Question Paper Preview

Notations :

1.Options shown in green color and with ✔ icon are correct.

2.Options shown in red color and with ✖ icon are incorrect.

Question Paper Name :	M Sc Electronics 05th July 2023 Shift 1
Subject Name :	M.Sc. Electronics
Creation Date :	2023-07-05 15:23:33
Duration :	90
Total Marks :	100
Display Marks:	No
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No

M.Sc. Electronics

Group Number :	1
Group Id :	18152078

Group Maximum Duration :	0
Group Minimum Duration :	90
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	100
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

PART A

Section Id :	181520119
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	100
Number of Questions to be attempted :	100
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	181520145
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 1 Question Id : 1815208115 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

How many bits are needed to represent decimal values ranging from 0 to 12,500?

Options :

1. ✖ 12

13

2. ✖

3. ✔ 14

16

4. ✖

Question Number : 2 Question Id : 1815208116 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The value of after adding $1A8_{16} + 67B_{16}$ is

Options :

1. ✖ 623_{16}

2. ✖ 723_{16}

3. ✔ 823_{16}

4. ✖ $9A3_{16}$

Question Number : 3 Question Id : 1815208117 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A number is expressed in binary two's complement as 1110 1111. Its decimal equivalent value is

Options :

1. ✖ 15

2. ✖ -15

3. ✖ 17

4. ✔ -17

Question Number : 4 Question Id : 1815208118 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The decimal equivalent of binary 110.001 is

Options :

1. ✖ 6.25

2. ✔ 6.125

3. ✖ 62.5

4. ✖ 0.625

Question Number : 5 Question Id : 1815208119 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the output of a logic gate is '1' when all its inputs are at logic'0', then the gate is either

Options :

1. ✔ a NAND or NOR

2. ✖ an AND or an EX-NOR

3. ✖ an OR or a NAND

4. ✖ an EX-OR or an EX-NOR

Question Number : 6 Question Id : 1815208120 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

In standard TTL , the 'totem pole' refers to

Options :

1. ✖ Multi-emitter input stage

2. ✖ The phase splitter

3. ✖ Open collector output stage

4. ✔ The output buffer

Question Number : 7 Question Id : 1815208121 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The voltage levels of a negative logic system

Options :

1. must necessarily be negative ✖

2. may be negative or positive ✔

3. must necessarily be positive ✖

4. must necessarily be 0V and -5V ✖

Question Number : 8 Question Id : 1815208122 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The figure of merit of a logic family is given by

Options :

1. Gain x Bandwidth ✖

2. Fan-out x Propagation delay ✖

3. Propagation delay x Power dissipation ✔

Noise-margin x Power dissipation

4. ✖

Question Number : 9 Question Id : 1815208123 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider the logic families

1. MOS
2. DTL
3. RTL
4. ECL

The sequence of these logic families in the order of their increasing noise margin is

Options :

3, 4, 2, 1

1. ✔

3, 4, 1, 2

2. ✖

4, 3, 2, 1

3. ✖

4, 3, 1, 2

4. ✖

Question Number : 10 Question Id : 1815208124 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following logic families can be operated using a supply voltage from 3V to 15V?

Options :

1. ✖ TTL

2. ✖ ECL

3. ✔ CMOS

4. ✖ PMOS

Question Number : 11 Question Id : 1815208125 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Boolean $(\bar{A}+B)\,(A+\bar{C})\;\;(\overline{B}+\overline{C})$ expression simplifies to

Options :

1. ✖ $(A+B)\bar{C}$

2. ✔ $(\bar{A}+B)\bar{C}$

3. ✖ $(A+\bar{B})\bar{C}$

4. ✖ $(\bar{A} + \bar{B})\bar{C}$

Question Number : 12 Question Id : 1815208126 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In Karnaugh map simplification, a group of eight adjacent ones leads to a term with

Options :

1. ✖ one literal less than the total number of variables

2. ✖ two literal less than the total number of variables

3. ✔ three literal less than the total number of variables

4. ✖ four literal less than the total number of variables

Question Number : 13 Question Id : 1815208127 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Sum of Products (SOP) form of logical expression is most suitable for designing logic circuits using only

Options :

1. ✖ XOR gates

NOR gates

2. ✖

NAND gates

3. ✔

AND gates

4. ✖

Question Number : 14 Question Id : 1815208128 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider the following statements:

1. Minimization using Karnaugh map may not provide unique solution.
2. Redundant grouping in Karnaugh map may result in non-minimized solution.
3. Don't care states if used in Karnaugh map for minimization, the minimal solution is not obtained.

