UP Metro Rail Corporation

Uttar Pradesh Metro Rail Corporation Limited
उत्तर प्रदेश मेट्रो रेल कॉर्पोरेशन लिमिटेड

A joint Venture of Govt. of India and Govt. of Uttar Pradesh

Participant ID	
Participant Name	
Test Center Name	
Test Date	11/05/2024
Test Time	4:30 PM - 6:30 PM
Subject	Assistant Manager Electrical

Section : **Section A**

Q.1 **A force of 30 N acts on a current carrying conductor of length 2 m, when it is placed in a uniform magnetic field of 1T, and current of 30 A is flowing through it. What is the angle between the field and the direction of current?**

Ans
✗ A. 15°
✗ B. 45°
✓ C. 30°
✗ D. 90°

Question ID : **630680146448**
Status : **Answered**
Chosen Option : **C**

Q.2 **A sum becomes ₹10,935 in 3 years at 12.5% per annum compound interest. The sum is _____.**

Ans
✓ A. ₹7,680
✗ B. ₹8,640
✗ C. ₹6,820
✗ D. ₹9,720

Question ID : **630680530330**
Status : **Answered**
Chosen Option : **A**

Q.3 **K-map is a method of simplifying Boolean algebra based on the _____ theorem. (X+X'=1)**

Ans
✗ A. Force
✗ B. Impact
✗ C. Complementarily
✓ D. Non-Impact Unifying

Question ID : **630680103545**
Status : **Marked For Review**
Chosen Option : **C**

Q.4 **Select the set in which the numbers are related in the same way as are the numbers of the given sets.**

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

11 – 22 – 28 – 56
13 – 26 – 32 – 64

Ans
✗ A. 8 – 16 – 22 – 32
✓ B. 10 – 20 – 26 – 52
✗ C. 17 – 34 – 40 – 60
✗ D. 9 – 81 – 87 – 174

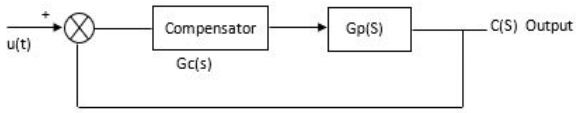
Question ID : **630680467213**
Status : **Answered**
Chosen Option : **B**

Q.5 **If the radius of a sphere is 1/(16π) m and the electric flux density is 16 π units, then the total flux is given by _____.**

Ans
✗ A. 0
✓ B. $\frac{1}{4}$
✗ C. 1
✗ D. 3

Question ID : **630680147318**
Status : **Answered**
Chosen Option : **B**

Q.6 Given plant transfer function $Gp(S) = \frac{144}{S(S+10)}$ and compensator of unit gain.
For unit step input, the damped natural frequency of the output response is _____



Ans
✗ A. 144 rad/sec
✓ B. 10.9 rad/sec
✗ C. 10.9 Hz
✗ D. 12 rad/sec

Question ID : **630680110777**
Status : **Answered**
Chosen Option : **D**

Q.7 Given two sequences x[n]= [4,6,9,8,7] and h[n]=[1,1,1,1,1,1] the convolution term y[n]=x[n]*h[n] is:

Ans
✗ A. [4,10,17,25,36,32,27,24,16,7]
✗ B. [4,10,17,25,38,36,26,26,15,7]
✓ C. [4,10,19,27,34,34,30,24,15,7]
✗ D. [4,10,17,27,32,32,28,24,16,7]

Question ID : **63068081292**
Status : **Answered**
Chosen Option : **C**

Q.8 **Select the pair that follows the same pattern as the one followed by the two sets of pairs given below. Both pairs follow the same pattern.**

OKP : ROO
GCZ : JGY

Ans
✗ A. PKQ : SNP
✗ B. PNS : SRT
✓ C. TSW : WWV
✗ D. WKN : ZOP

Question ID : **630680585698**
Status : **Answered**
Chosen Option : **C**

Q.9 **The artist diligently worked in her studio for several months, ultimately bringing her vision to fruition.**
What does the idiom "bring her vision to fruition" mean in this context?

Ans
✗ A. Experiencing a lack of inspiration
✗ B. Facing challenges that hinder her vision
✗ C. Sharing her vision with others
✓ D. Successfully realizing her creative idea

Question ID : **630680773316**
Status : **Answered**
Chosen Option : **D**

Q.10 **On addition of 28 and 18 using 2's complement, we get _____.**

Ans
✗ A. 1001111
✗ B. 00101110
✗ C. 00101111
✓ D. 0101110

Question ID : **630680176329**
Status : **Answered**
Chosen Option : **B**

Q.11 **भारत में गुफा वास्तुकला के स्वामी या निर्माता कौन थे?**

Ans
✓ A. मौर्य
✗ B. राष्ट्रकूट
✗ C. प्रतिहार
✗ D. तुगलक

Question ID : **630680773343**
Status : **Marked For Review**
Chosen Option : **B**

Q.12 **Five Indian youths have been recognized as teen environmental activists and awarded the 2023 _____ for their efforts in tackling pressing environmental challenges.**

Ans
✓ A. International Young Eco-Hero Award
✗ B. Indian Environmental Prize
✗ C. Green Nobel Prize
✗ D. Global Eco Youth Award

Question ID : **630680773323**
Status : **Marked For Review**
Chosen Option : **D**

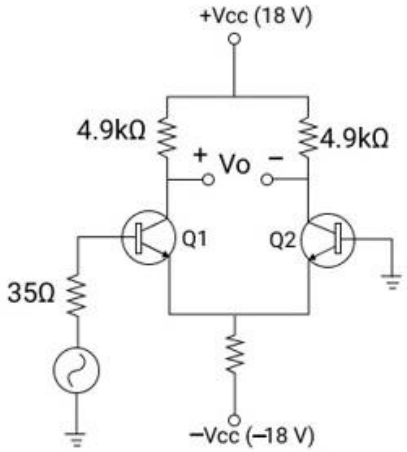
Q.13 **Choose the most appropriate option to complete the sentence.**

My friend Shivani whispered the secret _____.

Ans
- ✔ A. carefully
- ✗ B. shortly
- ✗ C. happily
- ✗ D. loudly

Question ID : **630680773312**
Status : **Answered**
Chosen Option : **A**

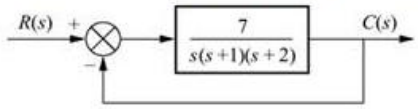
Q.14 In the given circuit, compute the output impedance of the circuit.



Ans
- ✔ A. 4.9 kΩ
- ✗ B. 2.45 kΩ
- ✗ C. 9.8 kΩ
- ✗ D. 25.2 kΩ

Question ID : **630680119960**
Status : **Answered**
Chosen Option : **B**

Q.15 Consider a control system represented by the given block diagram.



The closed loop system has

Ans
- ✗ A. three poles on the right of the s-plane
- ✗ B. two poles on the left half and one pole on the right half of the s-plane
- ✗ C. three poles on the left of the s-plane
- ✔ D. one pole on the left half and two poles on the right half of the s-plane

Question ID : **630680139554**
Status : **Answered**
Chosen Option : **D**

Q.16 Stator frequency control for speed control of an AC drive can be used for:

Ans
- ✔ A. squirrel-cage and wound-rotor induction motors
- ✘ B. squirrel-cage induction motors only
- ✘ C. wound-rotor induction motors only
- ✘ D. slip ring induction motors

Question ID : **630680133987**
Status : **Answered**
Chosen Option : **A**

Q.17 In an election between two candidates Ramesh and Mahesh, Ramesh secured 42% of the votes and was defeated by a majority of 1600 votes. Find the total number of recorded votes.

