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MPPGCL
AE Trainee
Previous Year Paper
(Electrical)
28 Mar, 2023

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Application Sequence No. of the candidate.	
Roll No. of the candidate.	
Name of the candidate.	
Post Code.	**001**
Post Name.	**Assistant Engineer/Manager(Technical/Distribution/Transmission) (Electrical) - Trainee**
Test Center Name .	**iON Digital Zone iDZ Chitoura Road**
Test Date of Candidate appeared in the CBT.	**28/04/2023**
Shift/ Time slot of Candidate appeared in the CBT.	**12:30 PM - 2:30 PM**

Section : **Numerical Ability**

Q.1 A 320 m long train A passes a pole in 24 seconds and passes completely another train B running at 72 km/h in opposite direction, in 18 seconds. How much time (in seconds) will train B take to overtake completely 220 m long train C running at 42 km/h, in the same direction?

Ans
✗ 1. 54
✗ 2. 48
✓ 3. 60
✗ 4. 50

Question ID : **630680209554**
Option 1 ID : **630680812384**
Option 2 ID : **630680812386**
Option 3 ID : **630680812383**
Option 4 ID : **630680812385**
Status : **Answered**
Chosen Option : **3**

Q.2 Ruchi sells sarees for ₹1,088 each after giving a discount of 32% on its marked price. If she does not give any discount, then she earns a profit of 25% on selling a saree. What is the cost price (in ₹) of a saree?

Ans
✗ 1. 1,240
✓ 2. 1,280
✗ 3. 1,260
✗ 4. 1,250

Question ID : **630680209552**
Option 1 ID : **630680812375**
Option 2 ID : **630680812378**
Option 3 ID : **630680812377**
Option 4 ID : **630680812376**
Status : **Answered**
Chosen Option : **2**

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Q.3 If a 9-digit number $3894x97y4$ is divisible by 88, then which of the following is NOT true?

Ans

✔ 1. $x = 4$ and $y = 8$

✗ 2. $x = 9$ and $y = 0$

✗ 3. $x = 2$ and $y = 4$

✗ 4. $x = 6$ and $y = 8$

Question ID : **630680209551**
Option 1 ID : **630680812373**
Option 2 ID : **630680812371**
Option 3 ID : **630680812372**
Option 4 ID : **630680812374**
Status : **Marked For Review**
Chosen Option : **2**

Q.4 Pipes A and B can empty a full tank in 10 hours and 18 hours, respectively. Pipe C is a filling pipe. When all three pipes are opened together, then $\frac{26}{45}$ part of the tank is emptied in 8 hours. Pipe C alone can fill 75% of the tank (in hours):

Ans

✗ 1. $7\frac{1}{2}$

✔ 2. 9

✗ 3. $10\frac{1}{4}$

✗ 4. 12

Question ID : **630680209555**
Option 1 ID : **630680812388**
Option 2 ID : **630680812389**
Option 3 ID : **630680812387**
Option 4 ID : **630680812390**
Status : **Answered**
Chosen Option : **2**

Q.5 The compound interest on a certain sum at 20% p.a. for $1\frac{1}{2}$ years is ₹2,317, interest compounded half-yearly. What will be the amount of the same sum at the same rate in $2\frac{1}{2}$ years, if interest is compounded yearly?

Ans

✔ 1. ₹11,088

✗ 2. ₹11,054

✗ 3. ₹12,010

✗ 4. ₹12,020

Question ID : **630680209553**
Option 1 ID : **630680812380**
Option 2 ID : **630680812379**
Option 3 ID : **630680812381**
Option 4 ID : **630680812382**
Status : **Answered**
Chosen Option : **3**

Section : **Reasoning and Mental Ability**

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Q.1 M is the sister of J. J is the father of D. F is the wife of J. L is the sister of D. Z is the son of R. B is the son of L. D is the husband of A. R is the sister of L. How is A related to F?

Ans

✔ 1. Daughter-in-law

✗ 2. Daughter

✗ 3. Mother

✗ 4. Sister-in-law

Question ID : **630680209558**
Option 1 ID : **630680812401**
Option 2 ID : **630680812399**
Option 3 ID : **630680812400**
Option 4 ID : **630680812402**
Status : **Answered**
Chosen Option : **1**

Q.2 Select the number from among the given options that can replace the question mark (?) in the following series.

6, 8, 19, 61, 249,?

Ans

✗ 1. 1250

✗ 2. 1248

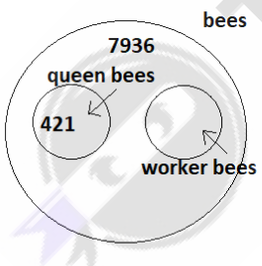
✗ 3. 1252

✔ 4. 1251

Question ID : **630680209560**
Option 1 ID : **630680812409**
Option 2 ID : **630680812407**
Option 3 ID : **630680812410**
Option 4 ID : **630680812408**
Status : **Answered**
Chosen Option : **4**

Q.3 Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of bees in an apiary.

(Note: The number denoted by the region 'bees' is partially inclusive of the regions 'queen bees' and 'worker bees'.)



How many worker bees are there?

Ans

✗ 1. 7346

✗ 2. 7410

✗ 3. 7219

✔ 4. 7515

Question ID : **630680209557**
Option 1 ID : **630680812396**
Option 2 ID : **630680812397**
Option 3 ID : **630680812395**
Option 4 ID : **630680812398**
Status : **Answered**
Chosen Option : **4**

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Q.4 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:

Some peanuts are leaves

All leaves are roots

Some currents are peanuts

Conclusions:

(I) Some currents are leaves

(II) Some roots are currents

(III) All peanuts are roots

Ans

✗ 1. Only conclusion II follows

✗ 2. Only conclusion I follows

✓ 3. None of the conclusions follow

✗ 4. Either conclusion I or III follows

Question ID : **630680209556**
Option 1 ID : **630680812392**
Option 2 ID : **630680812391**
Option 3 ID : **630680812394**
Option 4 ID : **630680812393**
Status : **Answered**
Chosen Option : **3**

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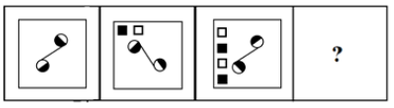
Q.5 Select the figure from among the given options that can replace the question mark (?) in the following series.



Ans

✗ 1.

✗ 2.

✓ 3.

✗ 4.