Which of the statements given above are correct?

Options :

1, 2 and 3

1. ✖

2 and 3 only

2. ✖

1 and 3 only

3. ✖

1 and 2 only

4. ✔

Question Number : 15 Question Id : 1815208129 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following can be used as parallel to serial converter?

Options :

1. ✖ Decoder

2. ✔ Multiplexer

3. ✖ Digital Counter

4. ✖ Demultiplexer

Question Number : 16 Question Id : 1815208130 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following circuits come under the class of combinational logic circuits?

1. Full Adder
2. Full Subtractor
3. Half Adder
4. J-K flip-flop
5. Counter

Select the correct answer from the codes given below:

Options :

1. ✖ 1 3, and 5

2. ✖ 2, 3 and 4.

3. ✖ 1, 4 and 5

4. ✔ 1, 2 and 3

Question Number : 17 Question Id : 1815208131 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

What is the number of select lines required in a single input *n*-output demultiplexer?

Options :

1. ✖ 2

2. ✖ n

3. ✖ 2^n

4. ✔ $\log_2 n$

Question Number : 18 Question Id : 1815208132 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

For an *n*-bit binary adder, what is the number of gates through which a carry has to propagate from input to output?

Options :

1. ✖ n

2. ✖ n^2

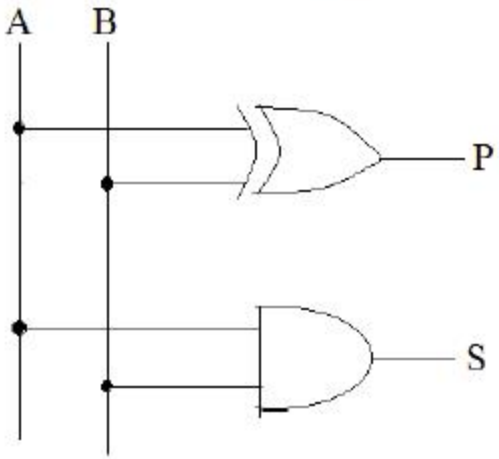
3. ✔ $2n$

4. ✖ $n + 1$

Question Number : 19 Question Id : 1815208133 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The half adder circuit in the given figure has inpute AB = 11



The logic level of P and S outputs will be

Options :

1. ✖ P = 0 and S = 0

2. ✔ P = 0 and S = 1

P = 1 and S = 0

3. ✖

P = 1 and S = 1

4. ✖

Question Number : 20 Question Id : 1815208134 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following type of negative feedback increases the input resistance and ' decreases the output resistance of the amplifier?

Options :

1. ✖ Current series feedback

2. ✔ Voltage series feedback

3. ✖ Current shunt feedback

4. ✖ Voltage shunt feedback

Question Number : 21 Question Id : 1815208135 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A programmable logic array (PLA)can be used as

Options :

1. ✖ a microprocessor

2. ✖ a dynamic memory

3. ✔ to realize a sequential logic

4. ✖ to realize a combinational logic

Question Number : 22 Question Id : 1815208136 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An R-S latch is a

Options :

1. ✔ one bit memory element

2. ✖ synchronous sequential element

3. ✖ combinational circuit

4. ✖ one clock delay element

Question Number : 23 Question Id : 1815208137 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

A master-slave flip-flop has the characteristic that

Options :

1. ✖ change in the input immediately reflected in the output.

2. ✔ change in the output occurs when the state of the master is affected.

3. ✖ change in the output occurs when the state of the slave is affected.

4. ✖ both the master and the slave states are affected at the same time.