Ans
- ✘ A. 11000
- ✘ B. 1000
- ✘ C. 10500
- ✔ D. 10000

Question ID : **630680523995**
Status : **Not Answered**
Chosen Option : **--**

Q.18 Ignoring the time required for latching to input, for a 4 MHz clock, what is the completion time in a pipelined processor if there are 5 stages and 8 input tasks?

Ans
- ✘ A. 3.5 micro seconds
- ✔ B. 3 micro seconds
- ✘ C. 3.25 micro seconds
- ✘ D. 2 micro seconds

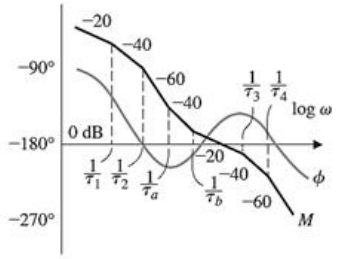
Question ID : **630680182163**
Status : **Not Answered**
Chosen Option : **--**

Q.19 निम्नलिखित में से कौन-सी वृक्ष प्रजाति भारत में अपने धार्मिक महत्व के लिए जानी जाती है, जिसे अक्सर "जीवन का वृक्ष" कहा जाता है?

Ans
- ✘ A. पीपल
- ✔ B. बरगद
- ✘ C. साल
- ✘ D. नीम

Question ID : **630680773339**
Status : **Answered**
Chosen Option : **B**

Q.20 Consider the given Bode plot of a system and find the transfer function.



Ans

✗ A. $\frac{K(s\tau_b+1)}{s(s\tau_1+1)(s\tau_2+1)(s\tau_3+1)(s\tau_4+1)}$

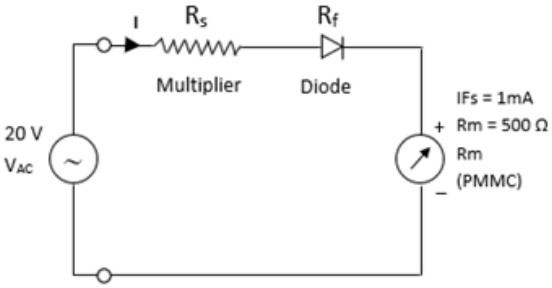
✗ B. $\frac{K(s\tau_a+1)}{s(s\tau_1+1)(s\tau_2+1)(s\tau_3+1)(s\tau_4+1)}$

✗ C. $\frac{K(s\tau_a+1)(s\tau_b+1)}{(s\tau_1+1)(s\tau_2+1)(s\tau_3+1)(s\tau_4+1)}$

✓ D. $\frac{K(s\tau_a+1)(s\tau_b+1)}{s(s\tau_1+1)(s\tau_2+1)(s\tau_3+1)(s\tau_4+1)}$

Question ID : **630680139568**
Status : **Answered**
Chosen Option : **D**

Q.21 **Find the value of multiplier resistor for a 20 V-rms. Sinusoidal AC range of the voltmeter is shown in the figure. The forward resistance of the diode is zero and reverse resistance is infinite.**



Ans

✗ A. 10 KΩ

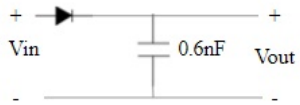
✗ B. 5 KΩ

✓ C. 8.5 KΩ

✗ D. 17.5 KΩ

Question ID : **630680196606**
Status : **Answered**
Chosen Option : **C**

Q.22 A square wave input of peak-to-peak voltage of 12 V is given as the input to the circuit with average as zero. What will be the value at V_{out}? Consider cut in voltage of the diode at 0.7 V.



Ans

✗ A. 6.7 V

✓ B. 5.3 V

✗ C. 12.7 V

✗ D. 6 V

Question ID : **630680390636**
Status : **Answered**
Chosen Option : **A**

Q.23 तमिलनाडु में आत्म-सम्मान आंदोलन के संस्थापक कौन थे, जिसका उद्देश्य जाति व्यवस्था को खत्म करना और गैर-ब्राह्मण आबादी को सशक्त बनाना था?

Ans

✔ A. पेरियार ई. वी. रामासामी

✘ B. महात्मा गांधी

✘ C. बी.आर. अंबेडकर

✘ D. ज्योतिराव फुले

Question ID : **630680773334**
Status : **Answered**
Chosen Option : **A**

Q.24 An ideal DC generator will have _____ regulation.

Ans

✘ A. negative

✘ B. positive

✔ C. zero

✘ D. one

Question ID : **63068081273**
Status : **Answered**
Chosen Option : **C**

Q.25 Two 1H inductive coils are connected in series and are also magnetically coupled to each other, with the coefficient of coupling being 0.1. What is the equivalent inductance of the combination?

Ans

✘ A. 2.0

✔ B. 2.2

✘ C. 2.1

✘ D. 4

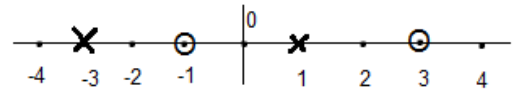
Question ID : **63068081673**
Status : **Answered**
Chosen Option : **B**

Q.26 Which of the following options is the correct representation of a pole-zero plot for an all-pass filter?

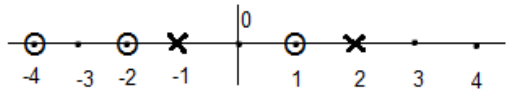
Ans

✘ A.

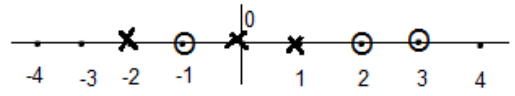
✔ B.



✘ C.



✘ D.



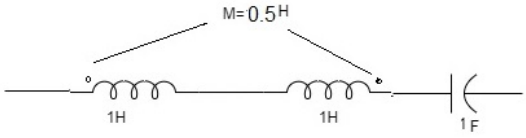
Question ID : **630680170551**
Status : **Answered**
Chosen Option : **A**

Q.27 A minimal phase system will have transfer function with:

Ans
- ✗ A. zeros on Left Hand Side and poles on Right Hand Side of the s-plane
- ✗ B. poles on LHS and zeros on Right Hand Side of the s-plane
- ✗ C. poles and zeros on Right Hand Side of the s-plane
- ✓ D. poles and zeros on Left Hand Side of the s-plane

Question ID : **63068093729**
Status : **Answered**
Chosen Option : **D**

Q.28 The resonant frequency of the series circuit having the mutual inductance of 0.5 H as shown in the following figure is:



Ans
- ✗ A. 2π Hz
- ✓ B. $\frac{1}{2\pi}$ Hz
- ✗ C. $\frac{1}{\sqrt{3}}\left(\frac{1}{2\pi}\right)$ Hz
- ✗ D. 1 Hz

Question ID : **630680146542**
Status : **Answered**
Chosen Option : **B**

Section : **Section B**

Q.1 Which of the following is the correct expression?

Ans
- ✗ A. $a^2 = 1-a$
- ✓ B. $a^2 = -1-a$
- ✗ C. $a^2 = -1+a$
- ✗ D. $a^2 = -1-a^3$

Question ID : **63068053499**
Status : **Answered**
Chosen Option : **B**

Q.2 What is the power factor at which two transformers in open delta operate while supplying a unity power factor load?

Ans
- ✓ A. Both the transformers operate at a power factor of 0.866.
- ✗ B. Both the transformers operate at a power factor of 1.
- ✗ C. One of the transformers operate at a power factor of zero and the other at 0.866.
- ✗ D. One of the transformers operate at a power factor of 1 and the other at 0.866.