Question ID : **630680209559**
Option 1 ID : **630680812404**
Option 2 ID : **630680812405**
Option 3 ID : **630680812406**
Option 4 ID : **630680812403**
Status : **Answered**
Chosen Option : **2**

Section : **General Knowledge Awareness**

Q.1 **Scheme for Modernisation and Reforms through Technology in Public Distribution System (SMART-PDS), a scheme that aims to transform the entire PDS IT ecosystem by leveraging the usage of Cloud and new age technology, is envisaged by the Department of Food and Public Distribution (DFPD) under the Ministry of Consumer Affairs, Food and Public Distribution which is headed by:**

Ans

✓ 1. Piyush Goyal

✗ 2. Pralhad Joshi

✗ 3. Giriraj Singh

✗ 4. Narendra Singh Tomar

Question ID : **630680209561**
Option 1 ID : **630680812413**
Option 2 ID : **630680812411**
Option 3 ID : **630680812412**
Option 4 ID : **630680812414**
Status : **Answered**
Chosen Option : **1**

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Q.2 **Which of the following Articles of the Indian Constitution is related to the Finance commission of India?**

Ans
✗ 1. Article 270
✓ 2. Article 280
✗ 3. Article 260
✗ 4. Article 290

Question ID : **630680209565**
Option 1 ID : **630680812429**
Option 2 ID : **630680812428**
Option 3 ID : **630680812427**
Option 4 ID : **630680812430**
Status : **Answered**
Chosen Option : **3**

Q.3 **Which of the following statement is INCORRECT?**

(a)M1 is a broader measure and M3 is a narrow measure of money supply.
(b)The main components of money supply are currency held by the public and net-demand deposits held by the commercial banks.
(c)Money supply refers to the total quantity of money held by public in various forms at any point of time in an economy.
(d)High powered money consists of cash with public, reserves with banks and other deposits with R.B.I.

Ans
✗ 1. d
✓ 2. a
✗ 3. b
✗ 4. c

Question ID : **630680209563**
Option 1 ID : **630680812419**
Option 2 ID : **630680812421**
Option 3 ID : **630680812422**
Option 4 ID : **630680812420**
Status : **Answered**
Chosen Option : **2**

Q.4 **Epigraphia Carnatica compiled by Benjamin Lewis Rice is a rich repository of source material on the history of the _____.**

Ans
✗ 1. Assam region
✗ 2. Rajputana region
✗ 3. Jammu and Kashmir region
✓ 4. Mysore region

Question ID : **630680209562**
Option 1 ID : **630680812418**
Option 2 ID : **630680812415**
Option 3 ID : **630680812417**
Option 4 ID : **630680812416**
Status : **Answered**
Chosen Option : **2**

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Q.5 **Lingmala Waterfall is situated in:**

Ans
✔ 1. Maharashtra
✘ 2. Gujarat
✘ 3. Tamil Nadu
✘ 4. Kerala

Question ID : **630680209564**
Option 1 ID : **630680812423**
Option 2 ID : **630680812424**
Option 3 ID : **630680812426**
Option 4 ID : **630680812425**
Status : **Answered**
Chosen Option : **3**

Section : **General English**

Q.1 **Select the most appropriate option to fill in the blanks.**

It is a well-recognised fact that there exists in India a parallel economy dependent entirely on black money _____. It is unfortunate that people hardly feel any pangs of _____ while dealing with black money.

Ans
✘ 1. hoarding; goodwill
✘ 2. exchanges; honesty
✘ 3. trading; punishment
✔ 4. transactions; conscience

Question ID : **630680209568**
Option 1 ID : **630680812441**
Option 2 ID : **630680812439**
Option 3 ID : **630680812442**
Option 4 ID : **630680812440**
Status : **Answered**
Chosen Option : **3**

Q.2 **Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.**

A. As a result, a number of priests and bishops were put in jails or sent to Siberia as punishment for their refusal to preach in Russian.
B. The use of the Polish language came to be seen as a symbol of struggle against Russian dominance.
C. Language played an important role in developing nationalist sentiments in Poland in 18th and 19th centuries.
D. So, after the armed rebellion against Russian rule, Polish was used for church gatherings and religious instruction.

Ans
✔ 1. CBDA
✘ 2. BACD
✘ 3. BDCA
✘ 4. CABD

Question ID : **630680209567**
Option 1 ID : **630680812438**
Option 2 ID : **630680812436**
Option 3 ID : **630680812435**
Option 4 ID : **630680812437**
Status : **Answered**
Chosen Option : **1**

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Q.3 **Select the most appropriate option to fill in the blanks.**

The Napoleonic Code was the _____ introduced by Napoleon in the territories he conquered. It ended all the _____ based on birth and established equality before law.

Ans
✗ 1. remedy; claims
✗ 2. revision; freedom
✗ 3. resolve; dues
✓ 4. reform; privileges

Question ID : **630680209569**
Option 1 ID : **630680812444**
Option 2 ID : **630680812446**
Option 3 ID : **630680812443**
Option 4 ID : **630680812445**
Status : **Answered**
Chosen Option : **4**

Q.4 **Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.**

A. It can be useful in scanning and organising documents pertaining to a case.
B. But it cannot perform higher-level tasks such as sharp decision making and building relationships.
C. These are over and above the realm of computerisation.
D. Artificial intelligence (AI) is making a difference to how legal work is done.

Ans
✗ 1. DBAC
✓ 2. DABC
✗ 3. DACB
✗ 4. DCAB

Question ID : **630680209566**
Option 1 ID : **630680812431**
Option 2 ID : **630680812432**
Option 3 ID : **630680812434**
Option 4 ID : **630680812433**
Status : **Answered**
Chosen Option : **2**

Q.5 **Select the option that can be used as a one-word substitute for the given group of words.**

A concentrated medicinal liquor

Ans
✗ 1. Potpourri
✓ 2. Decoction
✗ 3. Broth
✗ 4. Panacea

Question ID : **630680209570**
Option 1 ID : **630680812447**
Option 2 ID : **630680812448**
Option 3 ID : **630680812449**
Option 4 ID : **630680812450**
Status : **Answered**
Chosen Option : **2**

Section : **Power Sector Related**

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Q.1 What is India's total nuclear power capacity?

Ans
✗ 1. 678 MW
✗ 2. 2780 MW
✗ 3. 16780 MW
✓ 4. 6780 MW

Question ID : **630680209571**
Option 1 ID : **630680812452**
Option 2 ID : **630680812453**
Option 3 ID : **630680812454**
Option 4 ID : **630680812451**
Status : **Answered**
Chosen Option : **4**

Q.2 Which of the following is NOT a power distribution company of the State of Madhya Pradesh?

Ans
✗ 1. MP Poorve Kshetra Vidyut Vitaran Company Limited
✗ 2. MP Madhya Kshetra Vidyut Vitaran Company Limited
✗ 3. MP Paschim Kshetra Vidyut Vitaran Company Limited
✓ 4. MP Dakshin Kshetra Vidyut Vitaran Company Limited

Question ID : **630680209572**
Option 1 ID : **630680812455**
Option 2 ID : **630680812457**
Option 3 ID : **630680812456**
Option 4 ID : **630680812458**
Status : **Answered**
Chosen Option : **4**

Q.3 Identify the correct statement regarding Gandhi Sagar Hydro power plant.