Question Number : 24 Question Id : 1815208138 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

A 1μs pulse can be converted into a 1ms pulse by using

Options :

1. ✔ a monstable multivibrator

2. ✖ a bistable multivibrator

an astable multivibrator

3. ✖

a *J-K* flip-flop

4. ✖

Question Number : 25 Question Id : 1815208139 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A crystal oscillator is frequently used in digital circuits for timing purpose because of its

Options :

simple circuitry

1. ✖

low cost

2. ✖

high frequency stability

3. ✔

ability to set the frequency at the desired value

4. ✖

Question Number : 26 Question Id : 1815208140 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The initial content of a four-bit shift register is 1000. What is the register content after it is shifted four times to the right, with the serial input being 111100?

Options :

1. ✖ 0011

2. ✖ 1000

3. ✖ 1100

4. ✔ 1111

Question Number : 27 Question Id : 1815208141 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Which of the following statements is correct?

Options :

1. ✖ RAM is a non-volatile memory whereas ROM is a volatile memory.

2. ✔ RAM is a volatile memory whereas ROM is a non-volatile memory

Both RAM and ROM are volatile memories but in ROM data is not lost when power is switched off.

3. ✖

Both RAM and ROM are non-volatile memories but in RAM data is not lost when power is switched off.

4. ✖

Question Number : 28 Question Id : 1815208142 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following has the shortest access time?

Options :

Bipolar static RAM

1. ✔

NMOS EPROM

2. ✖

NMOS RAM

3. ✖

CMOS RAM

4. ✖

Question Number : 29 Question Id : 1815208143 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A certain semiconductor memory chip is specified as 2K x 8. How many bits can be stored on this chip?

Options :

1. ✖ 10240

2. ✖ 20480

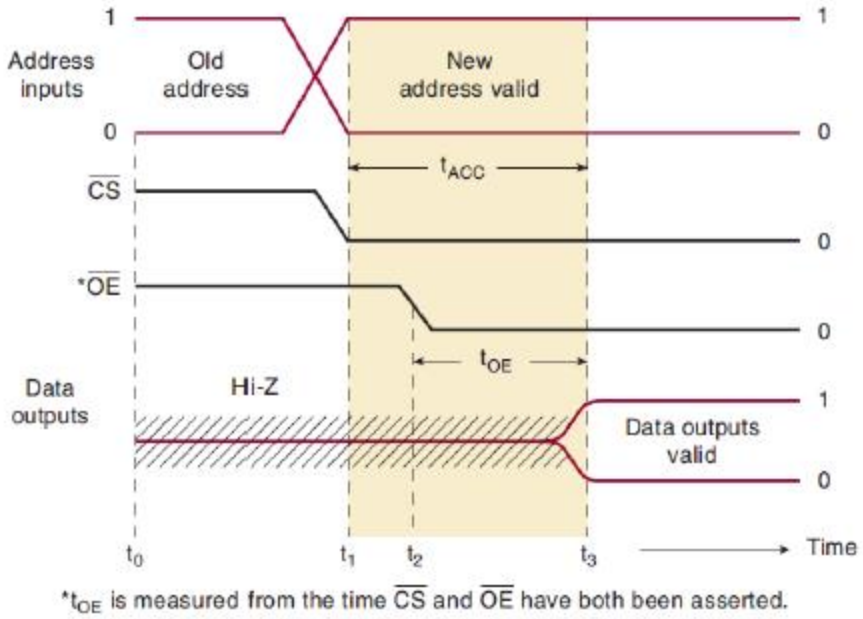
3. ✔ 16384

4. ✖ 18384

Question Number : 30 Question Id : 1815208144 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The following figure represents a



*t_{OE} is measured from the time $\overline{CS}$ and $\overline{OE}$ have both been asserted.

Options :

typical timing for a ROM read operation

1. ✔

typical timing for a ROM write operation

2. ✖

timing diagram for a RAM read operation

3. ✖

timing diagram for a RAM write operation

4. ✖

Question Number : 31 Question Id : 1815208145 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In principle, the sampled signal can be recovered exactly when

Options :

1. ✔ $T_s \leq 1/2f_M$

2. ✖ $T_s \geq 1/2f_M$

3. ✖ $T_s = 1/2f_M$

4. ✖ $T_s \leq 1/f_M$

Question Number : 32 Question Id : 1815208146 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the spectral range of a signal extends from 10.0 to 10.1 MHz, the signal may be recovered from samples taken at a frequency

Options :

1. ✖ $f_s = 0.1MHz$

2. ✔ $f_s = 0.2MHz$

3. ✖ $f_s = 0.3MHz$

4. ✖ $f_s = 0.4MHz$

Question Number : 33 Question Id : 1815208147 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following statements given below are true?