Question ID : **63068061757**
Status : **Marked For Review**
Chosen Option : **A**

Q.3 The simplified value of the expression $\frac{3}{4} + 1.25 \times 3 - \frac{9}{2}$ is:

Ans
✗ A. 1
✓ B. 0
✗ C. 0.5
✗ D. 0.25

Question ID : **630680731538**
Status : **Answered**
Chosen Option : **B**

Q.4 कौन-सा भारतीय स्मारक हिंदू और इस्लामी स्थापत्य शैली के संयोजन के लिए जाना जाता है और इसका एक शानदार प्रवेश द्वार है जिसे बुलंद दरवाजा कहा जाता है?

Ans
✓ A. फ़तेहपुर सीकरी
✗ B. गोलकुंडा किला
✗ C. जामा मस्जिद
✗ D. गेटवे ऑफ इंडिया

Question ID : **630680773345**
Status : **Answered**
Chosen Option : **A**

Q.5 **For a fault at generator terminals, the fault current is maximum for:**

Ans
✗ A. LLG fault
✗ B. line-to-line fault
✓ C. SLG fault
✗ D. 3ϕ fault

Question ID : **630680162183**
Status : **Answered**
Chosen Option : **C**

Q.6 **The fundamental building elements of a digital multi-meter are _____.**

Ans
✗ A. diode and op amp
✓ B. Analog to Digital converter, attenuator and counter
✗ C. oscillator and amplifier
✗ D. rectifier and schmitt trigger

Question ID : **630680131838**
Status : **Answered**
Chosen Option : **B**

Q.7 **Three of the following four letter-clusters are alike in a certain way and thus form a group. Which is the letter-cluster that does not belong to that group?**

Ans
✓ A. IQK
✗ B. EMH
✗ C. LTO
✗ D. PXS

Question ID : **630680521952**
Status : **Answered**
Chosen Option : **A**

Q.8 **Which control method varies current between the maximum and minimum level for continuous voltage in DC to DC converter?**

Ans
✗ A. Voltage limit control
✓ B. Current limit control
✗ C. Pulse width modulation
✗ D. Frequency modulation control

Question ID : **630680185348**
Status : **Marked For Review**
Chosen Option : **C**

Q.9 Richa's income is 20% more than that of Ritu's. By how much percentage is Ritu's income less than that of Richa?

Ans
✗ A. $15\frac{2}{3}\%$
✗ B. $18\frac{2}{3}\%$
✓ C. $16\frac{2}{3}\%$
✗ D. $20\frac{2}{3}\%$

Question ID : **630680623611**
Status : **Answered**
Chosen Option : **C**

Q.10 **An RL series circuit has 5V across the resistor and 12V across the inductor. What will be the supply voltage and power factor?**

Ans
✓ A. 13 V, 0.38 lagging
✗ B. 169 V, 0.38 lagging
✗ C. 13 V, 0.41 lagging
✗ D. 169 V, 0.41 lagging

Question ID : **630680118604**
Status : **Answered**
Chosen Option : **A**

Q.11 **A monostable multivibrator is triggered continuously with a 20 kHz, 75% duty-cycle square wave with triggered pulse duration of 5 μS. Find the duty cycle of the output of the monostable.**

Ans
✗ A. 75%
✗ B. 50%
✗ C. 20%
✓ D. 10%

Question ID : **630680166530**
Status : **Marked For Review**
Chosen Option : **B**

Q.12 **Which type of magnetic material is non-linear?**

Ans
✗ A. Paramagnetic
✗ B. Anti-paramagnetic
✗ C. Diamagnetic
✓ D. Ferromagnetic

Question ID : **630680118545**
Status : **Not Answered**
Chosen Option : **--**

Q.13 **Choose the most appropriate option to complete the sentence.**

I like to play Cricket _____ I also enjoy reading Novels.

Ans
✗ A. but
✗ B. so
✗ C. because
✓ D. and

Question ID : **630680773313**
Status : **Answered**
Chosen Option : **D**

Q.14 **Which of the following Indian cities was the first Green Hydrogen Plant in the Stainless Steel Sector, inaugurated on 4 March 2024?**

Ans
✗ A. Surat, Gujarat
✗ B. Pune, Maharashtra
✗ C. Kolkata, West Bengal
✓ D. Hisar, Haryana

Question ID : **630680773325**
Status : **Answered**
Chosen Option : **A**

Q.15 Consider a standard second order system given by $\frac{w_n^2}{s^2+2\zeta w_n s+w_n^2}$. The correlation between the maximum peak overshoot in time domain and the resonant peak in frequency domain exists when:

Ans
✗ A. $0 < \zeta < 0.45$
✗ B. $0 < \zeta < 1$
✗ C. $0 < \zeta < 0.6$
✓ D. $0 < \zeta < 0.707$

Question ID : **630680139575**
Status : **Answered**
Chosen Option : **D**

Q.16 **Calculate the stepping angle for a 3-phase, 16-tooth motor with variable reluctance.**

Ans
✗ A. 22.5°
✗ B. 45°
✓ C. 7.5°
✗ D. 15°

Question ID : **630680214310**
Status : **Answered**
Chosen Option : **C**

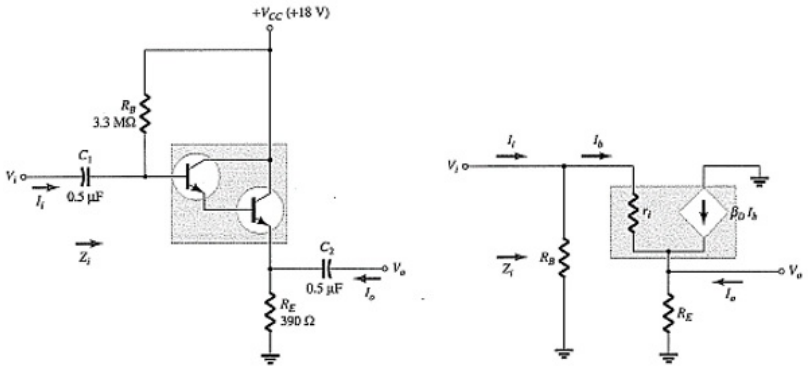
Q.17 **Choose the most appropriate option to complete the sentence.**

The puppy chased the ball of yarn with a very _____ look on its face.

Ans
✗ A. keen
✗ B. sad
✗ C. spooky
✓ D. playful

Question ID : **630680773311**
Status : **Answered**
Chosen Option : **D**

Q.18 **The circuit shown below has AC output current of 8 A through R_E and AC base current of 1 mA through r_i. Calculate the current gain 'A_i'.**



Ans

✗ A. 4102

✓ B. 4112

✗ C. 4121

✗ D. 4120

Question ID : **630680166519**
Status : **Not Answered**
Chosen Option : **--**

Q.19 **_____ , भारत में मुसलमानों के बीच आधुनिक शिक्षा और सामाजिक सुधारों को बढ़ावा देने के उद्देश्य से सर सैयद अहमद खान द्वारा स्थापित एक संघ था।**

Ans

✓ A. अलीगढ आंदोलन

✗ B. खिलाफत आंदोलन

✗ C. आर्य समाज

✗ D. वहाबी आंदोलन

Question ID : **630680773330**
Status : **Answered**
Chosen Option : **B**

Q.20 **In CPI instruction in an 8085 microprocessor, by comparing the accumulator content with the data in operand, if the accumulator content is lesser than the value of the data in operand, then which of the following is true?**

Ans

✗ A. Carry flag is set. Zero flag is set.

✗ B. Carry flag is reset. Zero flag is set.

✓ C. Carry flag is set. Zero flag is reset.

✗ D. Carry flag is reset. Zero flag is reset.

