
Option 1 ID : 4410095478301
Option 2 ID : 4410095478300
Option 3 ID : 4410095478299
Option 4 ID : 4410095478302
Status : Answered
Chosen Option : B

Q.64 The total electric field at a point due to multiple discrete charges is found using the:

- Ans ☒ A. difference between the largest and smallest field
☒ B. vector sum of individual fields
☒ C. product of charge and distance
☒ D. arithmetic sum of the charges

Question ID : 44100989437
Option 1 ID : 441009355902
Option 2 ID : 441009355899
Option 3 ID : 441009355901
Option 4 ID : 441009355900
Status : Answered
Chosen Option : B

Q.65 A parallel RLC circuit exhibits resonance at $f_0 = 1$ MHz. The half-power frequencies are found to be $f_1 = 0.98$ MHz and $f_2 = 1.02$ MHz. What is the shape of the frequency response curve and what is the implication on circuit design?

- Ans ☒ A. Flat curve; impedance remains constant across frequency
☒ B. Narrow curve; suitable for broadband applications
☒ C. Narrow curve; circuit is highly selective
☒ D. Broad curve; circuit is highly selective

Question ID : 441009166552
Option 1 ID : 441009659373
Option 2 ID : 441009659371
Option 3 ID : 441009659372
Option 4 ID : 441009659370
Status : Answered
Chosen Option : C

Q.66 In entered variable map, the size of K-map is reduced by ____.

- Ans ☒ A. one degree
☒ B. N degrees
☒ C. two degrees
☒ D. zero degrees

Question ID : 441009267332
Option 1 ID : 4410091038579
Option 2 ID : 4410091038582
Option 3 ID : 4410091038580
Option 4 ID : 4410091038581
Status : Answered
Chosen Option : D

Q.67 Define the unit ramp signal $r(t)$.

- Ans ☒ A. $r(t) = t u(t)$
☒ B. $r(t) = 2u(t)$
☒ C. $r(t) = \frac{1}{t} u(t)$
☒ D. $r(t) = 3\delta(t)$

Question ID : 4410091248404
Option 1 ID : 4410094926779
Option 2 ID : 4410094926780
Option 3 ID : 4410094926782
Option 4 ID : 4410094926781
Status : Answered
Chosen Option : A

Q.68 The continuous time signal is given by $x(t) = e^{-2(-t)} u(-t)$. What is its Laplace transform $X(s)$ and its Region of Convergence (ROC)?

- Ans ☒ A. $X(s) = -\frac{1}{s-2}$; ROC: $\text{Re}(s) < 2$
☒ B. $X(s) = \frac{1}{s+2}$; ROC: $\text{Re}(s) > -2$
☒ C. $X(s) = \frac{1}{2-s}$; ROC: $\text{Re}(s) > 2$
☒ D. $X(s) = \frac{1}{s+2}$; ROC: $\text{Re}(s) < -2$

Question ID : 4410091448096
Option 1 ID : 4410095720872
Option 2 ID : 4410095720873
Option 3 ID : 4410095720874
Option 4 ID : 4410095720875
Status : Answered
Chosen Option : A

Q.69 Which of the following is an advantage of implementing a digital controller compared to analog compensators in modern control system design?

- Ans ☒ A. Ability to reduce system gain without affecting bandwidth constraints
- ☒ B. Increased sensitivity to voltage fluctuations
- ☒ C. Elimination of feedback requirements in system design
- ☒ D. Flexibility to adapt to dynamic plant variations via software modifications

Question ID : 4410091154187

Option 1 ID : 4410094551445

Option 2 ID : 4410094551448

Option 3 ID : 4410094551447

Option 4 ID : 4410094551446

Status : Answered

Chosen Option : D

Q.70 _____ are designed to minimise magnetising current and reduce reluctance at the interleaved corners by assembling the lamination stacks with a slightly larger core cross-section than standard transformers.

- Ans ☒ A. Current transformers
- ☒ B. Power transformers
- ☒ C. Distribution transformers
- ☒ D. Isolation transformers

Question ID : 4410091188126

Option 1 ID : 4410094686754

Option 2 ID : 4410094686755

Option 3 ID : 4410094686756

Option 4 ID : 4410094686757

Status : Answered

Chosen Option : D

Q.71 In a binary weighted resistor DAC, what is the ratio of the resistance values for adjacent bits?