1. When a digitally encoded signal arrives at the receiver the first operation to be performed is the separation of the signal from the noise which has been added during the transmission along the channel.
2. The output signal-to-noise ratio includes both quantization and thermal noise.
3. If the communication channel is of limited bandwidth, then there is the possibility of interference in Delta-modulation but not in Pulse Code Modulation.

Options :

1. ✖ 1 , 2 and 3

2. ✖ 1 and 3 only

3. ✔ 1 and 2 only

4. ✖ 2 and 3only

Question Number : 34 Question Id : 1815208148 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Companding in PCM systems leads to improved signal to quantization noise ratio. This improvement is for :

Options :

Lower frequency components only

1. ✖

Higher frequency components only

2. ✖

Lower amplitudes only

3. ✔

Higher amplitudes only

4. ✖

Question Number : 35 Question Id : 1815208149 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An analog voltage is in the range 0 to 8V is divided in 16 equal intervals for conversion to 4-bit digital output. The maximum quantization error (in V) is

Options :

0.1V

1. ✖

0.2V

2. ✖

0.3V

3. ✖

0.5V

4. ✔

Question Number : 36 Question Id : 1815208150 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The concept of cell in cellular telephone refers to

Options :

1. geographical area ✔

2. mobile station ✖

3. tower station ✖

4. base switching center ✖

Question Number : 37 Question Id : 1815208151 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the transmission systems require that the original document to be scanned ?

Options :

1. Paging system ✖

2. Videotext ✖

3. ✔ Facsimile

4. ✖ GPS

Question Number : 38 Question Id : 1815208152 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Hamming distance is the

Options :

1. ✖ distance between any two words only

2. ✖ distance between any two vectors only

3. ✖ distance between any two signal amplitudes

4. ✔ distance between any two words or vectors

Question Number : 39 Question Id : 1815208153 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following gives the least probability of error?

Options :

1. ✖ Amplitude Shift Keying

2. ✖ Frequency Shift Keying

3. ✔ Phase Shift Keying

4. ✖ Differential Phase Shift Keying

Question Number : 40 Question Id : 1815208154 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Pulse Code Modulation (PCM) is an example of

Options :

1. ✖ analog-to-analog conversion

2. ✔ analog-to-digital conversion

3. ✖ digital-to-digital conversion

4. ✖ digital-to-analog conversion

Question Number : 41 Question Id : 1815208155 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The value of alternating current or voltage that has the same heating effect as a corresponding direct current value is known as the

Options :

1. ✖ peak value

2. ✖ average value

3. ✔ rms value

4. ✖ peak-to-peak value

Question Number : 42 Question Id : 1815208156 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

A sine wave has a peak voltage of 170V. What is the instantaneous voltage at an angle of 45^0?

Options :

1. ✖ 240V

2. ✖ 85V

3. ✖ 0V

4. ✔ 120V

Question Number : 43 Question Id : 1815208157 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a series *RC* circuit

Options :

1. ✖ VC leads VR by 900

2. ✖ VC and VR are in same phase

3. ✔ VC lags VR by 900

4. ✖ VC leads VR by 450

Question Number : 44 Question Id : 1815208158 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

At what frequency does a 0.015μF capacitor have an X_C value of 2 kΩ?

Options :

1. ✖ 5.2 Hz

2. ✔ 5.3 kHz

5.4 MHz

3. ✖

5.4 kHz

4. ✖

Question Number : 45 Question Id : 1815208159 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A 15-Ωresistance is in series with 50-Ω of X_L and 30-Ω of X_C. If the applied voltage equals 50V, how much real power is dissipated by the circuit?