Question ID : **630680132895**
Status : **Answered**
Chosen Option : **C**

Q.21 **The output power associated with harmonic current does _____ and it is dissipated as heat leading to rise in _____ temperature.**

Ans

✓ A. no useful work; load

✗ B. useful work; high

✗ C. no useful work; low

✗ D. no useful work; high

Question ID : **630680119361**
Status : **Answered**
Chosen Option : **A**

Q.22 How many T states are there for memory read machine cycle in 8085 microprocessor?

Ans
- ✗ A. 4
- ✗ B. 1
- ✗ C. 6
- ✓ D. 3

Question ID : **630680182161**
Status : **Answered**
Chosen Option : **A**

Q.23 महाबोधि मंदिर परिसर, _____ शताब्दी में सम्राट अशोक द्वारा बनवाया गया पहला मंदिर है।

Ans
- ✗ A. चौथी
- ✗ B. दूसरी
- ✗ C. पहली
- ✓ D. तीसरी

Question ID : **630680773342**
Status : **Marked For Review**
Chosen Option : **D**

Q.24 According to the De Morgan theorem, _____.

Ans
- ✓ A. (AB)' = A' + B'
- ✗ B. (A + B)' = A' × B
- ✗ C. (AB)' = A' + B
- ✗ D. A' + B' = A'B'

Question ID : **630680103536**
Status : **Answered**
Chosen Option : **A**

Q.25 In a certain circuit, two resistances of values 30 kΩ and 15 kΩ are connected in series with a DC voltage source. A digital voltmeter reads 10 V when connected across 15 kΩ. The voltmeter is rated at 500 Ω volt-1 with a full scale of 20 V. The DC voltage source will be _____.

Ans
- ✗ A. 30 V
- ✗ B. 120 V
- ✗ C. 90 V
- ✓ D. 60 V

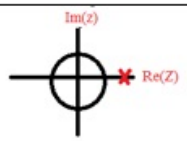
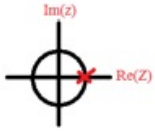
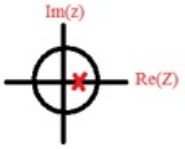
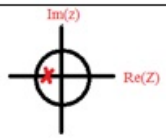
Question ID : **63068079494**
Status : **Answered**
Chosen Option : **D**

Q.26 In a capacitor start induction-run motor, the starting torque is directly related to _____.
Given α= angle between its two winding currents

Ans
- ✗ A. tanα
- ✓ B. sinα
- ✗ C. cotα
- ✗ D. cosα

Question ID : **63068056367**
Status : **Answered**
Chosen Option : **B**

Q.27 Match the following figures with their type of stability.

Group A	Group B
 1)	A Stable
 2)	B Unstable
 3)	C Marginally Stable
 4)	

Ans
- ✗ A. 1-A, 2-C, 3-B, 4-C
- ✗ B. 1-C, 2-A, 3-B, 4-A
- ✗ C. 1-A, 2-B, 3-A, 4-B
- ✓ D. 1-B, 2-C, 3-A, 4-A

Question ID : **630680203459**
Status : **Answered**
Chosen Option : **D**

Q.28 **What should come in place of the question mark (?) in the given series?**

14, 17, 23, 32, 44, ?

Ans
- ✓ A. 59
- ✗ B. 55
- ✗ C. 53
- ✗ D. 57

Question ID : **630680531739**
Status : **Answered**
Chosen Option : **A**

Section : **Section C**

Q.1 **_____, बाल गंगाधर तिलक द्वारा स्थापित एक संगठन था जिसका उद्देश्य स्वदेशी आंदोलन के हिस्से के रूप में स्वदेशी वस्तुओं के उपयोग को बढ़ावा देना और ब्रिटिश वस्तुओं का बहिष्कार करना था।**

Ans
- ✗ A. अखिल भारतीय ट्रेड यूनियन कांग्रेस
- ✓ B. स्वदेशी वास्तु प्रचारिणी सभा
- ✗ C. अनुशीलन समिति
- ✗ D. गणेश उत्सव समिति

Question ID : **630680773331**
Status : **Not Answered**
Chosen Option : **--**

Q.2 **What is the flux density of a coil of 400 turns and 600 mm^2 area if the perimeter of the coil is 1600 mm and the flux in the coil is 3200 μWb?**

Ans
✔ A. 5.33 T
✘ B. 7.45 T
✘ C. 3.8 T
✘ D. 4.6 T

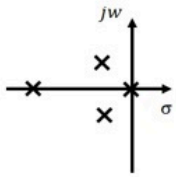
Question ID : **630680206875**
Status : **Not Answered**
Chosen Option : **--**

Q.3 **How many NMOS gates are required to realise a complete NMOS based 2 input NAND gate?**

Ans
✘ A. 2
✘ B. 1
✔ C. 3
✘ D. 4

Question ID : **630680182166**
Status : **Marked For Review**
Chosen Option : **C**

Q.4 The open loop pole-zero plot of a system is given here.



Which of the following statements related to the figure is correct?

a. The number of breakaway points is one and the number of asymptotes is two.
b. The number of root locus branches is four.
c. There exists a gain for the system to be marginally stable and unstable.
d. There exists a gain for which the system becomes unstable.

Ans
✘ A. (a), (b), (c) and (d) are correct
✔ B. Only (b), (c) and (d) are correct
✘ C. Only (a), (b) and (c) are correct
✘ D. Only (a), (c) and (d) are correct

Question ID : **63068093740**
Status : **Answered**
Chosen Option : **B**

Q.5 **17वीं सदी का मक़बरा, गोल गुम्बज _____ शहर में स्थित है।**

Ans
✘ A. औरंगाबाद
✘ B. आगरा
✔ C. बीजापुर
✘ D. लाहौर

Question ID : **630680773344**
Status : **Not Answered**
Chosen Option : **--**

Q.6 **Calculate the fission rate of a $_{92}U^{235}$ reactor if it takes 30 days to use up 4 kg of fuel. (Consider Avogadro's number = 6·023*10_{26} per kilomole.)**

Ans

✔ A. $3.95*10^{18}$ per second

✗ B. $2.56*10^{18}$ per second

✗ C. $2.95*10^{18}$ per second

✗ D. $4.95*10^{18}$ per second

Question ID : **630680212937**
Status : **Not Answered**
Chosen Option : **--**

Q.7 **Find the greatest number that will divide 47, 125 and 185 so as to leave the same remainder in each case.**

Ans

✔ A. 6

✗ B. 15

✗ C. 4

✗ D. 8

Question ID : **630680481129**
Status : **Answered**
Chosen Option : **A**

Q.8 **Which of the following option expresses the power output per phase in a synchronous generator?**
Given parameters are as:
E=Generated emf/phase
V=Terminal voltage /phase
Xs=Synchronous reactance/ phase
δ= power angle

Ans

✗ A. $((EV)*X_s)*\sin\delta$

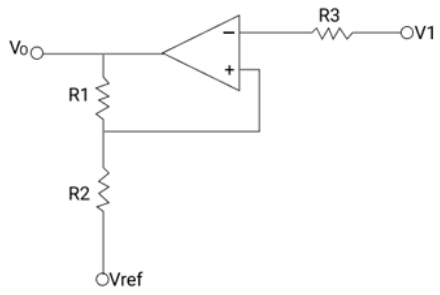
✗ B. $(3*(EV)*X_s)*\sin\delta$

✔ C. $((EV)/X_s)*\sin\delta$

✗ D. $(3*(EV)/X_s)*\sin\delta$

Question ID : **63068093441**
Status : **Answered**
Chosen Option : **D**

Q.9 In the given circuit, the values of resistances are given as R1 = 40 kΩ and R2 = 200 Ω. At the input terminal, sinusoidal signal is applied with peak-to-peak voltage as 1V and the saturation voltage is given as ±12 V. What would be the upper and lower threshold voltages?