- Ans ☒ A. 2:1
- ☒ B. 4:1
- ☒ C. 1:1
- ☒ D. 3:1

Question ID : 4410091150655

Option 1 ID : 4410094537578

Option 2 ID : 4410094537579

Option 3 ID : 4410094537576

Option 4 ID : 4410094537577

Status : Answered

Chosen Option : A

Q.72 If $f(z) = z^2 + 3z$ and C is the circle $|z| = 3$, which value does the integral $\int_C \frac{f(z)}{z-2} dz$ yield according to Cauchy's integral formula?

- Ans ☒ A. $36\pi i$
☒ B. $20\pi i$
☒ C. $10\pi i$
☒ D. 0

Question ID : 4410092311325
Option 1 ID : 4410099089922
Option 2 ID : 4410099089924
Option 3 ID : 4410099089923
Option 4 ID : 4410099089921
Status : Not Answered
Chosen Option : --

Q.73 Flux in the core of a transformer remains the same from no-load to full-load; this is the reason why _____ in a transformer remain the same from no-load to full-load.

- Ans ☒ A. ohmic losses
☒ B. dielectric losses
☒ C. stray losses
☒ D. iron losses

Question ID : 441009934841
Option 1 ID : 4410093693082
Option 2 ID : 4410093693084
Option 3 ID : 4410093693083
Option 4 ID : 4410093693081
Status : Answered
Chosen Option : D

Q.74 Which of the following statements is correct about signed number representations in digital systems?
A) In sign-magnitude representation, the MSB represents the sign, and the remaining bits represent the magnitude.
B) In 1's complement representation, a negative number is obtained by flipping all the bits of its positive counterpart.
C) In 2's complement representation, a negative number is obtained by taking the 1's complement of its positive counterpart and adding 1.

- Ans ☒ A. Only B and C
☒ B. All A, B and C
☒ C. Only A and C
☒ D. Only A and B

Question ID : 4410091259431
Option 1 ID : 4410094970582
Option 2 ID : 4410094970583
Option 3 ID : 4410094970581
Option 4 ID : 4410094970580
Status : Answered
Chosen Option : B

Q.75 Zero sequence reactance of the transformer does not depend on _____.

- Ans ☒ A. load connected to the transformer
- ☒ B. connection of the transformer
- ☒ C. winding of the transformer
- ☒ D. both connection and winding of the transformer

Question ID : 441009309579
Option 1 ID : 4410091204855
Option 2 ID : 4410091204852
Option 3 ID : 4410091204853
Option 4 ID : 4410091204854
Status : Answered
Chosen Option : C

Q.76 A linear time-invariant (LTI) system has an impulse response $h(t)$. If the input to the system is: $x(t) = \delta(t - 2) + 3\delta(t + 2)$, what will be the output of the system $y(t)$?

- Ans ☒ A. $y(t) = h(t - 2) + 3h(t + 2)$
- ☒ B. $y(t) = h(t - 2) + h(t + 2)$
- ☒ C. $y(t) = h(t - 2) + 3h(3t + 2)$
- ☒ D. $y(t) = h(t - 2) + h(3t + 2)$

Question ID : 4410091857575
Option 1 ID : 4410097321212
Option 2 ID : 4410097321214
Option 3 ID : 4410097321215
Option 4 ID : 4410097321213
Status : Answered
Chosen Option : A

Q.77 The maximum lagging-current test helps in determining:

- Ans ☒ A. load angle
- ☒ B. excitation EMF
- ☒ C. iron losses
- ☒ D. Potier reactance

Question ID : 4410091160045
Option 1 ID : 4410094574754
Option 2 ID : 4410094574753
Option 3 ID : 4410094574752
Option 4 ID : 4410094574751
Status : Answered
Chosen Option : D

Q.78 Consider an enhancement-mode NMOS device whose source is tied to ground. If the threshold voltage is $V_t = 0.7\text{ V}$ and the gate receives a DC bias of 1.5 V . For the device to operate in the triode region, the drain voltage V_D must be:

- Ans ☒ A. 1.5 V
☒ B. 0.9 V
☒ C. 0.5 V
☒ D. 3 V

Question ID : 4410091266322
Option 1 ID : 4410094998165
Option 2 ID : 4410094998163
Option 3 ID : 4410094998164
Option 4 ID : 4410094998166
Status : Answered
Chosen Option : C

Q.79 What is the sum of the eigenvalues of the matrix $D = \begin{pmatrix} 5 & 2 \\ 1 & 4 \end{pmatrix}$?