Options :

1. ✔ 60W

100W

2. ✖

100VA

3. ✖

5.12W

4. ✖

Question Number : 46 Question Id : 1815208160 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An *ac* circuit has $50 \angle -36.87^{\circ}\ \Omega$, an impedance, Z, of
What is the impedance of this circuit when expressed in rectangular form?

Options :

1. ✔ 40Ω - *j*30Ω

2. ✖ 40Ω + *j*30Ω

3. ✖ 30Ω - *j*40Ω

4. ✖ 30Ω + *j*40Ω

Question Number : 47 Question Id : 1815208161 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When dividing complex numbers in polar form

Options :

1. ✖ divide the magnitudes and phase angles

2. ✖ divide both the magnitudes and add the phase angles

3. ✖ divide the phase angles and add the magnitudes

4. ✔ divide the magnitudes and subtract the phase angles

Question Number : 48 Question Id : 1815208162 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When applying Kirchhoff's voltage law

Options :

1. ✖ consider any voltage whose positive terminal is reached first as negative and any voltage whose negative terminal is reached as positive

2. ✖ always consider all voltage sources as positive and all resistors voltage drops as negative.

3. ✔ consider any voltage whose negative terminal is reached first as negative and any voltage whose positive terminal is reached first as positive.

4. ✖ always consider all resistor voltage drops as positive and all voltage sources as negative.

Question Number : 49 Question Id : 1815208163 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A principal node is

Options :

1. ✖ a closed path or loop where the algebraic sum of the voltages must equal zero.

2. ✖ the simplest possible closed path around a circuit.

a junction where branch currents can combine or divide.

3. ✔

the algebraic sum of voltages is constant.

4. ✖

Question Number : 50 Question Id : 1815208164 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which theorem provides a shortcut for finding the common voltage across any number of parallel branches with different voltage sources?

Options :

The Superposition theorem.

1. ✖

Thevenin's theorem.

2. ✖

Norton's theorem.

3. ✖

Millman's theorem.

4. ✔

Question Number : 51 Question Id : 1815208165 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A circle is found on the screen of a CRO when two time varying signals of same frequency and same magnitude are applied to *X* and *Y* plates of the CRO. Then the relative phase difference is

Options :

1. 0^0 ✗

2. 90^0 ✓

3. 45^0 ✗

4. 270^0 ✗

Question Number : 52 Question Id : 1815208166 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following statements about Cathode Ray Tube is true?

1. the focusing electrodes are sometimes referred to as an electron lens.
2. the brightness of the glow produced at the screen does not depend on beam speed.
3. the color of the glow produced at the screen may be blue, red, green or white depending on the material employed.

Options :

1. 1 and 2 only ✗

2. 2 and 3 only ✗

3. 1, 2 and 3 ✗

4. ✔ 1 and 3 only

Question Number : 53 Question Id : 1815208167 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

When the frequency pf the applied voltage increases in a series *RC* circuit,

Options :

1. ✖ the phase angle, θ, becomes more negative.

2. ✖ Z_T increases

3. ✔ Z_T decreases

4. ✖ Z_T initially increases and then decreases

Question Number : 54 Question Id : 1815208168 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

An integrator is a circuit whose

Options :

1. ✔ output combines its original voltage with the new change in voltage

2. ✖ output is always equal to V_{in}

output is proportional to the change in applied voltage

3. ✖

time constant is short with the output across R

4. ✖

Question Number : 55 Question Id : 1815208169 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The time constant of an *RC* circuit is 330μs. If *R* = 1kΩ, then the value of *C* will be

Options :

1. ✔ *C* = 0.33μF

C = 0.033μF

2. ✖

C = 3.3μF

3. ✖

C = 330pF

4. ✖

Question Number : 56 Question Id : 1815208170 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The resonant frequency of an LC circuit is the frequency where

Options :

1. ✖ $X_L = 0\Omega$ and $X_C = 0\Omega$

2. ✖ $X_L < X_C$

3. ✖ $X_L > X_C$

4. ✔ $X_L = X_C$

Question Number : 57 Question Id : 1815208171 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In an *RC*-low pass filter, the output is taken across the

Options :