Ans

✔ A. ±60 mV

✗ B. ±50 mV

✗ C. ±75 mV

✗ D. ±25 mV

Question ID : **630680140079**
Status : **Answered**
Chosen Option : **C**

Q.10 **The attentive student dedicated extensive time to meticulously studying his notes.**

What is the antonym of "meticulously" in this sentence?

Ans

✗ A. Efficiently

✓ B. Carelessly

✗ C. Robustly

✗ D. Strictly

Question ID : **630680773318**
Status : **Answered**
Chosen Option : **A**

Q.11 **मौर्यों द्वारा निर्मित प्रारंभिक मंदिर संरचना, _____ में पाई गई।**

Ans

✗ A. कोटा

✗ B. भरतपुर

✗ C. जैसलमेर

✓ D. जयपुर

Question ID : **630680773346**
Status : **Marked For Review**
Chosen Option : **B**

Q.12 **What type of agreement did the Arunachal Pradesh government sign with the National Tiger Conservation Authority (NTCA) on 20th February 2024?**

Ans

✗ A. Memorandum of Partnership

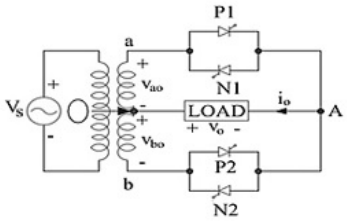
✗ B. Joint Statement of Action

✓ C. Memorandum of Understanding (MoU)

✗ D. Treaty of Cooperation

Question ID : **630680773326**
Status : **Not Answered**
Chosen Option : **--**

Q.13 The supply voltage of the single-phase to single-phase circuit step-down cycloconverter shown in the figure below has gone through _____ cycles.



Ans

✗ A. three

✓ B. four

✗ C. two

✗ D. five

Question ID : **630680206347**
Status : **Answered**
Chosen Option : **B**

Q.14 For +5V logic, what is the valid low logic for CMOS operation?

Ans
✔ A. 0 to 1.5 V
✘ B. 0 to 0.4 V
✘ C. 0 to 0.8 V
✘ D. 0 to 1 V

Question ID : **630680182165**
Status : **Answered**
Chosen Option : **B**

Q.15 The transfer function of the linear feedback control system is the:

Ans
✘ A. ratio of V0(t) to Vi(t)
✘ B. ratio of Laplace transform of the output to the Laplace transform of the input
✘ C. ratio of the derivative of the output to the derivative of the input
✔ D. ratio of Laplace transform of the output to the Laplace transform of the input with all initial conditions set to zero

Question ID : **630680110458**
Status : **Answered**
Chosen Option : **D**

Q.16 Addition of binary equivalent numbers of (−40)10 and (+20)10 with the help of 2's complement is _____.

Ans
✘ A. 0100101
✘ B. 01011
✘ C. −00101
✔ D. −10100

Question ID : **630680176330**
Status : **Not Answered**
Chosen Option : **--**

Q.17 The transfer function can be accurately defined as:

Ans
✘ A. the ratio of output voltage to input voltage
✔ B. the ratio of Laplace transform of output voltage to Laplace transform of input voltage with all initial conditions set to zero
✘ C. the ratio of Laplace transform of output voltage to Laplace transform of input current
✘ D. the ratio of Laplace transform of output voltage to Laplace transform of input voltage

Question ID : **630680146533**
Status : **Answered**
Chosen Option : **B**

Q.18 The torque for a dipole consisting of 1 μC charge in an electric field $\bar{E} = \frac{10^3(z\bar{a}_x - \bar{a}_y - \bar{a}_z)V}{m}$, separated by 1 mm and located on the z-axis at the origin is _____.

Ans
✔ A. $(\bar{a}_x + z\bar{a}_y)\ \mu Nm$
✘ B. $(33\bar{a}_x - 2.1z\bar{a}_y)\ \mu Nm$
✘ C. $(33\bar{a}_x + 2.1z\bar{a}_y)\ \mu Nm$
✘ D. $(\bar{a}_x - z\bar{a}_y)\ \mu Nm$

Question ID : **630680147319**
Status : **Not Answered**
Chosen Option : **--**

Q.19 **What should come in place of the question mark (?) in the given series?**

15, 17, 21, 27, 35, ?

Ans
- ✔ A. 45
- ✘ B. 40
- ✘ C. 47
- ✘ D. 42

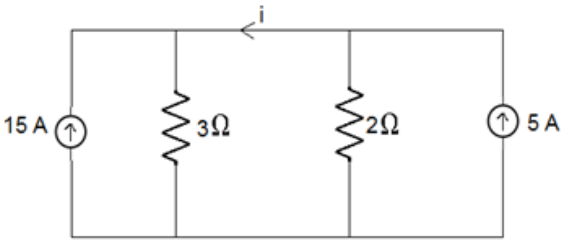
Question ID : **630680531738**
Status : **Answered**
Chosen Option : **A**

Q.20 **A single-phase induction motor has a slip of 5 percent with respect to forward flux. Calculate the slip with respect to backward flux.**

Ans
- ✘ A. 1.85
- ✔ B. 1.95
- ✘ C. 2.05
- ✘ D. 0.05

Question ID : **63068093437**
Status : **Answered**
Chosen Option : **B**

Q.21 **Find current (i) in the following figure, with the help of source transformation.**



Ans
- ✔ A. −7 A
- ✘ B. 7 A
- ✘ C. 12 A
- ✘ D. 5 A

Question ID : **630680170550**
Status : **Answered**
Chosen Option : **C**

Q.22 **Seven people, A, B, S, E, N, C and T, are sitting around a circular table facing the centre. Only two people sit between S and N when counted from the right of S. Only two people sit between N and A. Only three people sit between S and C. B sits to the immediate left of T. Who sits immediately to the right of S?**

Ans
- ✔ A. B
- ✘ B. A
- ✘ C. C
- ✘ D. N

Question ID : **630680546326**
Status : **Answered**
Chosen Option : **A**

Q.23 **_____ is the type of commutation which is NOT used by a step-down cycloconverter.**

Ans
- ✔ A. Forced commutation
- ✘ B. Load commutation
- ✘ C. Line commutation
- ✘ D. Natural commutation

Question ID : **630680206346**
Status : **Answered**
Chosen Option : **D**

Q.24 **Which of the following statements is INCORRECT for a digital multimeter?**

Ans
- ✘ A. There is no parallax error in digital multimeter.
- ✘ B. Unlike analogue multimeter, digital multimeter does not requires zero adjustment.
- ✘ C. Interpolation error is reduced in digital multimeter.
- ✔ D. Digital multimeters have very low input impedance.

Question ID : **630680112455**
Status : **Answered**
Chosen Option : **D**

Q.25 **Rupali has a monthly income of ₹45,000. She saves 40% of her monthly income and spends the rest. 25% of her monthly expenditure goes towards purchase of groceries. How much (in ₹) does Rupali spend every month on the purchase of groceries?**

Ans
- ✘ A. 4500
- ✘ B. 7500
- ✔ C. 6750
- ✘ D. 11250

Question ID : **630680524009**
Status : **Answered**
Chosen Option : **C**

Q.26 **Choose the most appropriate option to complete the sentence.**

The weathered explorer, his face etched with the stories of a thousand journeys, finally _____ the summit, a triumphant smile breaking across his lips.