Ans
✓ 1. It has 5 units of 23 MW each.
✗ 2. It has 10 units of 11.5 MW each.
✗ 3. It has 5 units of 11.5 MW each.
✗ 4. It has 10 units of 23 MW each.

Question ID : **630680209575**
Option 1 ID : **630680812467**
Option 2 ID : **630680812469**
Option 3 ID : **630680812470**
Option 4 ID : **630680812468**
Status : **Answered**
Chosen Option : **1**

Q.4 Madhikheda hydro power plant is located in which district of Madhya Pradesh?

Ans
✗ 1. Jabalpur
✗ 2. Mandsaur
✓ 3. Shivpuri
✗ 4. Ujjain

Question ID : **630680209574**
Option 1 ID : **630680812465**
Option 2 ID : **630680812463**
Option 3 ID : **630680812466**
Option 4 ID : **630680812464**
Status : **Answered**
Chosen Option : **3**

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Q.5 What was the date of incorporation of MPPGCL?

Ans
✔ 1. 22 November 2001
✘ 2. 11 November 2016
✘ 3. 11 November 2012
✘ 4. 22 November 2006

Question ID : **630680209573**
Option 1 ID : **630680812459**
Option 2 ID : **630680812462**
Option 3 ID : **630680812460**
Option 4 ID : **630680812461**
Status : **Answered**
Chosen Option : **1**

Section : **Discipline Related**

Q.1 With reference to power MOSFET, which of the following statements is wrong?

Ans
✘ 1. It is a voltage-controlled device.
✔ 2. Current conduction in any MOSFET is always due to electrons.
✘ 3. It has a high input impedance.
✘ 4. It is a unipolar device.

Question ID : **630680209632**
Option 1 ID : **630680812695**
Option 2 ID : **630680812697**
Option 3 ID : **630680812698**
Option 4 ID : **630680812696**
Status : **Answered**
Chosen Option : **2**

Q.2 Calculate the amount of total power transferred conductively for a 35 kVA autotransformer with a transformation ratio of 0.8.

Ans
✘ 1. 44 kVA
✔ 2. 28 kVA
✘ 3. 7 kVA
✘ 4. 14 kVA

Question ID : **630680209606**
Option 1 ID : **630680812594**
Option 2 ID : **630680812593**
Option 3 ID : **630680812591**
Option 4 ID : **630680812592**
Status : **Answered**
Chosen Option : **2**

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Q.3 The following Lissajous figure is obtained on CRO when the frequency of the signal connected to vertical deflection plates is 300 Hz. Find the frequency of the signal applied to horizontal deflection plates.

Ans
✗ 1. 600 Hz
✓ 2. 150 Hz
✗ 3. 300 Hz
✗ 4. 75 Hz

Question ID : **630680209595**
Option 1 ID : **630680812550**
Option 2 ID : **630680812548**
Option 3 ID : **630680812549**
Option 4 ID : **630680812547**
Status : **Answered**
Chosen Option : **2**

Q.4 Which of the following parameters should be low in an operational amplifier?

Ans
✗ 1. Input impedance
✓ 2. Output impedance
✗ 3. Slew rate
✗ 4. CMRR

Question ID : **630680209641**
Option 1 ID : **630680812734**
Option 2 ID : **630680812733**
Option 3 ID : **630680812732**
Option 4 ID : **630680812731**
Status : **Answered**
Chosen Option : **4**

Q.5 State whether the following statements are true or false.

1. SRAM is a volatile memory.

2. Flash memory is a non-volatile memory.

Ans
✓ 1. (1) True, (2) True
✗ 2. (1) False, (2) True
✗ 3. (1) True, (2) False
✗ 4. (1) False, (2) False

Question ID : **630680209613**
Option 1 ID : **630680812619**
Option 2 ID : **630680812621**
Option 3 ID : **630680812620**
Option 4 ID : **630680812622**
Status : **Answered**
Chosen Option : **3**

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Q.6 How many select lines are required for 1-line to 8-line demultiplexer?

Ans
✔ 1. 3
✗ 2. 4
✗ 3. 8
✗ 4. 2

Question ID : **630680209615**
Option 1 ID : **630680812628**
Option 2 ID : **630680812629**
Option 3 ID : **630680812630**
Option 4 ID : **630680812627**
Status : **Answered**
Chosen Option : **1**

Q.7 What is the condition for reciprocity for a two-port network represented in terms of h-parameters?

Ans
✗ 1. $h_{11} = h_{22}$
✔ 2. $h_{12} = -h_{21}$
✗ 3. $h_{11} = -h_{22}$
✗ 4. $h_{12} = h_{21}$

Question ID : **630680209604**
Option 1 ID : **630680812583**
Option 2 ID : **630680812586**
Option 3 ID : **630680812584**
Option 4 ID : **630680812585**
Status : **Answered**
Chosen Option : **2**

Q.8 Which of the following is NOT a valid advantage of PMMC instruments?

Ans
✔ 1. Can be used for AC as well as DC measurements
✗ 2. High accuracy
✗ 3. Uniform scale
✗ 4. Low power consumption

Question ID : **630680209590**
Option 1 ID : **630680812529**
Option 2 ID : **630680812530**
Option 3 ID : **630680812527**
Option 4 ID : **630680812528**
Status : **Answered**
Chosen Option : **1**

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Q.9 If the number of bits per word in a transmitted signal is 5, then the number of quantisation levels will be:

Ans

✗ 1. 64

✗ 2. 16

✓ 3. 32

✗ 4. 48

Question ID : **630680209601**
Option 1 ID : **630680812574**
Option 2 ID : **630680812571**
Option 3 ID : **630680812572**
Option 4 ID : **630680812573**
Status : **Answered**
Chosen Option : **3**

Q.10 Determine the operating point for a common-emitter transistor if V_{CC} = 12 V, zero signal collector current = 1 mA and collector resistance R_C = 4 kΩ.

Ans

✗ 1. 6 V, 1 mA

✗ 2. 8 V, 2 mA

✗ 3. 6 V, 2 mA

✓ 4. 8 V, 1 mA

Question ID : **630680209640**
Option 1 ID : **630680812729**
Option 2 ID : **630680812728**
Option 3 ID : **630680812727**
Option 4 ID : **630680812730**
Status : **Answered**
Chosen Option : **4**

Q.11 State whether the following statements are true or false.

