National Testing Agency

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Electronics Communication and Information Engineering

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Question Number : 1 Question Id : 87827042210 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).

Assertion (A) : An equipotential surface or line is a contour along which a charge moves with zero work.

Reason (R) : The maximum amount of work per unit distance is performed moving normal or perpendicular to an equipotential surface in the direction of the electric field.

In light of the above statements, choose the *correct* answer from the options given below.

1. Both (A) and (R) are true and (R) is the correct explanation of (A).
2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A).
3. (A) is true but (R) is false.
4. (A) is false but (R) is true.

Options :

878270165741. 1

878270165742. 2

878270165743. 3

878270165744. 4

Question Number : 2 Question Id : 87827042211 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List-I** with **List-II**

List-I	**List-II**
Formula	**Name of Law / equation**
(A). $dH = \frac{IdLsin\theta}{4\pi r^2}$	(I). Ampere's law
(B). $I = \oint H.dL$	(II). Biot-Savart law
(C). $\oint B.ds = 0$	(III). Faraday's law
(D). $emf = \oint E.dL$	(IV). Gauss's law for magnetic field

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (I), (B) - (III), (C) - (II), (D) - (IV)
3. (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

Options :

878270165745. 1

878270165746. 2

878270165747. 3

878270165748. 4

Question Number : 3 Question Id : 87827042212 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Formula for responsivity (R) of a photodetector is /are

(A). $R = \frac{I_P}{P}$

(B). $R = \frac{\eta\lambda}{hc}$

(C). $R = \frac{P}{I_P}$

(D). $R = \frac{\eta\lambda e}{hc}$

where, η, λ, e are the efficiency, wavelength, and charge of electron respectively. I_p and **P** are the primary photocurrent and optical power falling on the photodetector respectively.

Choose the ***correct*** answer from the options given below:

1. (A) and (B) only.
2. (A) and (D) only.
3. (B) and (C) only
4. (B), (C) and (D) only.

Options :

878270165749. 1

878270165750. 2

878270165751. 3

878270165752. 4

Question Number : 4 Question Id : 87827042213 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement (I): The surface emitting LED is a layered p-n structure where the optical output is taken from the upper surface of the device.

Statement (II): The surface emitting LED is preferred for practical optical communication systems since the efficiency of such a structure is moderate.

In light of the above statements, choose the *most appropriate* answer from the options given below.

1. Both Statement (I) and Statement (II) are incorrect.
2. Both Statement (I) and Statement (II) are correct.
3. Statement (I) is correct but Statement (II) is incorrect.
4. Statement (I) is incorrect but Statement (II) is correct.

Options :

878270165753. 1

878270165754. 2

878270165755. 3

878270165756. 4

Question Number : 5 Question Id : 87827042214 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A transmission line is feeding 1 Watt of power to a horn antenna having gain of 10 dB. The antenna is matched to the transmission line. The total power radiated by the horn antenna into the free-space is

1. 0.1 Watt
2. 0.01 Watt
3. 1 Watt
4. 10 Watt

Options :

878270165757. 1

878270165758. 2

878270165759. 3

878270165760. 4

Question Number : 6 Question Id : 87827042215 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The threshold voltage of an n-channel MOSFET can be increased by

1. increasing the channel dopant concentration
2. reducing the gate oxide thickness
3. reducing the channel dopant concentration
4. reducing the channel length

Options :

878270165761. 1

878270165762. 2

878270165763. 3

878270165764. 4

Question Number : 7 Question Id : 87827042216 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given that $f(y) = \frac{|y|}{y}$ and q is any non-zero real number, the value of $|f(q) - f(-q)|$ is

1. 0
2. -1
3. 2
4. 1

Options :

878270165765. 1

878270165766. 2

878270165767. 3

878270165768. 4

Question Number : 8 Question Id : 87827042217 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which one of the following statements is NOT true for a square matrix A?

1. If A is upper triangular, the eigen values of A are the diagonal elements of it
2. If A is real symmetric, the eigen values of A are always real and positive
3. If A is real, the eigen values of A and A^T are always the same
4. If all the principal minors of A are positive, all the eigen values of A are also positive

Options :

878270165769. 1

878270165770. 2

878270165771. 3

878270165772. 4

Question Number : 9 Question Id : 87827042218 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The depth of penetration of electromagnetic wave in a medium having conductivity σ at a frequency of 1 MHz is 25 cm. The depth of penetration at a frequency of 4 MHz will be

1. 6.25 cm
2. 12.50 cm
3. 50.00 cm
4. 100.00 cm

Options :

878270165773. 1

878270165774. 2

878270165775. 3

878270165776. 4

Question Number : 10 Question Id : 87827042219 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The input to a coherent detector is DSB-SC signal plus noise. The noise at the detector output is

1. the in-phase component
2. the quadrature - component
3. zero
4. the envelope

Options :

878270165777. 1

878270165778. 2

878270165779. 3

878270165780. 4

Question Number : 11 Question Id : 87827042220 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement (I): The look ahead carry adder is a parallel carry adder where all sum digits are generated directly from the input digits.