Ans
- ✘ A. contemplated
- ✔ B. ascended
- ✘ C. traversed
- ✘ D. resided

Question ID : **630680773314**
Status : **Not Answered**
Chosen Option : **--**

Q.27 **What is the value of x if vector A= xi+2j and B =3i−2j are co-linear?**

Ans
- ✘ A. 6
- ✘ B. 3
- ✔ C. -3
- ✘ D. -6

Question ID : **63068064173**
Status : **Answered**
Chosen Option : **C**

Q.28 **Which of the given statements is/are correct?**
Statements:
P) LTI system is considered to be stable if the imaginary axis is included in the ROC of its system function.
Q) Causal and Stable System with its system function H(s) has all poles lying on the left side of the s-plane.

Ans
✗ A. Only statement P is correct
✓ B. Both statements P and Q are correct
✗ C. Only statement Q is correct
✗ D. Neither statement P nor Q is correct

Question ID : **630680211453**
Status : **Answered**
Chosen Option : **A**

Section : **Section D**

Q.1 **Simplify the given expression.**

$$4\frac{3}{13} \div 2\frac{3}{26} \times 3\frac{1}{2} + \frac{1}{4}$$

Ans
✓ A. $\frac{29}{4}$
✗ B. $\frac{12}{7}$
✗ C. $\frac{31}{11}$
✗ D. $\frac{6}{13}$

Question ID : **630680630347**
Status : **Answered**
Chosen Option : **A**

Q.2 **A golden eagle can fly at a speed of 72 km/hr. How much time (in hours and minutes separated by a comma) will be taken by the golden eagle to fly 180km?**

Ans
✓ A. 2, 30
✗ B. 2, 15
✗ C. 2, 45
✗ D. 2, 50

Question ID : **630680633830**
Status : **Answered**
Chosen Option : **A**

Q.3 **The inverse h parameters are used to do the analysis of _____.**

Ans
✓ A. the bipolar junction transistor
✗ B. OP AMP circuits
✗ C. MOSFETS
✗ D. transmission lines

Question ID : **63068081682**
Status : **Marked For Review**
Chosen Option : **A**

Q.4 The number of states required to describe the first order low pass filter is:

Ans
- ✔ A. 1
- ✘ B. 2
- ✘ C. 0
- ✘ D. 3

Question ID : **630680110762**
Status : **Answered**
Chosen Option : **A**

Q.5 When an AC voltage signal 5 + 6 sin ωt + 7 sin ωt + 8 sin ωt V is passed through an average responding permanent magnet moving coil voltmeter, then the instrument will read _____.

Ans
- ✘ A. 13 V
- ✘ B. 26 V
- ✔ C. 5 V
- ✘ D. 16.56 V

Question ID : **630680131837**
Status : **Answered**
Chosen Option : **C**

Q.6 Which region in India Receives the Highest rainfall during the monsoon season?

Ans
- ✘ A. Manipur
- ✘ B. Rajasthan
- ✘ C. West Bengal
- ✔ D. Meghalaya

Question ID : **630680773340**
Status : **Answered**
Chosen Option : **D**

Q.7 All day efficiency is an important figure of merit for which type of transformers?

Ans
- ✘ A. Current transformer
- ✔ B. Distribution transformer
- ✘ C. Potential transformer
- ✘ D. Power transformer

Question ID : **630680146465**
Status : **Answered**
Chosen Option : **D**

Q.8 A 4-unit insulator string has string efficiency of 80%. The voltage across the lowest unit is 16 kV. Calculate the total voltage across the string.

Ans
- ✘ A. 80 kV
- ✘ B. 64 Kv
- ✘ C. 60 kV
- ✔ D. 51.2 Kv

Question ID : **630680212935**
Status : **Answered**
Chosen Option : **D**

Q.9 **The inductance of an iron-cored coil is _____.**

Ans
✗ A. approximately the same as that of an air-cored coil
✓ B. more than that of an air-cored coil
✗ C. not defined
✗ D. less than that of an air-cored coil

Question ID : **630680140166**
Status : **Answered**
Chosen Option : **B**

Q.10 **The Arya Samaj, founded in 1875 by Swami Dayananda Saraswati, emphasized a return to the teachings of the _____ as the basis of Hinduism.**

Ans
✗ A. Mahabharata
✗ B. Ramayana
✗ C. Puranas
✓ D. Vedas

Question ID : **630680773333**
Status : **Answered**
Chosen Option : **D**

Q.11 **In extra-high-voltage (EHV) lines, shunt compensation is used:**

Ans
✗ A. as a substitution of the synchronous phase modifier
✗ B. to improve stability
✓ C. to improve voltage profile
✗ D. to reduce stability

Question ID : **630680212931**
Status : **Answered**
Chosen Option : **C**

Q.12 **Which idiom describes someone who is constantly complaining?**

Ans
✗ A. See eye to eye
✗ B. Spill the beans
✓ C. A broken record
✗ D. Once in a blue moon

Question ID : **630680773315**
Status : **Marked For Review**
Chosen Option : **B**

Q.13 For a unity feedback system with the open-loop transfer function $G(s) = \frac{K}{s\,(S+1)(S+2)}$, the system is oscillatory for the gain _____.

Ans
✗ A. $0 < K < 6$
✗ B. $K > 6$
✗ C. $K < 6$
✓ D. $K = 6$

Question ID : **630680146554**
Status : **Answered**
Chosen Option : **D**

Q.14 **According to a report released by Swiss air quality monitoring body IQAir, which position did India rank in terms of the most polluted countries in 2023?**

Ans

✗ A. First

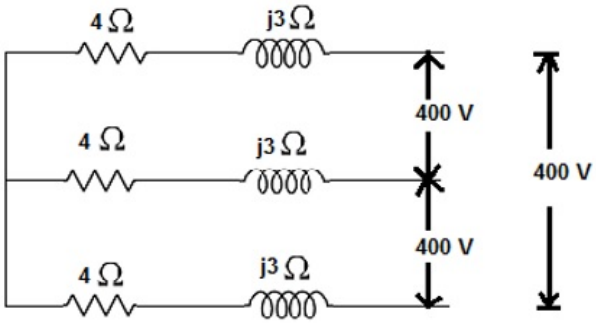
✗ B. Fourth

✗ C. Second

✓ D. Third

Question ID : **630680773327**
Status : **Answered**
Chosen Option : **D**

Q.15 Find the power factor of star connected load as shown in the given figure.



Ans

✗ A. 0.8 leading

✗ B. 0.4 lagging

✓ C. 0.8 lagging

✗ D. 0.3 leading

Question ID : **630680117098**
Status : **Answered**
Chosen Option : **C**

Q.16 Two T connected transformers are used to supply 500 V, $50\sqrt{3}$ kVA, balanced load from a balanced three-phase supply of 5 kV. What are the ratings of main and teaser transformers, respectively?

Ans

✗ A. 43 kVA and 50 kVA

✗ B. $50\sqrt{3}$ kVA and 50 kVA

✓ C. 50 kVA and 43.3 kVA

✗ D. 50 kVA and $50\sqrt{3}$ kVA

Question ID : **630680146467**
Status : **Marked For Review**
Chosen Option : **B**

Q.17 If two port networks are connected in series having impedance matrices as $\begin{bmatrix}5 & 4\\3 & 6\end{bmatrix}$ and $\begin{bmatrix}4 & 3\\2 & 1\end{bmatrix}$, the impedance matrix of the resulting two-port network will be:

Ans

✔ A. $\begin{bmatrix}9 & 7\\5 & 7\end{bmatrix}$

✘ B. $\begin{bmatrix}5 & 3\\3 & 1\end{bmatrix}$

✘ C. $\begin{bmatrix}4 & 4\\2 & 6\end{bmatrix}$

✘ D. $\begin{bmatrix}28 & 19\\24 & 15\end{bmatrix}$

Question ID : **630680117196**
Status : **Answered**
Chosen Option : **A**

Q.18 **A string insulator has 4 units. The voltage across the bottom-most unit is 33.33% of the total voltage. Its string efficiency is _____.**