- Ans ☒ A. 7
☒ B. 9
☒ C. 6
☒ D. 10

Question ID : 4410092311306
Option 1 ID : 4410099089845
Option 2 ID : 4410099089848
Option 3 ID : 4410099089846
Option 4 ID : 4410099089847
Status : Answered
Chosen Option : B

Q.80 If a synchronous condenser is switched into a distribution network that already has switched capacitors, what is the immediate combined effect on voltage profile and system resonance risk?

- Ans ☒ A. Voltage worsens and resonance risk decreases.
☒ B.
No change in voltage; resonance is eliminated.
☒ C. Voltage improves; resonance risk is always eliminated.
☒ D. Voltage improves and the risk of resonance may increase if natural frequency is close to switching frequency.

Question ID : 4410091414478
Option 1 ID : 4410095586881
Option 2 ID : 4410095586882
Option 3 ID : 4410095586883
Option 4 ID : 4410095586880
Status : Answered
Chosen Option : D

Q.81 Which of the following best describes the contour C required for Cauchy's theorem to apply?

- Ans ☒ A. A self-intersecting curve
- ☒ B. A simple closed curve
- ☒ C. An open curve
- ☒ D. A curve with endpoints

Question ID : 4410092311326

Option 1 ID : 4410099089928

Option 2 ID : 4410099089927

Option 3 ID : 4410099089925

Option 4 ID : 4410099089926

Status : Answered

Chosen Option : B

Q.82 In parallel operation of alternators, synchronizing power acts to:

- Ans ☒ A. Maintain constant terminal voltage
- ☒ B. Increase power factor of the alternator
- ☒ C. Restore synchronism during small disturbances in load angle
- ☒ D. Control the speed of prime mover

Question ID : 441009686994

Option 1 ID : 4410092701997

Option 2 ID : 4410092701996

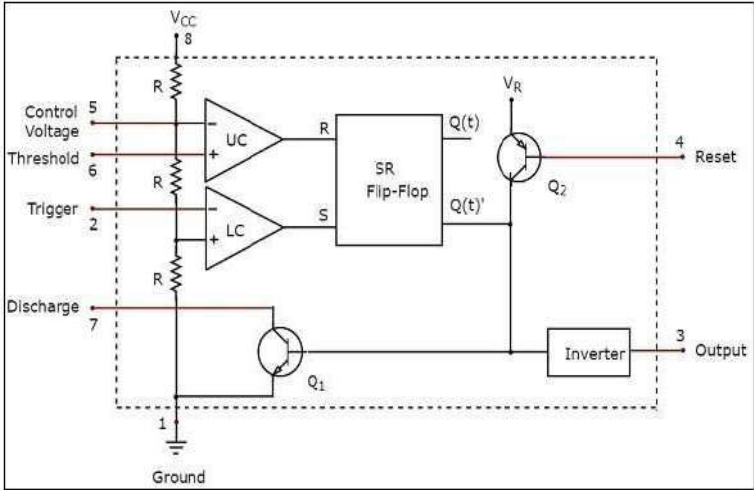
Option 3 ID : 4410092701998

Option 4 ID : 4410092701999

Status : Answered

Chosen Option : C

Q.83 A 555 timer uses three equal resistors as an internal voltage divider. If the middle resistor of the internal voltage divider becomes open-circuited, what will be the effect on the timer's operation?



- Ans**
- ☒ A. The timer will oscillate at double the normal frequency.
 - ☒ B. The output will remain permanently high.
 - ☒ C. The output will remain permanently low.
 - ☒ D. The timer will operate normally.

Question ID : 4410091392029
Option 1 ID : 4410095497820
Option 2 ID : 4410095497818
Option 3 ID : 4410095497819
Option 4 ID : 4410095497817
Status : Not Answered
Chosen Option : --

Q.84 Why do squirrel cage induction motors generally have low starting torque?

- Ans**
- ☒ A. Their stator current is independent of rotor design.
 - ☒ B. Their rotor resistance is low and fixed.
 - ☒ C. They operate at low slip during starting.
 - ☒ D. Their rotor reactance is negligible.

Question ID : 44100955944
Option 1 ID : 441009222705
Option 2 ID : 441009222704
Option 3 ID : 441009222707
Option 4 ID : 441009222706
Status : Answered
Chosen Option : B

Q.85 What is the primary advantage of using a cylindrical rotor type alternator?