1. Coulomb's law is applicable only if the charges are static.

2. It is difficult to apply Coulomb's law to irregular shapes.

Ans

✗ 1. (1) False, (2) True

✗ 2. (1) False, (2) False

✗ 3. (1) True, (2) False

✓ 4. (1) True, (2) True

Question ID : **630680209581**
Option 1 ID : **630680812493**
Option 2 ID : **630680812494**
Option 3 ID : **630680812492**
Option 4 ID : **630680812491**
Status : **Answered**
Chosen Option : **3**

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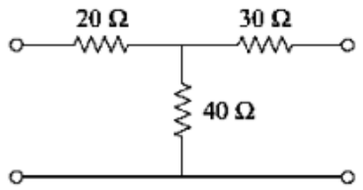
Q.12 Find z-parameters for the following circuit.



Ans

✗ 1. $[Z] = \begin{bmatrix} 40\Omega & 20\Omega \\ 30\Omega & 40\Omega \end{bmatrix}$

✗ 2. $[Z] = \begin{bmatrix} 20\Omega & 40\Omega \\ 40\Omega & 30\Omega \end{bmatrix}$

✓ 3. $[Z] = \begin{bmatrix} 60\Omega & 40\Omega \\ 40\Omega & 70\Omega \end{bmatrix}$

✗ 4. $[Z] = \begin{bmatrix} 40\Omega & 60\Omega \\ 70\Omega & 40\Omega \end{bmatrix}$

Question ID : **630680209603**
Option 1 ID : **630680812582**
Option 2 ID : **630680812579**
Option 3 ID : **630680812580**
Option 4 ID : **630680812581**
Status : **Answered**
Chosen Option : **3**

Q.13 In power systems, the _____ is the factor by which the incremental cost of power production must be multiplied to accommodate line losses.

Ans

✓ 1. penalty factor

✗ 2. form factor

✗ 3. crest factor

✗ 4. loss factor

Question ID : **630680209619**
Option 1 ID : **630680812643**
Option 2 ID : **630680812646**
Option 3 ID : **630680812645**
Option 4 ID : **630680812644**
Status : **Answered**
Chosen Option : **1**

Q.14 An analogue indicating voltmeter when used to measure the voltage of a 10 V battery, indicates 9.96 V. Find the relative error.

Ans

✗ 1. 0.2%

✗ 2. 2%

✓ 3. 0.4%

✗ 4. 4%

Question ID : **630680209591**
Option 1 ID : **630680812533**
Option 2 ID : **630680812531**
Option 3 ID : **630680812534**
Option 4 ID : **630680812532**
Status : **Answered**
Chosen Option : **3**

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Q.15 A three-phase induction motor operated at 50 Hz offers a maximum torque of 200 Nm. If the frequency is increased to 100 Hz, while keeping the supply voltage constant, what will be the maximum torque at increased frequency?

Ans

✗ 1. 25 Nm

✗ 2. 400 Nm

✗ 3. 200 Nm

✓ 4. 50 Nm

Question ID : **630680209608**
Option 1 ID : **630680812602**
Option 2 ID : **630680812599**
Option 3 ID : **630680812600**
Option 4 ID : **630680812601**
Status : **Answered**
Chosen Option : **4**

Q.16 Maxwell's equations are nothing but a combination of four basic laws of electromagnetism. Which of the following laws is NOT one of them?

Ans

✗ 1. Faraday's law

✓ 2. Planck's law

✗ 3. Ampere circuital law

✗ 4. Gauss's law of electricity

Question ID : **630680209587**
Option 1 ID : **630680812517**
Option 2 ID : **630680812515**
Option 3 ID : **630680812518**
Option 4 ID : **630680812516**
Status : **Answered**
Chosen Option : **2**

Q.17 Direct measurement of _____ is NOT possible in conventional analogue CRO.

Ans

✓ 1. power

✗ 2. phase

✗ 3. time period

✗ 4. voltage

Question ID : **630680209594**
Option 1 ID : **630680812543**
Option 2 ID : **630680812545**
Option 3 ID : **630680812546**
Option 4 ID : **630680812544**
Status : **Answered**
Chosen Option : **1**

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Q.18 State whether the following statements are true or false.

1. A current transformer is also called 'series transformer'.

2. The primary current of a current transformer does not depend on load.

Ans

✗ 1. (1) False, (2) True

✗ 2. (1) True, (2) False

✓ 3. (1) True, (2) True

✗ 4. (1) False, (2) False

Question ID : **630680209592**
Option 1 ID : **630680812537**
Option 2 ID : **630680812536**
Option 3 ID : **630680812535**
Option 4 ID : **630680812538**
Status : **Answered**
Chosen Option : **2**

Q.19 For a class A chopper connected with RL load, the current ripple will be maximum when duty cycle is:

Ans

✗ 1. 25%

✗ 2. 75%

✓ 3. 50%

✗ 4. 100%

Question ID : **630680209637**
Option 1 ID : **630680812715**
Option 2 ID : **630680812717**
Option 3 ID : **630680812716**
Option 4 ID : **630680812718**
Status : **Answered**
Chosen Option : **3**

Q.20 Three point charges, $Q_1 = -80$ nC, $Q_2 = 60$ nC and $Q_3 = 180$ nC, are enclosed by the surface S. Find the net flux that crosses S.

Ans

✓ 1. 160 nC

✗ 2. 240 nC

✗ 3. 120 nC

✗ 4. 320 nC

Question ID : **630680209584**
Option 1 ID : **630680812505**
Option 2 ID : **630680812504**
Option 3 ID : **630680812506**
Option 4 ID : **630680812503**
Status : **Answered**
Chosen Option : **1**

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Q.21 A half-wave rectifier is supplied through a 230 V, 50 Hz supply. What will be the output ripple frequency?

Ans
✗ 1. 75 Hz
✓ 2. 50 Hz
✗ 3. 100 Hz
✗ 4. 25 Hz

Question ID : **630680209598**
Option 1 ID : **630680812562**
Option 2 ID : **630680812559**
Option 3 ID : **630680812560**
Option 4 ID : **630680812561**
Status : **Answered**
Chosen Option : **2**

Q.22 Split-phase induction motors are rarely used for drives requiring more than _____.

Ans
✗ 1. 100 W
✗ 2. 10 kW
✓ 3. 1 kW
✗ 4. 100 kW

Question ID : **630680209644**
Option 1 ID : **630680812743**
Option 2 ID : **630680812745**
Option 3 ID : **630680812744**
Option 4 ID : **630680812746**
Status : **Answered**
Chosen Option : **2**

Q.23 A signal x(t) is said to be a power signal if its normalised average power is _____.

Ans
✗ 1. zero or infinite
✗ 2. zero or finite
✓ 3. non-zero and finite
✗ 4. non-zero and infinite

Question ID : **630680209602**
Option 1 ID : **630680812576**
Option 2 ID : **630680812575**
Option 3 ID : **630680812577**
Option 4 ID : **630680812578**
Status : **Answered**
Chosen Option : **3**

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Q.24 An SCR is connected across 100 V battery through 0.1 H inductance. What should be the minimum width of the gating pulse to trigger the SCR properly if the latching current is 3 mA.