Statement (II): Look ahead carry adder is a fast adder.

In light of the above statements, choose the *most appropriate* answer from the options given below.

1. Both Statement (I) and Statement (II) are true.
2. Both Statement (I) and Statement (II) are false.
3. Statement (I) is true but Statement (II) is false.
4. Statement (I) is false but Statement (II) is true.

Options :

878270165781. 1

878270165782. 2

878270165783. 3

878270165784. 4

Question Number : 12 Question Id : 87827042221 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List-I** with **List-II**

List-I	**List-II**
Modulation Technique	Detector / Generator
(A). Twin-single-sideband	(I). Envelope detector
(B). Amplitude Modulation	(II). Integrate and dump
(C). NRZ or RZ data	(III). In-phase– quadrature (I/Q) modulator
(D). Frequency Modulation	(IV). Ratio detector

Choose the **correct** answer from the options given below:

1. (A) - (II), (B) - (I), (C) - (III), (D) - (IV)
2. (A) - (I), (B) - (IV), (C) - (II), (D) - (III)
3. (A) - (III), (B) - (I), (C) - (II), (D) - (IV)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

Options :

878270165785. 1

878270165786. 2

878270165787. 3

878270165788. 4

Question Number : 13 Question Id : 87827042222 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).

Assertion (A) : Noise Figure of an amplifier, is about the amount of noise introduced in any part of the system.

Reason (R) : Noise Figure of an ideal amplifier is always greater than 1.

In light of the above statements, choose the *correct* answer from the options given below.

1. Both (A) and (R) are true and (R) is the correct explanation of (A).
2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A).
3. (A) is true but (R) is false.
4. (A) is false but (R) is true.

Options :

878270165789. 1

878270165790. 2

878270165791. 3

878270165792. 4

Question Number : 14 Question Id : 87827042223 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

What is the minimum distance of a BCH code with generator polynomial $g(x)=(x+1)(x^2+x+1)$?

1. 2
2. 3
3. 4
4. 5

Options :

878270165793. 1

878270165794. 2

878270165795. 3

878270165796. 4

Question Number : 15 Question Id : 87827042224 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).

Assertion (A) : An increase in Signal-to-Noise Ratio (SNR) leads to a decrease in Bit Error Rate (BER) in digital communication systems

Reason (R) : Higher SNR implies a stronger signal compared to the background noise, allowing the receiver to more accurately distinguish between transmitted signals, reducing the probability of errors in decoding.

In light of the above statements, choose the *most appropriate* answer from the options given below .

1. Both (A) and (R) are correct and (R) is the correct explanation of (A).
2. Both (A) and (R) are correct but (R) is NOT the correct explanation of (A).
3. (A) is correct but (R) is not correct.
4. (A) is not correct but (R) is correct.

Options :

878270165797. 1

878270165798. 2

878270165799. 3

878270165800. 4

Question Number : 16 Question Id : 87827042225 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Statements related to PSK modulation schemes are given below:

(A). PSK modulation scheme utilizes both phase and amplitude to encode digital information and is widely used in telecommunications.

(B). PSK modulation scheme is known for its ability to handle high noise environments and is commonly used in wireless LANs.

(C). PSK modulation scheme is characterized by changing the phase of the carrier signal to represent different symbols or bits.

(D). PSK modulation scheme is particularly efficient in terms of bandwidth usage and is utilized in applications requiring high spectral efficiency.

Choose the ***correct*** answer from the options given below:

1. (A), and (D) only.
2. (A), and (C) only.
3. (C) and (D) only
4. (B), and (C) only.

Options :

878270165801. 1

878270165802. 2

878270165803. 3

878270165804. 4

Question Number : 17 Question Id : 87827042226 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which statement accurately describes the role of the redundant bits in Hamming codes?

1. Redundant bits are randomly inserted to increase data integrity.
2. Redundant bits are positioned at even indices to improve error detection.
3. Redundant bits serve as parity bits for error detection and correction.
4. Redundant bits ensure data encryption within the code word.