- Ans ☒ A. Better cooling due to rotor design
- ☒ B. Simplicity of construction
- ☒ C. Higher efficiency at low speeds
- ☒ D. Ability to generate higher voltages at high speeds

Question ID : 441009290827
Option 1 ID : 4410091130185
Option 2 ID : 4410091130187
Option 3 ID : 4410091130184
Option 4 ID : 4410091130186
Status : Answered
Chosen Option : D

Q.86 Which of the following best describes the Continuous-Time Fourier Transform (CTFT)?

- Ans ☒ A. It is used to represent discrete-time periodic signals
- ☒ B. It is only valid for finite-length signals
- ☒ C. It is only defined for causal systems
- ☒ D. It expresses both periodic and non-periodic signals in the frequency domain

Question ID : 44100970969
Option 1 ID : 441009282311
Option 2 ID : 441009282313
Option 3 ID : 441009282314
Option 4 ID : 441009282312
Status : Answered
Chosen Option : D

Q.87 Why is Laplace's equation used when calculating the capacitance of an electrostatic configuration?

- Ans ☒ A. It directly outputs the charge on the conductors
- ☒ B. It provides the magnetic field distribution
- ☒ C. It gives the electrostatic potential distribution
- ☒ D. It determines the electric field without applying boundary conditions

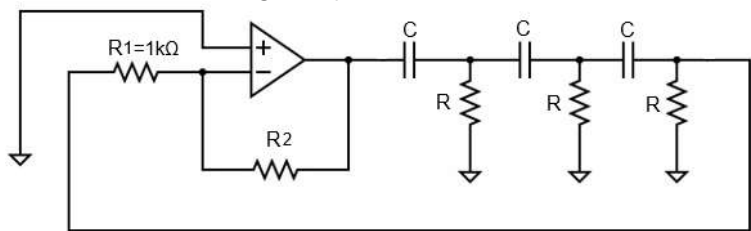
Question ID : 44100918072
Option 1 ID : 44100972121
Option 2 ID : 44100972119
Option 3 ID : 44100972120
Option 4 ID : 44100972122
Status : Answered
Chosen Option : C

Q.88 Which of the following is NOT an advantage of electrodynamic instruments?

- Ans ☒ A. They are suitable for measuring both current and voltage in AC circuits.
- ☒ B. They are highly accurate for measuring power in both resistive and inductive loads.
- ☒ C. They have linear scales for displaying readings.
- ☒ D. They experience low hysteresis and eddy current errors.

Question ID : 441009316700
Option 1 ID : 4410091233277
Option 2 ID : 4410091233274
Option 3 ID : 4410091233275
Option 4 ID : 4410091233276
Status : Answered
Chosen Option : D

Q.89 Consider a RC phase shift oscillator having operational amplifier connected as an inverting amplifier as shown in the figure. What should be the value of resistance R2 for the unity loop gain of this circuit? (Note: Any minor losses in the circuit should be neglected.)



- Ans ☒ A. 19 kΩ
- ☒ B. 1 kΩ
- ☒ C. 29 kΩ
- ☒ D. 6 kΩ

Question ID : 4410091170830
Option 1 ID : 4410094617597
Option 2 ID : 4410094617595
Option 3 ID : 4410094617598
Option 4 ID : 4410094617596
Status : Answered
Chosen Option : B

Q.90 A transformer with winding resistance and magnetic leakage is equivalent to an ideal transformer (having no resistance and leakage resistance) having _____ connected in series with each winding.

- Ans** ☒ A. resistive and capacitive coils only
☒ B. resistive and inductive coils only
☒ C. inductive coils only
☒ D. capacitive coils only

Question ID : 4410091194199
Option 1 ID : 4410094710719
Option 2 ID : 4410094710718
Option 3 ID : 4410094710720
Option 4 ID : 4410094710721
Status : Answered
Chosen Option : B

Q.91 Which of the following is a major cause of error in a current transformer?

- Ans** ☒ A. High secondary voltage
☒ B. Poor insulation resistance
☒ C. Core saturation and leakage reactance
☒ D. High primary current

Question ID : 441009950700
Option 1 ID : 4410093756201
Option 2 ID : 4410093756203
Option 3 ID : 4410093756204
Option 4 ID : 4410093756202
Status : Answered
Chosen Option : C

Q.92 In a series RLC circuit, the power delivered to the circuit at resonance is _____.

- Ans** ☒ A. maximum, because the current is minimum
☒ B. minimum, because the impedance is minimum
☒ C. minimum, because the impedance is maximum
☒ D. maximum, because the impedance is minimum

Question ID : 441009138239
Option 1 ID : 441009549183
Option 2 ID : 441009549185
Option 3 ID : 441009549184
Option 4 ID : 441009549182
Status : Answered
Chosen Option : D

Q.93 In electrostatics, solving Poisson's equation determines which physical quantity?