Ans

✔ 1. 3 μs

✗ 2. 1 μs

✗ 3. 1 ms

✗ 4. 3 ms

Question ID : **630680209649**
Option 1 ID : **630680812765**
Option 2 ID : **630680812766**
Option 3 ID : **630680812764**
Option 4 ID : **630680812763**
Status : **Answered**
Chosen Option : **1**

Q.25 In an RC circuit, resistance is 3Ω and circuit impedance is 5Ω. Find the power factor.

Ans

✔ 1. 0.6

✗ 2. 0.8

✗ 3. 0.2

✗ 4. 0.4

Question ID : **630680209579**
Option 1 ID : **630680812485**
Option 2 ID : **630680812486**
Option 3 ID : **630680812483**
Option 4 ID : **630680812484**
Status : **Answered**
Chosen Option : **1**

Q.26 A capacitor of 15 μF is connected in series with 30 μF. If the supply voltage for the series connection is 100 V, 50 Hz, find the current.

Ans

✔ 1. $\frac{\pi}{10}$ A

✗ 2. $\frac{\pi}{2}$ A

✗ 3. $\frac{\pi}{5}$ A

✗ 4. $\frac{2\pi}{5}$ A

Question ID : **630680209580**
Option 1 ID : **630680812489**
Option 2 ID : **630680812487**
Option 3 ID : **630680812488**
Option 4 ID : **630680812490**
Status : **Answered**
Chosen Option : **1**

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Q.27 If a signal is sampled with a sampling rate of 80 samples/second, then what will be the maximum frequency that can be present in the discrete signal?

Ans

✗ 1. 80 samples/sec

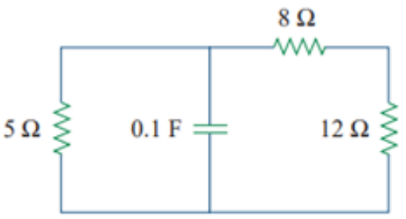
✗ 2. 160 samples/sec

✓ 3. 40 samples/sec

✗ 4. 120 samples/sec

Question ID : **630680209600**
Option 1 ID : **630680812569**
Option 2 ID : **630680812567**
Option 3 ID : **630680812570**
Option 4 ID : **630680812568**
Status : **Answered**
Chosen Option : **2**

Q.28 Find the time constant for the following circuit.



Ans

✗ 1. 0.1 s

✓ 2. 0.4 s

✗ 3. 1.6 s

✗ 4. 2.5 s

Question ID : **630680209643**
Option 1 ID : **630680812742**
Option 2 ID : **630680812741**
Option 3 ID : **630680812740**
Option 4 ID : **630680812739**
Status : **Answered**
Chosen Option : **2**

Q.29 A current source of 2.5 ampere with 8 Ω parallel resistance is equivalent to a voltage source of _____ with 8 Ω series resistance.

Ans

✗ 1. 4 V

✓ 2. 20 V

✗ 3. 10 V

✗ 4. 8 V

Question ID : **630680209578**
Option 1 ID : **630680812482**
Option 2 ID : **630680812479**
Option 3 ID : **630680812480**
Option 4 ID : **630680812481**
Status : **Answered**
Chosen Option : **2**

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Q.30 Find the duty cycle of a chopper that has input voltage of 50 V and output voltage of 125 V.

Ans
✗ 1. 80%
✗ 2. 40%
✓ 3. 60%
✗ 4. 20%

Question ID : **630680209636**
Option 1 ID : **630680812714**
Option 2 ID : **630680812712**
Option 3 ID : **630680812713**
Option 4 ID : **630680812711**
Status : **Answered**
Chosen Option : **3**

Q.31 Which of the following is NOT a valid advantage of a single bus bar system?

Ans
✗ 1. Low cost
✓ 2. Very low fault currents
✗ 3. Less maintenance
✗ 4. Simple operation

Question ID : **630680209648**
Option 1 ID : **630680812759**
Option 2 ID : **630680812762**
Option 3 ID : **630680812760**
Option 4 ID : **630680812761**
Status : **Answered**
Chosen Option : **2**

Q.32 The position error coefficient of a unity feedback system with $G(s) = \frac{1}{(s+3)(s+5)}$ will be:

Ans
✗ 1. ∞
✗ 2. 0
✗ 3. $\frac{1}{5}$
✓ 4. $\frac{1}{15}$

Question ID : **630680209624**
Option 1 ID : **630680812664**
Option 2 ID : **630680812663**
Option 3 ID : **630680812665**
Option 4 ID : **630680812666**
Status : **Answered**
Chosen Option : **4**

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Q.33 In a star-star transformer connection, if the phase transformation ratio is $x:1$, then the line transformation ratio is _____.

Ans

✔ 1. $x:1$

✗ 2. $3x:1$

✗ 3. $\sqrt{3}x:1$

✗ 4. $2x:1$

Question ID : **630680209605**
Option 1 ID : **630680812587**
Option 2 ID : **630680812589**
Option 3 ID : **630680812590**
Option 4 ID : **630680812588**
Status : **Answered**
Chosen Option : **1**

Q.34 In 8085 microprocessors, after any arithmetical or logical operation, if the result is 00 H, then _____ flag is set.

Ans

✔ 1. Zero

✗ 2. Sign

✗ 3. Auxiliary Carry

✗ 4. Carry

Question ID : **630680209612**
Option 1 ID : **630680812615**
Option 2 ID : **630680812617**
Option 3 ID : **630680812618**
Option 4 ID : **630680812616**
Status : **Answered**
Chosen Option : **2**

Q.35 Convolution of two equal-length rectangular pulses is a _____.

Ans

✗ 1. square

✔ 2. triangle

✗ 3. circle

✗ 4. trapezium

Question ID : **630680209628**
Option 1 ID : **630680812682**
Option 2 ID : **630680812681**
Option 3 ID : **630680812679**
Option 4 ID : **630680812680**
Status : **Answered**
Chosen Option : **2**

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Q.36 With reference to SCRs, state whether the following statements are true or false.

1. Holding current is always greater than latching current.

2. SCR can be considered as an AC switch.

Ans
✗ 1. (1) False, (2) True
✓ 2. (1) False, (2) False
✗ 3. (1) True, (2) False
✗ 4. (1) True, (2) True

Question ID : **630680209634**
Option 1 ID : **630680812705**
Option 2 ID : **630680812706**
Option 3 ID : **630680812704**
Option 4 ID : **630680812703**
Status : **Answered**
Chosen Option : **1**

Q.37 Find the speed of an 8-pole synchronous motor if supply frequency is 25 Hz.