Options :

878270165805. 1

878270165806. 2

878270165807. 3

878270165808. 4

Question Number : 18 Question Id : 87827042227 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List-I** with **List-II**

List-I	**List-II**
Concepts	**Descriptions**
(A).Shannon's Source Coding Theorem	(I). Provides the maximum achievable rate of error-free transmission over a noisy channel.
(B).Differential Entropy	(II). Measures the uncertainty or average information content associated with continuous random variables.
(C). Mutual Information	(III). States the fundamental limit of lossless data compression.
(D). Shannon's Channel Coding Theorem	(IV). Measures the amount of information shared between two random variables in terms of their entropy and conditional entropy.

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
2. (A) - (I), (B) - (III), (C) - (II), (D) - (IV)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

Options :

878270165809. 1

878270165810. 2

878270165811. 3

878270165812. 4

Question Number : 19 Question Id : 87827042228 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following statements accurately describes Trellis Coded Modulation (TCM)?

1. TCM is a modulation technique that uses multiple carriers to transmit data signals simultaneously.
2. TCM combines error correction coding and modulation, employing convolutional codes to encode the data before modulation.
3. TCM utilizes amplitude and phase modulation to increase the data rate.
4. TCM relies on frequency diversity to combat fading in wireless communication channels.

Options :

878270165813. 1

878270165814. 2

878270165815. 3

878270165816. 4

Question Number : 20 Question Id : 87827042229 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Reed-Solomon codes are known for their application in:

1. Image compression techniques.
2. Error detection in network protocols.
3. Audio equalization in wireless communication.
4. Source encoding for video streaming.

Options :

878270165817. 1

878270165818. 2

878270165819. 3

878270165820. 4

Question Number : 21 Question Id : 87827042230 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A thin (diameter~0) dipole has a terminal impedance of 73+j53.6 Ω. what is the dimensions of the complementary slot?

1. 18.25+j13.4Ω
2. 18.25+j12.4Ω
3. 17.25+j13.4Ω
4. 17.25+j12.4Ω

Options :

878270165821. 1

878270165822. 2

878270165823. 3

878270165824. 4

Question Number : 22 Question Id : 87827042231 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

What happens to the Poynting vector magnitude as an electromagnetic wave travels through a medium?

1. It decreases with distance.
2. It remains constant.
3. It increases with distance.
4. It oscillates periodically.

Options :

878270165825. 1

878270165826. 2

878270165827. 3

878270165828. 4

Question Number : 23 Question Id : 87827042232 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement (I): A dielectric medium has a relative permitivity $\varepsilon_r = 6$ and $\mu_r = 1$.The index of refraction for a wave in an unbounded medium of this dielectric is 2.45.

Statement (II): In optics, the index of refraction η is defined as the reciprocal of the relative phase velocity *p*.

In light of the above statements, choose the *most appropriate* answer from the options given below.

1. Both Statement (I) and Statement (II) are correct.
2. Both Statement (I) and Statement (II) are incorrect.
3. Statement (I) is correct but Statement (II) is incorrect.
4. Statement (I) is incorrect but Statement (II) is correct.

Options :

878270165829. 1

878270165830. 2

878270165831. 3

878270165832. 4

Question Number : 24 Question Id : 87827042233 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

(A). The Fourier series of an even function i.e., f(t) = f(-t), does not have sine terms

(B). The Fourier series of an odd function i.e., f(t) = -f(-t), does not have cosine terms

(C). The Fourier series of an even function i.e., f(t) = f(-t), does not have cosine terms

(D). The Fourier series of a function with half-wave symmetry i.e., $f(t) = -f(t \pm T/2)$ does not have odd harmonics.

Choose the ***correct*** answer from the options given below:

1. (A), (B) and (D) only.
2. (A), (B) and (C) only.
3. (A), (B), (C) and (D).
4. (B), (C) and (D) only.

Options :

878270165833. 1

878270165834. 2

878270165835. 3

878270165836. 4

Question Number : 25 Question Id : 87827042234 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List-I** with **List-II for f-v Analogy.**

List-I	List-II
Mechanical system	**Electrical system**
(A). Force *f*	(I). Inductance L
(B). Mass *M*	(II). Voltage *v*
(C). Damping coefficient *D*	(III). Capacitance C
(D). Compliance *K*	(IV). Resistance R

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (I), (B) - (III), (C) - (II), (D) - (IV)
3. (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

Options :

878270165837. 1

878270165838. 2

878270165839. 3

878270165840. 4

Question Number : 26 Question Id : 87827042235 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The integral term in a PID controller is responsible for:

1. Reducing the offset between set point and actual value
2. Adjusting the response based on the rate of change of error
3. Responding to the present error value
4. Predicting future errors

Options :

878270165841. 1

878270165842. 2

878270165843. 3

878270165844. 4

Question Number : 27 Question Id : 87827042236 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In which of the following method, the multiplication of magnitude can be converted into the addition.