- Ans ☒ A. The magnetic field intensity
- ☒ B. The energy stored in a capacitor
- ☒ C. The potential function due to given charge density
- ☒ D. The resistance of a material

Question ID : 4410091416315
Option 1 ID : 4410095593957
Option 2 ID : 4410095593960
Option 3 ID : 4410095593958
Option 4 ID : 4410095593959
Status : Answered
Chosen Option : C

Q.94 Two capacitors of capacitance C_1 and C_2 are connected in series and charged so that each stores charge Q . They are then disconnected from the source and reconnected in parallel with opposite plate polarity (positive to positive, negative to negative). What happens to the total stored electrostatic energy?

- Ans ☒ A. It decreases
- ☒ B. It becomes zero
- ☒ C. It increases
- ☒ D. It remains the same as before

Question ID : 4410091529810
Option 1 ID : 4410096042341
Option 2 ID : 4410096042342
Option 3 ID : 4410096042340
Option 4 ID : 4410096042339
Status : Answered
Chosen Option : D

Q.95 If $x(t)$ has an average value of 4, determine the average value of $y(t) = x(2t - 3) + 5$.

- Ans ☒ A. 5
- ☒ B. 2
- ☒ C. 4
- ☒ D. 9

Question ID : 4410091423619
Option 1 ID : 4410095623311
Option 2 ID : 4410095623309
Option 3 ID : 4410095623310
Option 4 ID : 4410095623312
Status : Answered
Chosen Option : D

Q.96 In a boost converter operating in continuous mode, if the duty cycle increases, what happens to the output voltage?

- Ans ☒ A. Output voltage increases non-linearly
- ☒ B. Output voltage follows linear relation with duty cycle
- ☒ C. Output voltage remains constant
- ☒ D. Output voltage decreases

Question ID : 4410091136581
Option 1 ID : 4410094481551
Option 2 ID : 4410094481553
Option 3 ID : 4410094481552
Option 4 ID : 4410094481550
Status : Answered
Chosen Option : A

Q.97 Which of the following statements is/are correct regarding an RC phase shift oscillator?

S1: Two minimum RC networks are required in this circuit for oscillation.
S2: The circuit will oscillate at a frequency for which the phase shift of the network is 180°.

- Ans ☒ A. Only S2
- ☒ B. S1 and S2
- ☒ C. Only S1
- ☒ D. Neither S1 nor S2

Question ID : 441009334542
Option 1 ID : 4410091304122
Option 2 ID : 4410091304125
Option 3 ID : 4410091304123
Option 4 ID : 4410091304124
Status : Answered
Chosen Option : B

Q.98 Crystal oscillators are known for their _____ stability and _____ bandwidth.

- Ans ☒ A. high ; narrow
- ☒ B. low ; narrow
- ☒ C. low ; wide
- ☒ D. high ; wide

Question ID : 4410091184928
Option 1 ID : 4410094673817
Option 2 ID : 4410094673815
Option 3 ID : 4410094673814
Option 4 ID : 4410094673816
Status : Answered
Chosen Option : D

Q.99 Choose the correct option.

Statement 1: In a load-commutated chopper, the efficiency may become high for high-power, high-frequency applications due to high switching losses.

Statement 2: In a load-commutated chopper, the rating of freewheeling diode is subjected to twice the supply voltage.

- Ans ☒ A. Both statements are false.
- ☒ B. Both statements are true.
- ☒ C. Statement 1 is true, but statement 2 is false.
- ☒ D. Statement 1 is false, but statement 2 is true.

Question ID : 4410091512693

Option 1 ID : 4410095974821

Option 2 ID : 4410095974820

Option 3 ID : 4410095974818

Option 4 ID : 4410095974819

Status : Answered

Chosen Option : D

Q.100 The type number of a control system is defined as:

- Ans ☒ A. the order of the system's characteristic equation
- ☒ B. the number of zeros at the origin in the open-loop transfer function
- ☒ C. the number of integrators (poles at the origin) in the open loop transfer function
- ☒ D. the degree of the numerator of the closed-loop transfer function

Question ID : 4410091308237

Option 1 ID : 4410095164603

Option 2 ID : 4410095164605

Option 3 ID : 4410095164604

Option 4 ID : 4410095164606

Status : Answered

Chosen Option : C