Ans
✗ 1. 250 rpm
✓ 2. 375 rpm
✗ 3. 150 rpm
✗ 4. 750 rpm

Question ID : **630680209610**
Option 1 ID : **630680812608**
Option 2 ID : **630680812609**
Option 3 ID : **630680812607**
Option 4 ID : **630680812610**
Status : **Answered**
Chosen Option : **2**

Q.38 A long wire carrying a certain current produces a magnetic field of 0.3 Tesla at a distance of 1 cm. The magnetic field at a distance of 0.5 cm is _____.

Ans
✓ 1. 0.6 Tesla
✗ 2. 0.3 Tesla
✗ 3. 0.15 Tesla
✗ 4. 1.2 Tesla

Question ID : **630680209586**
Option 1 ID : **630680812513**
Option 2 ID : **630680812512**
Option 3 ID : **630680812511**
Option 4 ID : **630680812514**
Status : **Answered**
Chosen Option : **1**

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Q.39 A 230 V single-phase energy meter has a constant load current of 20 A at unity power factor. If the meter disk makes 1150 revolutions for 2 hours, find the meter constant.

Ans

✗ 1. 25 revolutions/kWh

✗ 2. 250 revolutions/kWh

✓ 3. 125 revolutions/kWh

✗ 4. 12.5 revolutions/kWh

Question ID : **630680209589**
Option 1 ID : **630680812526**
Option 2 ID : **630680812524**
Option 3 ID : **630680812523**
Option 4 ID : **630680812525**
Status : **Answered**
Chosen Option : **3**

Q.40 A transmission line of surge impedance 240 Ω is connected to a load of 240 Ω. The reflection coefficient of the transmission line at the load end will be:

Ans

✓ 1. 0

✗ 2. −1

✗ 3. 1

✗ 4. 2

Question ID : **630680209617**
Option 1 ID : **630680812635**
Option 2 ID : **630680812638**
Option 3 ID : **630680812636**
Option 4 ID : **630680812637**
Status : **Answered**
Chosen Option : **1**

Q.41 The dual of T-network is _____.

Ans

✗ 1. Ladder network

✗ 2. V-network

✗ 3. Star network

✓ 4. π-network

Question ID : **630680209577**
Option 1 ID : **630680812478**
Option 2 ID : **630680812475**
Option 3 ID : **630680812476**
Option 4 ID : **630680812477**
Status : **Answered**
Chosen Option : **4**

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Q.42 Which of the following are LC oscillators?

Ans
✔ 1. Hartley and Colpitts's oscillators
✗ 2. Wien bridge and Crystal oscillators
✗ 3. Crystal and Colpitts's oscillators
✗ 4. Hartley and Wien bridge oscillators

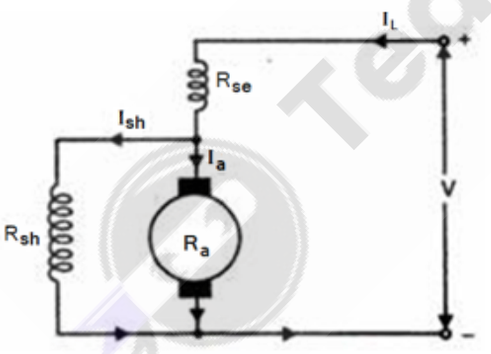
Question ID : **630680209597**
Option 1 ID : **630680812556**
Option 2 ID : **630680812557**
Option 3 ID : **630680812558**
Option 4 ID : **630680812555**
Status : **Answered**
Chosen Option : **2**

Q.43 The Laplace transform of a signal x(t) is $\frac{6s+1}{(s^2+5s+2)}$. Find the initial value x(0).

Ans
✗ 1. 2
✗ 2. 4
✗ 3. 3
✔ 4. 6

Question ID : **630680209629**
Option 1 ID : **630680812683**
Option 2 ID : **630680812685**
Option 3 ID : **630680812684**
Option 4 ID : **630680812686**
Status : **Answered**
Chosen Option : **4**

Q.44 Identify the DC machine shown in following diagram.



Ans
✔ 1. Short shunt compound DC motor
✗ 2. Long shunt compound DC generator
✗ 3. Long shunt compound DC motor
✗ 4. Short shunt compound DC generator

Question ID : **630680209609**
Option 1 ID : **630680812604**
Option 2 ID : **630680812605**
Option 3 ID : **630680812603**
Option 4 ID : **630680812606**
Status : **Answered**
Chosen Option : **1**

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Q.45 Power diode is a _____ device.

Ans
✗ 1. 3 terminal, 2 layer
✗ 2. 2 terminal, 2 layer
✗ 3. 3 terminal, 3 layer
✓ 4. 2 terminal, 3 layer

Question ID : **630680209631**
Option 1 ID : **630680812692**
Option 2 ID : **630680812693**
Option 3 ID : **630680812694**
Option 4 ID : **630680812691**
Status : **Answered**
Chosen Option : **4**

Q.46 In a 3-phase induction motor, the pull-out torque is independent of _____.

Ans
✗ 1. stator resistance
✗ 2. rotor reactance
✗ 3. stator reactance
✓ 4. rotor resistance

Question ID : **630680209607**
Option 1 ID : **630680812595**
Option 2 ID : **630680812598**
Option 3 ID : **630680812597**
Option 4 ID : **630680812596**
Status : **Answered**
Chosen Option : **4**

Q.47 An inductor coil stores 64 J of magnetic field energy and dissipates 320 W when a current of 8 A is passed through it. If the coil is joined through an ideal battery, find the time constant of the circuit.

Ans
✗ 1. 0.2 s
✗ 2. 0.6 s
✓ 3. 0.4 s
✗ 4. 0.8 s

Question ID : **630680209585**
Option 1 ID : **630680812507**
Option 2 ID : **630680812509**
Option 3 ID : **630680812508**
Option 4 ID : **630680812510**
Status : **Answered**
Chosen Option : **3**

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Q.48 Find the fundamental frequency in rad/sec for the following periodic signal.

$$V(t) = 50\sin 100t + 25\sin 300t + 15\sin 500t$$

Ans
✗ 1. 800
✗ 2. 500
✗ 3. 300
✓ 4. 100

Question ID : **630680209650**
Option 1 ID : **630680812770**
Option 2 ID : **630680812769**
Option 3 ID : **630680812768**
Option 4 ID : **630680812767**
Status : **Answered**
Chosen Option : **4**

Q.49 In ACSR (Aluminium Conductor Steel Reinforced), which of the following characteristics is due to steel?

Ans
✗ 1. Light weight
✗ 2. Rust lessness
✗ 3. Good conductivity
✓ 4. High tensile strength

Question ID : **630680209616**
Option 1 ID : **630680812631**
Option 2 ID : **630680812634**
Option 3 ID : **630680812632**
Option 4 ID : **630680812633**
Status : **Answered**
Chosen Option : **4**

Q.50 With the help of the R-triggering method, the firing angle CANNOT be varied above _____.