Ans

✘ A. 60%

✔ B. 75%

✘ C. 80%

✘ D. 100%

Question ID : **630680162182**
Status : **Answered**
Chosen Option : **B**

Q.19 **Seven people, K, L, M, N, A, B and C are sitting in a straight line, facing north. Only L sits to the left of M. Only four people sit between L and N. Only K sits between A and B and A is not an immediate neighbor of N. Who sits at the extreme right of the line?**

Ans

✘ A. A

✘ B. L

✔ C. C

✘ D. B

Question ID : **630680408751**
Status : **Answered**
Chosen Option : **C**

Q.20 **भारतीय मूल की प्रोफेसर जोइता गुप्ता को _____ पर उनके कार्य के लिए 2023 में प्रतिष्ठित डच पुरस्कार से सम्मानित किया गया है।**

Ans

✘ A. नवीकरणीय ऊर्जा

✘ B. समुद्री संरक्षण

✔ C. जलवायु परिवर्तन

✘ D. संधारणीय कृषि

Question ID : **630680773324**
Status : **Answered**
Chosen Option : **C**

Q.21 Consider a second order system given by $\frac{w_n^2}{s^2+2\zeta w_n s+w_n^2}$.
The resonant frequency can be correlated to the damped natural frequency when:

Ans
✗ A. $0 < \zeta < 0.45$
✗ B. $0 < \zeta < 1$
✗ C. $0 < \zeta < 0.6$
✓ D. $0 < \zeta < 0.707$

Question ID : **630680139579**
Status : **Answered**
Chosen Option : **D**

Q.22 A circuit which converts data of one type into another type is called_____.

Ans
✗ A. adders
✗ B. multiplexer
✗ C. flip-flop
✓ D. code converters

Question ID : **630680103564**
Status : **Answered**
Chosen Option : **D**

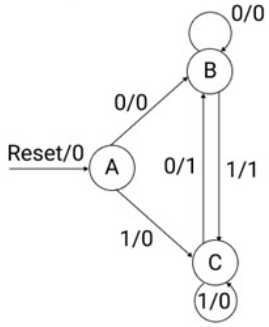
Q.23 Choose the most appropriate option to complete the sentence.

The professor explained the significance of _____ technical method in conducting research.

Ans
✓ A. the
✗ B. those
✗ C. an
✗ D. a

Question ID : **630680773310**
Status : **Answered**
Chosen Option : **D**

Q.24 How many times will we jump to B state for input 0, for the given state diagram?



Ans
✗ A. 0
✗ B. 2
✗ C. 1
✓ D. 3

Question ID : **630680132920**
Status : **Not Answered**
Chosen Option : **--**

Q.25 **The angle between the synchronously rotating stator flux and rotor poles of a synchronous motor is called _____ angle.**

Ans
✗ A. slip
✗ B. synchronizing
✗ C. power factor
✓ D. torque

Question ID : **63068081275**
Status : **Answered**
Chosen Option : **D**

Q.26 **एक निश्चित कूट भाषा में,**
A % B का अर्थ है कि 'A, B की माता है',
A @ B का अर्थ है कि 'A, B की बहन है',
A # B का अर्थ है कि 'A, B का पिता है',
और A & B का अर्थ है कि 'A, B का पति है'।

यदि 'L # I & M % O @ S' है, तो L का S से क्या संबंध है?

Ans
✗ A. चाचा/ताऊ
✗ B. दादी
✓ C. दादा
✗ D. बुआ

Question ID : **630680585530**
Status : **Answered**
Chosen Option : **C**

Q.27 **From the AC equivalent circuit for a single input unbalanced output, re = 25.3Ω,Vin = 10mV and RC = 2.2k.Calculate the voltage gain.**

Ans
✗ A. 50
✗ B. 86.94
✓ C. 43.47
✗ D. 21.23

Question ID : **630680118574**
Status : **Not Answered**
Chosen Option : **--**

Q.28 **Ampere-turn method assumes:**

Ans
✗ A. armature resistance to be additional armature reaction
✗ B. armature leakage reactance to be substractional armature reaction
✗ C. armature leakage resistance to be substractional armature reaction
✓ D. armature leakage reactance to be additional armature reaction

Question ID : **630680145061**
Status : **Answered**
Chosen Option : **D**

Section : **Section E**

Q.1 **What is the energy stored in the magnetic field if 5A current in a coil has a constant inductance of 50 henrys and grows at a uniform rate?**

Ans
✓ A. 625
✗ B. 1025
✗ C. 25
✗ D. 125

Question ID : **630680118553**
Status : **Answered**
Chosen Option : **A**

Q.2 निम्नलिखित में से कौन-सी नदी हीराकुंड बांध के निर्माण से संबंधित है?

Ans
✗ A. गोदावरी
✗ B. नर्मदा
✗ C. यमुना
✓ D. महानदी

Question ID : **630680773337**
Status : **Answered**
Chosen Option : **D**

Q.3 **Which of the following is true for programmable array logic?**

Ans
✗ A. Has fixed AND array and programmable OR array
✗ B. Has programmable AND array and programmable OR array
✗ C. Has fixed AND array and fixed OR array
✓ D. Has fixed OR array and programmable AND array

Question ID : **630680182177**
Status : **Not Answered**
Chosen Option : **--**

Q.4 **In a 3-phase alternator, three windings are spaced _____ apart.**

Ans
✗ A. 150 electrical degrees
✗ B. 60 electrical degrees
✗ C. 90 electrical degrees
✓ D. 120 electrical degrees

Question ID : **63068081362**
Status : **Answered**
Chosen Option : **D**

Q.5 **"All that glitters is not gold."**

This proverb proposes that something that seems attractive or promising might actually be:

Ans
✓ A. Deceptive or lacking in true worth.
✗ B. Difficult or dangerous to obtain.
✗ C. A sign of good luck and fortune.
✗ D. More valuable than it seems.

Question ID : **630680773317**
Status : **Answered**
Chosen Option : **A**

Q.6 **Pipe A can fill one-fourth of the tank in 2 hours, and pipe B can fill half of the same tank in 6 hours. C is an emptying pipe, which alone can empty the full tank in x hours. All the pipes were opened together at 9 a.m., but pipe C was closed at 11 a.m. If the tank was full at 2 p.m. on the same day, then what is the value of x?**

Ans
✗ A. 45
✗ B. 51
✗ C. 42
✓ D. 48

Question ID : **630680630865**
Status : **Answered**
Chosen Option : **D**

Q.7 सारिरिका, परिभोगिका और उद्देशिका, राजा अशोक द्वारा निर्मित तीन प्रकार के _____ हैं।

Ans
- ✗ A. विहार
- ✗ B. पगोडा
- ✓ C. स्तूप
- ✗ D. मंडल

Question ID : **630680773341**
Status : **Answered**
Chosen Option : **B**

Q.8 **In a Q-meter, circuit is tuned to resonance _____**

Ans
- ✓ A. Either by varying the frequency of oscillator or by varying the resonating capacitor
- ✗ B. only by varying the shunt resistance
- ✗ C. always by varying the resonating capacitor
- ✗ D. always by varying the frequency of oscillator

Question ID : **630680196612**
Status : **Marked For Review**
Chosen Option : **A**

Q.9 What is the output voltage in D type chopper when duty ratio $= \frac{1}{2}$?