1. Nyquist plot
2. Bode plot
3. Nichols chart
4. Nichols plot

Options :

878270165845. 1

878270165846. 2

878270165847. 3

878270165848. 4

Question Number : 28 Question Id : 87827042237 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement (I): Servo motors generally offer higher accuracy and precision in position control compared to stepper motors.

Statement (II): Stepper motors operate in discrete steps and do not require feedback for position control, whereas servo motors rely on feedback mechanisms for accurate positioning.

In light of the above statements, choose the *most appropriate* answer from the options given below.

1. Both Statement (I) and Statement (II) are correct.
2. Both Statement (I) and Statement (II) are incorrect.
3. Statement (I) is correct but Statement (II) is incorrect.
4. Statement (I) is incorrect but Statement (II) is correct.

Options :

878270165849. 1

878270165850. 2

878270165851. 3

878270165852. 4

Question Number : 29 Question Id : 87827042238 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).

Assertion (A) :Time delay systems introduce instability in closed-loop control systems.

Reason (R) : Time delays in feedback loops can lead to phase shifts and oscillatory behavior, causing instability due to delayed response in the closed-loop system.

In light of the above statements, choose the *correct* answer from the options given below.

1. Both (A) and (R) are true and (R) is the correct explanation of (A).
2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A).
3. (A) is true but (R) is false.
4. (A) is false but (R) is true.

Options :

878270165853. 1

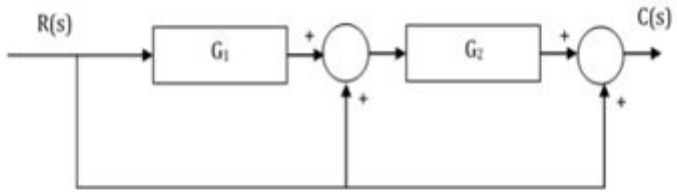
878270165854. 2

878270165855. 3

878270165856. 4

Question Number : 30 Question Id : 87827042239 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1



Consider the above block diagram in the figure.

The transfer function $\frac{C(s)}{R(s)}$ is

1. $\frac{G_1G_2}{1+G_1G_2}$
2. $G_1G_2+1+G_1$
3. $G_1G_2+1+G_2$
4. $\frac{G_1}{1+G_1G_2}$

Options :

878270165857. 1

878270165858. 2

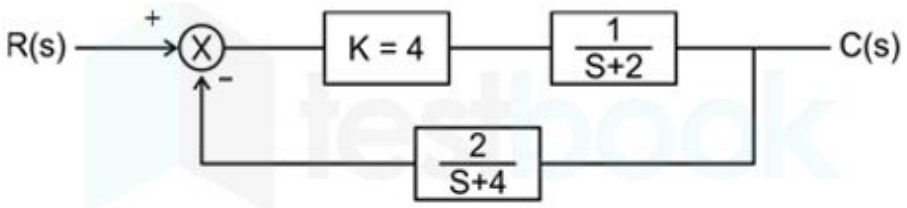
878270165859. 3

878270165860. 4

Question Number : 31 Question Id : 87827042240 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The steady state error of the system shown in the figure for a unit step input is



1. 0.25
2. 0.5
3. 1
4. 1.5

Options :

878270165861. 1

878270165862. 2

878270165863. 3

878270165864. 4

Question Number : 32 Question Id : 87827042241 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the following open loop transfer function

$$G = \frac{k(s+2)}{(s+1)(s+4)}$$

The characteristic equation of the unity negative feedback will be

1. $(s+1)(s+4)+k(s+2)=0$
2. $(s+2)(s+1)+k(s+4)=0$
3. $(s+1)(s-2)+k(s+4)=0$
4. $(s+2)(s+4)+k(s+1)=0$

Options :

878270165865. 1

878270165866. 2

878270165867. 3

878270165868. 4

Question Number : 33 Question Id : 87827042242 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The magnitude and phase relationship between the sinusoidal input and the steady-state output of a system is called as

1. magnitude response
2. transient response
3. frequency response
4. steady-state response

Options :

878270165869. 1

878270165870. 2

878270165871. 3

878270165872. 4

Question Number : 34 Question Id : 87827042243 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which memory storage is widely used in PCs and Embedded Systems?

1. EEPROM
2. Flash memory
3. DRAM
4. SRAM

Options :

878270165873. 1

878270165874. 2

878270165875. 3

878270165876. 4

Question Number : 35 Question Id : 87827042244 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Identify the standard software components that can be reused in an embedded system design?