Ans
✗ 1. 45°
✗ 2. 60°
✓ 3. 90°
✗ 4. 30°

Question ID : **630680209646**
Option 1 ID : **630680812752**
Option 2 ID : **630680812753**
Option 3 ID : **630680812754**
Option 4 ID : **630680812751**
Status : **Answered**
Chosen Option : **3**

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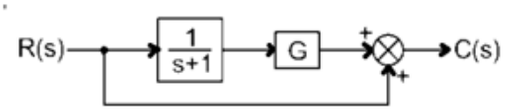
Q.51 Find $\frac{C(s)}{R(s)}$ for the following diagram if G = 1.



Ans

✗ 1. $\frac{s}{s+1}$

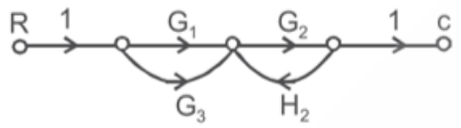
✗ 2. $\frac{s+1}{s+2}$

✗ 3. $\frac{s}{s+2}$

✓ 4. $\frac{s+2}{s+1}$

Question ID : **630680209623**
Option 1 ID : **630680812661**
Option 2 ID : **630680812660**
Option 3 ID : **630680812662**
Option 4 ID : **630680812659**
Status : **Answered**
Chosen Option : **4**

Q.52 How many forward paths are there in the following signal flow graph?



Ans

✗ 1. 4

✓ 2. 2

✗ 3. 3

✗ 4. 1

Question ID : **630680209622**
Option 1 ID : **630680812658**
Option 2 ID : **630680812656**
Option 3 ID : **630680812657**
Option 4 ID : **630680812655**
Status : **Answered**
Chosen Option : **2**

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Q.53 For low-tension cables, the operating voltage should NOT be more than _____.

Ans
✗ 1. 100 V
✗ 2. 10,000 V
✓ 3. 1000 V
✗ 4. 500 V

Question ID : **630680209618**
Option 1 ID : **630680812642**
Option 2 ID : **630680812639**
Option 3 ID : **630680812640**
Option 4 ID : **630680812641**
Status : **Answered**
Chosen Option : **4**

Q.54 Find the corner frequencies if the transfer function of a system is given as follows.

$$\frac{10\,(1\,+\,0.1s)}{(1\,+\,0.5s)}$$

Ans
✓ 1. 10 and 2
✗ 2. 5 and 2
✗ 3. 10 and 5
✗ 4. 2 and 1

Question ID : **630680209627**
Option 1 ID : **630680812678**
Option 2 ID : **630680812676**
Option 3 ID : **630680812677**
Option 4 ID : **630680812675**
Status : **Answered**
Chosen Option : **1**

Q.55 In a multiplexer, if there are 8 input lines and 1 output line, then the number of selection lines required will be _____.

Ans
✗ 1. 2
✗ 2. 4
✓ 3. 3
✗ 4. 8

Question ID : **630680209647**
Option 1 ID : **630680812755**
Option 2 ID : **630680812757**
Option 3 ID : **630680812756**
Option 4 ID : **630680812758**
Status : **Answered**
Chosen Option : **3**

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Q.56 Which of the following meters is used to measure the speed of wind?

Ans
✔ 1. Anemometer
✘ 2. Altimeter
✘ 3. Barometer
✘ 4. Ammeter

Question ID : **630680209588**
Option 1 ID : **630680812520**
Option 2 ID : **630680812519**
Option 3 ID : **630680812522**
Option 4 ID : **630680812521**
Status : **Answered**
Chosen Option : **1**

Q.57 According to Blondel's theorem, for the measurement of power in n-phase, n-wire, without neutral, _____ wattmeters are required.

Ans
✔ 1. $(n-1)$
✘ 2. $(n+1)$
✘ 3. $2n$
✘ 4. n

Question ID : **630680209593**
Option 1 ID : **630680812541**
Option 2 ID : **630680812540**
Option 3 ID : **630680812542**
Option 4 ID : **630680812539**
Status : **Answered**
Chosen Option : **1**

Q.58 Isolator or disconnecting switch is essentially a knife switch that is designed to open a circuit under _____.

Ans
✘ 1. quarter load
✘ 2. half load
✘ 3. full load
✔ 4. no load

Question ID : **630680209620**
Option 1 ID : **630680812650**
Option 2 ID : **630680812649**
Option 3 ID : **630680812647**
Option 4 ID : **630680812648**
Status : **Answered**
Chosen Option : **4**

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Q.59 A 4-pole synchronous motor is running at the speed of 3000 rpm. Find the frequency of the supply.

Ans

✗ 1. 200 Hz

✗ 2. 150 Hz

✗ 3. 50 Hz

✓ 4. 100 Hz

Question ID : **630680209645**
Option 1 ID : **630680812750**
Option 2 ID : **630680812749**
Option 3 ID : **630680812747**
Option 4 ID : **630680812748**
Status : **Answered**
Chosen Option : **4**

Q.60 For a single stage transistor amplifier, the collector load is $R_C = 2\ k\Omega$ and the input resistance $R_i = 1\ k\Omega$. If the current gain is 50, calculate the voltage gain of the amplifier.

Ans

✓ 1. 100

✗ 2. 25

✗ 3. 50

✗ 4. 150

Question ID : **630680209596**
Option 1 ID : **630680812553**
Option 2 ID : **630680812551**
Option 3 ID : **630680812552**
Option 4 ID : **630680812554**
Status : **Answered**
Chosen Option : **1**

Q.61 With reference to MOSFETs, state whether the following statements are true or false.

1. D-MOSFET can work only in depletion mode.

2. E-MOSFET can work only in enhancement mode.

Ans

✓ 1. (1) False, (2) True

✗ 2. (1) False, (2) False

✗ 3. (1) True, (2) False

✗ 4. (1) True, (2) True

Question ID : **630680209599**
Option 1 ID : **630680812565**
Option 2 ID : **630680812566**
Option 3 ID : **630680812564**
Option 4 ID : **630680812563**
Status : **Answered**
Chosen Option : **4**

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Q.62 A 4-bit digital to analogue converter (DAC) gives an output voltage of 5 V for an input code of 1111. What will be the output voltage for an input code of 1001?

Ans

✗ 1. 2 V

✓ 2. 3 V

✗ 3. 4 V

✗ 4. 1 V

Question ID : **630680209614**
Option 1 ID : **630680812624**
Option 2 ID : **630680812625**
Option 3 ID : **630680812626**
Option 4 ID : **630680812623**
Status : **Answered**
Chosen Option : **2**

Q.63 With reference to single phase induction motor, state whether the following statements are true or false.