Ans
- ✓ A. Zero value of average voltage
- ✗ B. Negative value of average voltage
- ✗ C. Doesn't work on duty ratio $= \frac{1}{2}$
- ✗ D. Positive value of average voltage

Question ID : **630680185356**
Status : **Answered**
Chosen Option : **D**

Q.10 **Which type of element combination is used to make McMurray-Bedford half-bridge inverter?**

Ans
- ✗ A. 2 SCRs, 4 diodes, 1 capacitors and 1 inductor
- ✗ B. 4 SCRs, 2 diodes, 2 capacitors and 4 inductors
- ✓ C. 2 SCRs, 2 diodes, 2 capacitors and 2 inductors
- ✗ D. 2 SCRs, 4 diodes, 2 capacitors and 4 inductors

Question ID : **630680185370**
Status : **Not Answered**
Chosen Option : **--**

Q.11 **Which of the following plateaus is known as the "Roof of the World"**

Ans
- ✓ A. Tibetan Plateau
- ✗ B. Malwa Plateau
- ✗ C. Deccan Plateau
- ✗ D. Chota Nagpur Plateau

Question ID : **630680773335**
Status : **Answered**
Chosen Option : **A**

Q.12 The square root of $(12 + 2\sqrt{35})$ is:

Ans

✔ A. $(\sqrt{7} + \sqrt{5})$

✗ B. $(7 + \sqrt{3})$

✗ C. $(\sqrt{3} + \sqrt{5})$

✗ D. $(3 + \sqrt{5})$

Question ID : **630680135981**
Status : **Answered**
Chosen Option : **A**

Q.13 Find the number of poles on the left-hand side of the s-plane, right-hand side of the s-plane and on the imaginary axis for the system with the characteristic equation described by $P(s)$ given by
$P(s) = 3s^7 + 9s^6 + 6s^5 + 4s^4 + 7s^3 + 8s^2 + 2s + 6.$

Ans

✔ A. Three poles are on the left-hand side of the s-plane, 4 poles are on the right-hand side of the s-plane and no poles are on the imaginary axis.

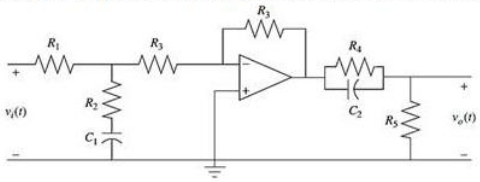
✗ B. Four poles are on the left-hand side of the s-plane, 3 poles are on the right-hand side of the s-plane and no poles are on the imaginary axis.

✗ C. All the poles are on the left-hand side of the s-plane.

✗ D. Two poles are on the left-hand side of the s-plane, 3 poles are on the right-hand side of the s-plane and 2 poles are on the imaginary axis.

Question ID : **63068093721**
Status : **Answered**
Chosen Option : **B**

Q.14 The given operational amplifier circuit is the implementation of which of the following?



Ans

✗ A. PD-PI controller

✔ B. Lag-lead compensator

✗ C. PI-PD controller

✗ D. Lead-lag compensator

Question ID : **630680139566**
Status : **Answered**
Chosen Option : **B**

Q.15 Which parameter can be varied in TRC (Time Ratio Control) method?

Ans

✔ A. Duty ratio

✗ B. Applied voltage

✗ C. Current wave

✗ D. Firing angle

Question ID : **630680119908**
Status : **Answered**
Chosen Option : **A**

Q.16 A bubble in the universal gates symbol shows the _____ gate.

Ans
- ✔ A. NOT
- ✘ B. OR
- ✘ C. AND
- ✘ D. XOR

Question ID : **630680103553**
Status : **Answered**
Chosen Option : **A**

Q.17 In an RL series circuit, R = 10Ω and XL = 10Ω. Calculate the power factor of such a circuit.

Ans
- ✘ A. 1
- ✘ B. 0
- ✔ C. 0.707
- ✘ D. 1.414

Question ID : **630680118603**
Status : **Answered**
Chosen Option : **C**

Q.18 In the inverse h parameters, g11 and g22, respectively, are:

Ans
- ✘ A. open circuit input admittance, short circuit output admittance
- ✔ B. open circuit input admittance, short circuit output impedance
- ✘ C. open circuit input impedance, short circuit output admittance
- ✘ D. open circuit input impedance, short circuit output impedance

Question ID : **630680199406**
Status : **Marked For Review**
Chosen Option : **B**

Q.19 Which of the following is NOT an application of the dot product?

Ans
- ✔ A. Finding the direction perpendicular to two given vectors
- ✘ B. Finding the projections
- ✘ C. Calculation of work
- ✘ D. Finding the angle between two given vectors

Question ID : **63068061850**
Status : **Answered**
Chosen Option : **A**

Q.20 The vigorous athlete trained persistently to achieve his top performance.

What is the synonym for "vigorous" in this sentence?

Ans
- ✘ A. Furious
- ✘ B. Suspicious
- ✘ C. Atrocious
- ✔ D. Vivacious

Question ID : **630680773319**
Status : **Answered**
Chosen Option : **A**

Q.21 _____ ,1932 में कांग्रेस और ब्रिटिश सरकार के बीच एक समझौता था, जिसने दलित वर्गों के लिए अलग निर्वाचन क्षेत्र प्रदान किया था और महात्मा गांधी ने इसकी भारी आलोचना की थी।

Ans
- ✗ A. साइमन कमीशन
- ✓ B. पूना पैक्ट
- ✗ C. लखनऊ पैक्ट
- ✗ D. अगस्त ऑफर

Question ID : **630680773329**
Status : **Answered**
Chosen Option : **B**

Q.22 **By connecting both input pins of two input NAND gates, the result is _____ gate.**

Ans
- ✗ A. OR
- ✗ B. NOR
- ✓ C. NOT
- ✗ D. AND

Question ID : **630680103558**
Status : **Answered**
Chosen Option : **C**

Q.23 **The overhead transmission line with the sending-end voltage and line current to the receiving-end voltage and current, respectively, is known as _____.**

Ans
- ✓ A. tuned line
- ✗ B. lossless line
- ✗ C. infinite line
- ✗ D. natural line

Question ID : **63068081794**
Status : **Answered**
Chosen Option : **B**

Q.24 **Temperature measurements by a thermocouple are:**

Ans
- ✗ A. primary measurements
- ✗ B. Any of the given options
- ✗ C. secondary measurements
- ✓ D. tertiary measurements

Question ID : **630680407013**
Status : **Answered**
Chosen Option : **C**

Q.25 **Voltage reduction factor (VRF) of a cycloconverter is _____.**

Ans
- ✗ A. less than equal to unity
- ✗ B. greater than unity
- ✓ C. less than unity
- ✗ D. equal to unity

Question ID : **630680138370**
Status : **Answered**
Chosen Option : **A**

Q.26 C और E नामक दो पुत्रियों की माँ X है। Q, E की पुत्री है। I, Q का भाई है। X का I से क्या संबंध है?

Ans
- ✗ A. माँ
- ✗ B. बहन
- ✗ C. दादी
- ✓ D. नानी

Question ID : **630680467726**
Status : **Answered**
Chosen Option : **D**

Q.27 **Read the given statements and conclusions carefully. You have to take the given statementsto be true even if they seem to be at variance from commonly known facts. You have to decidewhich conclusion/s logically follow/s from the given statements.**

Statements:
All curds are hats. All hats are gums. Some gums are pins.
Conclusions:
(I): All curds are gums.
(II): Some pins are curds.

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

Question ID : **630680522639**
Status : **Answered**
Chosen Option : **D**

Q.28 **What is the value of mean deviation if absolute deviation is D and the number of measurements done is N?**

Ans
- ✗ A. $\frac{\sum D}{N}$
- ✗ B. $\frac{2\sqrt{\sum D}}{N}$
- ✓ C. $\frac{\sum |D|}{N}$
- ✗ D. $\frac{\sqrt{\sum D}}{N}$

Question ID : **630680133506**
Status : **Answered**
Chosen Option : **C**