1. memory
2. application software
3. application manager
4. operating system

Options :

878270165877. 1

878270165878. 2

878270165879. 3

878270165880. 4

Question Number : 36 Question Id : 87827042245 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In the IPv6 header, the traffic class field is similar to which field in the IPv4 header?

1. Fragmentation field
2. Fast-switching
3. ToS field
4. Option field

Options :

878270165881. 1

878270165882. 2

878270165883. 3

878270165884. 4

Question Number : 37 Question Id : 87827042246 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

MAC addresses are used as

1. Network addresses
2. IP address
3. Hardware address
4. Burned in address

Options :

878270165885. 1

878270165886. 2

878270165887. 3

878270165888. 4

Question Number : 38 Question Id : 87827042247 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which protocol is a signaling communication protocol used for controlling multimedia communication sessions?

1. session initiation protocol
2. session modelling protocol
3. session maintenance protocol
4. resource reservation protocol

Options :

878270165889. 1

878270165890. 2

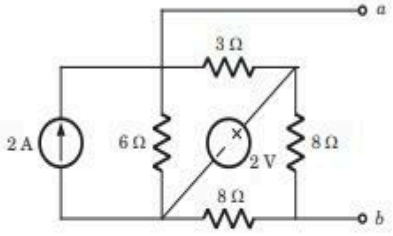
878270165891. 3

878270165892. 4

Question Number : 39 Question Id : 87827042248 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The Thevenin impedance across the terminals *ab* of the network shown in the figure is :



1. 2 Ω
2. 6 Ω
3. 6.16 Ω
4. $\frac{4}{3}$ Ω

Options :

878270165893. 1

878270165894. 2

878270165895. 3

878270165896. 4

Question Number : 40 Question Id : 87827042249 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The following results were obtained from measurements taken between the two terminal of a resistive network

Terminal voltage	12 V	0 V
Terminal current	0 A	1.5 A

The Thevenin resistance of the network is

1. 16 Ω
2. 8 Ω
3. 0 Ω
4. ∞ Ω

Options :

878270165897. 1

878270165898. 2

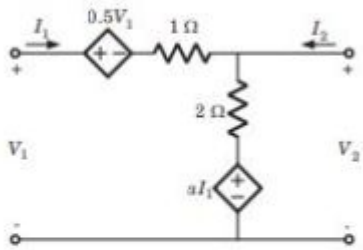
878270165899. 3

878270165900. 4

Question Number : 41 Question Id : 87827042250 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The circuit shown in the figure is reciprocal if **'a'** is



1. 2
2. -2
3. 1
4. -1

Options :

878270165901. 1

878270165902. 2

878270165903. 3

878270165904. 4

Question Number : 42 Question Id : 87827042251 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A parallel circuit has R = 1 kΩ , C = 50 μF and L = 10 mH. The quality factor at resonance is

1. 100
2. 90.86
3. 70.7
4. 78.76

Options :

878270165905. 1

878270165906. 2

878270165907. 3

878270165908. 4

Question Number : 43 Question Id : 87827042252 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A parallel resonant circuit has a resistance of 2 kΩ and half power frequencies of 86 kHz and 90 kHz. The value of inductor is

1. 4.3 mH
2. 43 mH
3. 0.16 mH
4. 1.6 mH

Options :

878270165909. 1

878270165910. 2

878270165911. 3

878270165912. 4

Question Number : 44 Question Id : 87827042253 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List-I** with **List-II**

List-I	**List-II**
Function	Laplace transform
(A). $sin(\omega t)$	(I). $\frac{\omega}{s^2+\omega^2}$
(B). $cos(\omega t)$	(II). $\frac{s}{s^2+\omega^2}$
(C). $sinh(bt)$	(III). $\frac{s}{s^2-b^2}$
(D). $cosh(bt)$	(IV). $\frac{b}{s^2-b^2}$

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (I), (B) - (III), (C) - (II), (D) - (IV)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

Options :

878270165913. 1

878270165914. 2

878270165915. 3

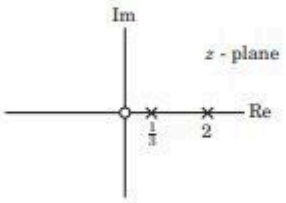
878270165916. 4

Question Number : 45 Question Id : 87827042254 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

X (z) of a system is specified by a pole zero pattern in figure given below:



Consider three different solution of x [n]

$$x_1[n]=\left[2^n-\left(\frac{1}{3}\right)^n\right]u[n]$$

$$x_2[n]=-2^n u[n-1]-\frac{1}{3^n}u[n]$$

$$x_3[n]=-2^n u[n-1]+\frac{1}{3^n}u[-n-1]$$

1. $x_1(n)$
2. $x_2(n)$
3. $x_3(n)$
4. All of above

Options :