1. Single-phase induction motor is a self-starting machine.

2. Double-revolving field theory can be used for the performance analysis of 1-phase induction motors.

Ans

✗ 1. (1) True, (2) False

✓ 2. (1) False, (2) True

✗ 3. (1) False, (2) False

✗ 4. (1) True, (2) True

Question ID : **630680209611**
Option 1 ID : **630680812612**
Option 2 ID : **630680812613**
Option 3 ID : **630680812614**
Option 4 ID : **630680812611**
Status : **Answered**
Chosen Option : **2**

Q.64 The terminals of DIAC are named as:

Ans

✗ 1. Gate1 and Gate2

✓ 2. MT1 and MT2

✗ 3. Emitter and Base

✗ 4. Anode and Cathode

Question ID : **630680209633**
Option 1 ID : **630680812701**
Option 2 ID : **630680812702**
Option 3 ID : **630680812700**
Option 4 ID : **630680812699**
Status : **Answered**
Chosen Option : **2**

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Q.65 The necessary condition for a series inverter to be an underdamped circuit is:

Ans

✗ 1. $C^2 < \frac{4L}{R}$

✗ 2. $R^2 < \frac{4C}{L}$

✓ 3. $R^2 < \frac{4L}{C}$

✗ 4. $L^2 < \frac{4R}{C}$

Question ID : **630680209635**
Option 1 ID : **630680812709**
Option 2 ID : **630680812710**
Option 3 ID : **630680812708**
Option 4 ID : **630680812707**
Status : **Answered**
Chosen Option : **3**

Q.66 Calculate the MMF required to produce a flux of 50 μWb in an air gap of length 0.2 mm having area of cross-section of 1 cm^2.

Ans

✓ 1. $\frac{250}{\pi}$ AT

✗ 2. $\frac{100}{\pi}$ AT

✗ 3. $250\ \pi$ AT

✗ 4. $100\ \pi$ AT

Question ID : **630680209583**
Option 1 ID : **630680812502**
Option 2 ID : **630680812501**
Option 3 ID : **630680812499**
Option 4 ID : **630680812500**
Status : **Answered**
Chosen Option : **1**

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Q.67 The state representation of a second order system is,

$$\dot{x}_1 = -x_1 + u$$
$$\dot{x}_2 = x_1 - 2x_2 + u$$

The system is _____.

Ans
✔ 1. not controllable
✘ 2. not observable
✘ 3. completely observable
✘ 4. completely controllable

Question ID : **630680209621**
Option 1 ID : **630680812653**
Option 2 ID : **630680812654**
Option 3 ID : **630680812652**
Option 4 ID : **630680812651**
Status : **Answered**
Chosen Option : **1**

Q.68 Which of the following is NOT a method of computation of linear convolution?

Ans
✔ 1. Substitution method
✘ 2. Tabulation method
✘ 3. Multiplication method
✘ 4. Graphical method

Question ID : **630680209630**
Option 1 ID : **630680812689**
Option 2 ID : **630680812688**
Option 3 ID : **630680812690**
Option 4 ID : **630680812687**
Status : **Answered**
Chosen Option : **4**

Q.69 When a 5 μC of charge is carried from a point A to point B, the amount of work done by electric field is 90 μJ. Find the potential difference.

Ans
✔ 1. 18 V
✘ 2. 45 V
✘ 3. 9 V
✘ 4. 90 V

Question ID : **630680209582**
Option 1 ID : **630680812496**
Option 2 ID : **630680812497**
Option 3 ID : **630680812495**
Option 4 ID : **630680812498**
Status : **Answered**
Chosen Option : **1**

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Q.70 What will be the gain margin and phase margin if the system is marginally stable?

Ans

✗ 1. Gain margin is negative, and phase margin is positive.

✗ 2. Gain margin and phase margin both are positive.

✗ 3. Gain margin and phase margin both are negative.

✓ 4. Gain margin and phase margin both are zero.

Question ID : **630680209626**
Option 1 ID : **630680812674**
Option 2 ID : **630680812671**
Option 3 ID : **630680812672**
Option 4 ID : **630680812673**
Status : **Answered**
Chosen Option : **4**

Q.71 How many SCRs are there in the P-converter of a single-phase bridge cycloconverter?

Ans

✗ 1. 2

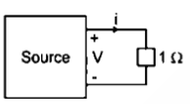
✓ 2. 4

✗ 3. 8

✗ 4. 6

Question ID : **630680209638**
Option 1 ID : **630680812719**
Option 2 ID : **630680812720**
Option 3 ID : **630680812722**
Option 4 ID : **630680812721**
Status : **Answered**
Chosen Option : **3**

Q.72 In the circuit shown below, a 1 Ω resistance is connected across the source that has a load line $V + i = 50$. Find the current through 1 Ω resistance.



Ans

✗ 1. 6.25 A

✓ 2. 25 A

✗ 3. 50 A

✗ 4. 12.5 A

Question ID : **630680209642**
Option 1 ID : **630680812738**
Option 2 ID : **630680812735**
Option 3 ID : **630680812736**
Option 4 ID : **630680812737**
Status : **Answered**
Chosen Option : **2**

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Q.73 For a transistor with typical values of $\beta = 300$ and $I_C = 15$ mA, find I_B.

Ans
✔ 1. 0.05 mA
✗ 2. 0.075 mA
✗ 3. 4.5 mA
✗ 4. 45 mA

Question ID : **630680209639**
Option 1 ID : **630680812724**
Option 2 ID : **630680812723**
Option 3 ID : **630680812725**
Option 4 ID : **630680812726**
Status : **Answered**
Chosen Option : **1**

Q.74 Which of the following is NOT a correct pair of dual?

Ans
✗ 1. Resistance and Conductance
✗ 2. Inductance and Capacitance
✔ 3. Mesh and Loop
✗ 4. Series branch and Parallel branch

Question ID : **630680209576**
Option 1 ID : **630680812471**
Option 2 ID : **630680812473**
Option 3 ID : **630680812472**
Option 4 ID : **630680812474**
Status : **Answered**
Chosen Option : **3**

Q.75 A second order system has damping ratio $\xi = 0.5$ and undamped natural frequency $\omega_n = 10$ rad/sec. If the steady state value at zero is 1.1, find the transfer function.

Ans
✗ 1. $G(s) = \frac{110}{(s^2 + 110s + 110)}$
✗ 2. $G(s) = \frac{110}{(s^2 + 100s + 100)}$
✗ 3. $G(s) = \frac{110}{(s^2 + 10s + 110)}$
✔ 4. $G(s) = \frac{110}{(s^2 + 10s + 100)}$

Question ID : **630680209625**
Option 1 ID : **630680812668**
Option 2 ID : **630680812669**
Option 3 ID : **630680812670**
Option 4 ID : **630680812667**
Status : **Answered**
Chosen Option : **4**

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