1. ✖ resistor

2. ✖ inductor

3. ✔ capacitor

4. ✖ diode

Question Number : 58 Question Id : 1815208172 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For signal frequencies in the pass band, an RC high-pass filter has a phase angle of approximately

Options :

1. ✖ 45^0

2. ✔ 0^0

3. ✖ -90^0

4. ✖ $+90^0$

Question Number : 59 Question Id : 1815208173 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An LC circuit resonant at 2000 kHz has a Q of 50. Then the edge frequencies f_1 and f_2 are

Options :

1. ✔ 1980 kHz and 2020 kHz

2. ✖ 2020 kHz and 1980 kHz

3. ✖ 2050 kHz and 1950 kHz

4. ✖ 1950 kHz and 2050 kHz

Question Number : 60 Question Id : 1815208174 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

The junction capacitance of a *p-n* junction depends on

Options :

1. ✖ doping concentration only

2. ✖ applied voltage only

3. ✔ both doping concentration and applied voltage

4. ✖ barrier potential

Question Number : 61 Question Id : 1815208175 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

The I-V characteristics of a Tunnel-diode exhibit

Options :

1. ✖ current-controlled positive resistance

2. ✔ voltage-controlled negative resistance

current-controlled negative resistance

3. ✖

voltage-controlled positive resistance

4. ✖

Question Number : 62 Question Id : 1815208176 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Varactor diodes are used in

Options :

To charge auxiliary storage batteries

1. ✖

Reference voltages

2. ✖

High frequency switching circuits

3. ✖

High frequency tuning circuits

4. ✔

Question Number : 63 Question Id : 1815208177 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The cathode of a Zener diode in a voltage regulator is normally

Options :

more positive than the anode

1. ✔

more negative than the anode

2. ✖

at + 0.7V

3. ✖

grounded

4. ✖

Question Number : 64 Question Id : 1815208178 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a transistor amplifier, if the base-emitter junction is open, the collector voltage is

Options :

1. ✖ 0V

2. ✖ 0.2V

3. ✖ floating

4. ✔ Vcc

Question Number : 65 Question Id : 1815208179 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a certain voltage-divider biased *npn* transistor, V_B is 2.95 V. the dc emitter voltage is approximately

Options :

1. ✖ 0.7V

2. ✖ 3.65V

3. ✔ 2.25V

4. ✖ 2.95V

Question Number : 66 Question Id : 1815208180 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

The disadvantage of base bias is

Options :

1. ✖ it is very complex

2. ✖ it produces low gain

3. ✖ it produces high leakage current

4. ✔ it is too beta dependent

Question Number : 67 Question Id : 1815208181 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a voltage-divider biased *npn* transistor, if the lower voltage-divider resistor (the one connected to ground) opens,

Options :

1. ✖ the transistor is not affected

2. ✖ the transistor may be driven into cut-off

3. ✔ the transistor may be driven into saturation

4. ✖ the collector current will increase

Question Number : 68 Question Id : 1815208182 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which transistor region is very thin and lightly doped?

Options :

1. ✖ the emitter region

2. ✖ the collector region

3. ✖ the anode region

4. ✔ the base region

Question Number : 69 Question Id : 1815208183 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following biasing techniques produces the most unstable Q point?

Options :

1. ✔ base bias

2. ✖ voltage-divider bias

3. ✖ emitter bias

4. ✖ collector bias

Question Number : 70 Question Id : 1815208184 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A JFET is a

Options :

1. ✔ normally on device

normally off device

2. ✖

bipolar device

3. ✖

current-controlled device

4. ✖

Question Number : 71 Question Id : 1815208185 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The drain and source leads may be interchanged when using a(n)

Options :

asymmetrical JFET

1. ✖

symmetrical JFET

2. ✖

D-type MOSFET

3. ✔

Photo diode

4. ✖

Question Number : 72 Question Id : 1815208186 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When a JFET is operating in the ohmic region

Options :

1. ✖ I_D is independent of V_{DS}

I_D is independent of V_{GS}

2. ✖

I_D increases in direct proportion to V_{DS}

3. ✖

the drain acts like a current source

4. ✔

Question Number : 73 Question Id : 1815208187 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Which of the following JFET amplifiers has the lowest input impedance?