878270165917. 1

878270165918. 2

878270165919. 3

878270165920. 4

Question Number : 46 Question Id : 87827042255 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In silicon at T = 300 K the thermal-equilibrium concentration of electron is $n_0 = 5 \times 10^4$ cm^{-3} . The hole concentration is

1. 4.5×10^{15} cm^{-3}
2. 4.5×10^{15} m^{-3}
3. 0.3×10^{-6} cm^{-3}
4. 0.3×10^{-6} m^{-3}

Options :

878270165921. 1

878270165922. 2

878270165923. 3

878270165924. 4

Question Number : 47 Question Id : 87827042256 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A diode has reverse saturation current $I_s = 10^{-10}$ A at 300K and non ideality factor $\eta = 2$. If diode voltage is 0.9 V, then diode current is

1. 11 mA
2. 35 mA
3. 83 mA
4. 143 mA

Options :

878270165925. 1

878270165926. 2

878270165927. 3

878270165928. 4

Question Number : 48 Question Id : 87827042257 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In bipolar junction transistor biased in the forward-active region the base current is $I_B = 50\ \mu A$ and the collector currents is $I_C = 2.7mA$. The α is

1. 0.949
2. 54
3. 0.982
4. 0.018

Options :

878270165929. 1

878270165930. 2

878270165931. 3

878270165932. 4

Question Number : 49 Question Id : 87827042258 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A heavily doped n- type semiconductor has the following data:

Hole-electron ratio : 0.4

Doping concentration : 4.2×10^8 atoms/m^3

Intrinsic concentration : 1.5×10^4 atoms/m^3

The ratio of conductance of the n-type semiconductor to that of the intrinsic semiconductor of same material and at same temperature is given by

1. 2000
2. 20000
3. 0.00005
4. 10000

Options :

878270165933. 1

878270165934. 2

878270165935. 3

878270165936. 4

Question Number : 50 Question Id : 87827042259 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Under low level injection assumption, the injected minority carrier current for an extrinsic semiconductor is essentially the

1. Diffusion current
2. Drift current
3. Recombination current
4. Induced current

Options :

878270165937. 1

878270165938. 2

878270165939. 3

878270165940. 4

Question Number : 51 Question Id : 87827042260 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Choose proper substitutes for X and Y to make the following statement correct:

Tunnel diode and Avalanche photo diode are operated in X bias and Y bias respectively

1. X: reverse, Y: reverse
2. X: reverse, Y: forward
3. X: forward, Y: reverse
4. X: forward, Y: forward

Options :

878270165941. 1

878270165942. 2

878270165943. 3

878270165944. 4

Question Number : 52 Question Id : 87827042261 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The Fermi level in an intrinsic semiconductor is:

1. closer to valence band
2. nearly midway between conduction and valence band
3. closer to the conduction band
4. overlapping with valence band

Options :

878270165945. 1

878270165946. 2

878270165947. 3

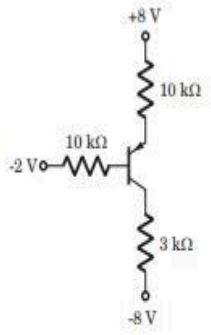
878270165948. 4

Question Number : 53 Question Id : 87827042262 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The common-emitter current gain of the transistor is β =75. The voltage V_{BE} in ON state is 0.7 V.



what is the value of V_{EC} ?

1. 8.4 V
2. 6.2 V
3. 4.1 V
4. 4.8 V

Options :

878270165949. 1

878270165950. 2

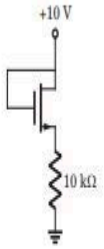
878270165951. 3

878270165952. 4

Question Number : 54 Question Id : 87827042263 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The parameters for the transistor in circuit of figure given below are V_{TN} = 2 V and K_n = 0 2. mA / V^2 . The power dissipated in the transistor is



1. 5.845 mW
2. 2.348 mW
3. 0.263 mW
4. 58.445 mW

Options :

878270165953. 1

878270165954. 2

878270165955. 3

878270165956. 4

Question Number : 55 Question Id : 87827042264 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Statement I: JFET is considered as a Voltage Controlled Device because Gate current is controlled by drain voltage.

Statement II: PIN diode is used as a current controlled attenuator.

In the light of above statements, choose the most appropriate answer from the options given below:

1. Statement I is true but statement II is false .
2. Statement I is false but statement II is true.
3. Both statement I and statement II are true.
4. Both statement I and statement II are false.

Options :

878270165957. 1

878270165958. 2

878270165959. 3

878270165960. 4

Question Number : 56 Question Id : 87827042265 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The value of integral $\int_0^i ze^{z^2}\,dz$ is

1. $\frac{1}{2}[e^{-1}-1]$
2. $\frac{1}{2}[1-e^{-1}]$
3. $\frac{3}{2}[e^{-1}-1]$
4. $\frac{3}{2}[1-e^{-1}]$

Options :

878270165961. 1

878270165962. 2

878270165963. 3

878270165964. 4

Question Number : 57 Question Id : 87827042266 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The particular solution of the give differential equation $(D^2-1)y = 2x^4-3x+1$ where D is the differential operator is

1. $2x^4-3x-1+24x^2+48$
2. $-2x^4+3x-1-24x^2-48$
3. $2x^4-3x+1+24x^2-48$
4. $-2x^4-3x-1-24x^2-48$

Options :

878270165965. 1

878270165966. 2

878270165967. 3

878270165968. 4

Question Number : 58 Question Id : 87827042267 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A player tosses 3 fair coins. He wins Rs. 500 if 3 heads occur, Rs. 300 if 2 heads occur, Rs. 100 if one head occurs. On the other hand , he loses Rs. 1500 if 3 tails occur. The value of the game to the player is

1. Rs. 25
2. Rs. 50
3. Rs. 75
4. Rs. 60

Options :

878270165969. 1

878270165970. 2

878270165971. 3

878270165972. 4

Question Number : 59 Question Id : 87827042268 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The integral value of function given by $f(z) = \frac{1}{(z^3 - z^4)}$ clockwise around the circle C: $|z| = \frac{1}{2}$.

1. $\frac{-2\pi i}{3}$
2. $2\pi i$
3. $-2\pi i$
4. $\frac{2\pi i}{3}$

Options :

878270165973. 1

878270165974. 2

878270165975. 3

878270165976. 4

Question Number : 60 Question Id : 87827042269 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $z = x^2 + 2y^2, x = r\cos\theta, y = r\sin\theta$, the partial derivative $\left(\frac{\partial z}{\partial \theta}\right)_r$ is

1. $r^2. \sin^2\theta$
2. $r. \sin 2\theta$
3. $r. \sin^2\theta$
4. $r^2. \sin 2\theta$

Options :

878270165977. 1

878270165978. 2

878270165979. 3

878270165980. 4

Question Number : 61 Question Id : 87827042270 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Three students A, B and C are in a swimming race. A and B have the same probability of winning and each is twice as likely to win as C.The probability that B or C wins is

1. $\frac{1}{5}$
2. $\frac{4}{5}$
3. $\frac{3}{5}$
4. $\frac{2}{5}$

Options :

878270165981. 1

878270165982. 2

878270165983. 3

878270165984. 4

Question Number : 62 Question Id : 87827042271 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The value of integral $\oint_c \frac{dz}{z^2+9}$ is _____, where c is |z|=5

1. $-\frac{\pi}{3}$
2. $\frac{\pi}{3}$
3. $-\frac{2\pi}{3}$
4. 0

Options :

878270165985. 1

878270165986. 2

878270165987. 3

878270165988. 4

Question Number : 63 Question Id : 87827042272 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A particular green LED emits light of wavelength 5490 A^0. The energy bandgap of the semiconductor material used there is

(Plank's constant 6.626 10^{-34} J s)

1. 1.98 eV
2. 1.17 eV
3. 2.26 eV
4. 0.74 eV

Options :

878270165989. 1

878270165990. 2

878270165991. 3

878270165992. 4

Question Number : 64 Question Id : 87827042273 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

One of the following negative resistance devices is a voltage controlled device:

1. Unijunction transistor
2. silicon controlled rectifier
3. triac
4. tunnel diode

Options :

878270165993. 1

878270165994. 2

878270165995. 3

878270165996. 4

Question Number : 65 Question Id : 87827042274 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which one of the following statements about RAM is not correct?

1. RAM stands for random-access memory
2. it is also called read/write memory
3. when power supply is switched off the information in RAM is usually lost
4. the binary contents are entered or stored in the RAM chip during the manufacturing state

Options :

878270165997. 1

878270165998. 2

878270165999. 3

878270166000. 4

Question Number : 66 Question Id : 87827042275 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List-I** with **List-II**

List-I	List-II
Filter\Circuit	**Circuit name**
(A). Low pass filter	(I). Tuned circuit
(B). High pass filter	(II). Compensated attenuator
(C). Bandpass filter	(III). Differentiator
(D). R-L-C circuit	(IV). Ringing

Choose the **correct** answer from the options given below:

1. (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
2. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)
3. (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
4. (A) - (II), (B) - (I), (C) - (III), (D) - (IV)

Options :

878270166001. 1

878270166002. 2

878270166003. 3

878270166004. 4

Question Number : 67 Question Id : 87827042276 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The cutoff frequency of an op-amp having specified values of signal bandwidth (BW) of 1 MHz and closed loop gain (A_{CL}) = $200\frac{V}{mV}$ will be

1. 15 Hz
2. 20 Hz
3. 10 Hz
4. 5 Hz

Options :

878270166005. 1

878270166006. 2

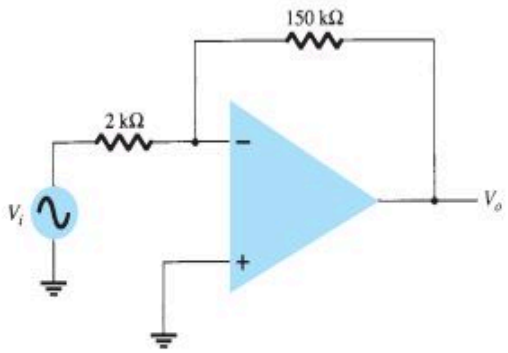
878270166007. 3

878270166008. 4

Question Number : 68 Question Id : 87827042277 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Find the output offset voltage of the given circuit . The op-amp spec lists V_{IO} = 1.2 mV.



1. 90.4 mV
2. 91.2 mV
3. 93.5 mV
4. 98.2 mV

Options :

878270166009. 1

878270166010. 2

878270166011. 3

878270166012. 4

Question Number : 69 Question Id : 87827042278 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In Darlington pair connection if each transistor has a current gain of 200 the overall current gain is

1. 40000
2. 20000
3. 10000
4. 80000

Options :

878270166013. 1

878270166014. 2

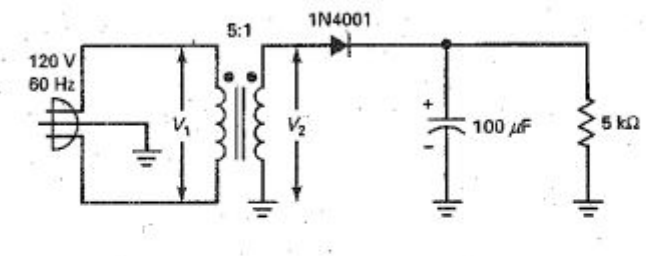
878270166015. 3

878270166016. 4

Question Number : 70 Question Id : 87827042279 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

What is the dc load current in the given figure



1. 5.4 mA
2. 6.8 mA
3. 4.6 mA
4. 3.7 mA

Options :

878270166017. 1

878270166018. 2

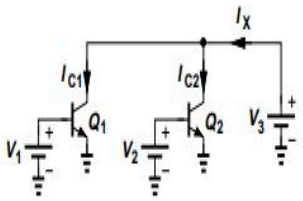
878270166019. 3

878270166020. 4

Question Number : 71 Question Id : 87827042280 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In the given circuit Q1 and Q2 are identical and operate in the active mode.Asuming $exp\left(\frac{V_{BE}}{V_T}\right) \gg 1$ then at 300 K the value of V_1-V_2 such that $I_{C1} = 10.I_{C2}$ will be



1. 40mV
2. 20mV
3. 80mV
4. 60mV

Options :

878270166021. 1

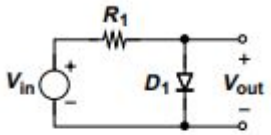
878270166022. 2

878270166023. 3

878270166024. 4

Question Number : 72 Question Id : 87827042281 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1



At the output the circuit shown above passes

1. both negative and postive cycles
2. only negative cycles
3. only positive cycles
4. zero output

Options :

878270166025. 1

878270166026. 2

878270166027. 3

878270166028. 4

Question Number : 73 Question Id : 87827042282 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A certain memory has a capacity of 8K×16.How many address lines does it have?

1. 15
2. 16
3. 8
4. 13

Options :

878270166029. 1

878270166030. 2

878270166031. 3

878270166032. 4

Question Number : 74 Question Id : 87827042283 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

An ADC has a total conversion time of 400μs. The highest frequency that its analog input should be allowed to contain is

1. 2.5 KHz
2. 1.25 KHz
3. 0.625 KHz
4. 5 KHz

Options :

878270166033. 1

878270166034. 2

878270166035. 3

878270166036. 4

Question Number : 75 Question Id : 87827042284 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : Scientific Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The sequential circuit with ten states will have

1. 10 flip flops
2. 5 flip-flops
3. 4 flip-flops
4. 0 flip-flops

Options :

878270166037. 1

878270166038. 2

878270166039. 3

878270166040. 4