Options :

the common-gate amplifier

1. ✖

the common-source amplifier

2. ✖

the common-drain amplifier

3. ✖

4. ✔ the source amplifier

Question Number : 74 Question Id : 1815208188 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The input impedance of MOSFET is

Options :

1. ✔ higher than that of JFET

2. ✖ lower than that of JFET

3. ✖ same as that of a JFET

4. ✖ approximately zero ohms

Question Number : 75 Question Id : 1815208189 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is **not** a characteristic of the UJT?

Options :

1. ✖ intrinsic standoff ratio

2. ✔ bilateral conduction

3. ✖ negative resistance

4. ✖ peak-point voltage

Question Number : 76 Question Id : 1815208190 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The specified value of holding current for an SCR means that

Options :

1. ✖ the device will turn on when the anode current exceeds this value

2. ✔ the device will turn off when the anode current falls below this value

3. ✖ the device may be damaged if the anode current exceeds this value

4. ✖ the gate current must equal or exceed this value to turn the device on

Question Number : 77 Question Id : 1815208191 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Once an SCR is conducting

Options :

1. ✖ its anode to cathode voltage increases substantially

2. ✖ the only way to turn it off is with a positive gate voltage

3. ✖ it can never be turned off

4. ✔ the gate loses all control

Question Number : 78 Question Id : 1815208192 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

The internal resistance of a photodiode

Options :

1. ✖ increases with light intensity when reverse-biased

2. ✖ increases with light intensity when forward-biased

3. ✔ decreases with light intensity when reverse-biased

decreases with light intensity when forward-biased

4. ✖

Question Number : 79 Question Id : 1815208193 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The efficiency of an LED for generating light is directly proportional to the

Options :

1. ✖ applied voltage

2. ✔ current injected

3. ✖ temperature

4. ✖ level of doping

Question Number : 80 Question Id : 1815208194 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The average value of a half-wave rectified voltage with a peak value of 200 V is

Options :

1. ✔ 63.7 V

2. ✖ 127.2 V

3. ✖ 141 V

4. ✖ 0 V

Question Number : 81 Question Id : 1815208195 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Line regulation is determined by

Options :

1. ✖ load current

2. ✖ zener current and load current

3. ✖ changes in load resistance and output voltage

4. ✔ changes in output voltage and input voltage

Question Number : 82 Question Id : 1815208196 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The ideal dc output voltage of a capacitor-input filter is equal to

Options :

1. ✔ the *peak* value of the rectified voltage

2. ✖ the *average* value of the rectified voltage

3. ✖ the *rms* value of the rectified voltage

4. ✖ zero volts

Question Number : 83 Question Id : 1815208197 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A dc voltage supply provides 60 V when the output is unloaded. When connected to a load, the output drops to 56 V. In this case, the value of voltage regulation is

Options :

1. ✖ 3.1%

2. ✖ 5.1%

3. ✔ 7.1%

4. ✖ 4.0%

Question Number : 84 Question Id : 1815208198 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The ripple voltage of a full-wave rectifier with 100-μF filter capacitor connected to a load drawing 50mA is

Options :

1. ✖ 0.6 V

2. ✔ 1.2 V

3. ✖ 2.4 V

4. ✖ 1.25 V

Question Number : 85 Question Id : 1815208199 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A certain common-emitter amplifier has a voltage gain of 100. If the emotter by pass capacitor is removed,

Options :

1. ✖ the circuit will become unstable

2. ✖ the voltage will increase

3. ✔ the voltage will decrease

4. ✖ the Q –point will shift

Question Number : 86 Question Id : 1815208200 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

The input resistance of a common-base amplifier is

Options :

1. ✔ very low

2. ✖ very high

3. ✖ the same as a CE

4. ✖ the same as CC

Question Number : 87 Question Id : 1815208201 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Which of the following type of transistor amplifier has its voltage gain as unity?

Options :

1. ✖ the common-base amplifier

the common-collector amplifier

2. ✔

the common-emitter amplifier

3. ✖

All the options

4. ✖

Question Number : 88 Question Id : 1815208202 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the only amplifier configuration that provides both voltage and current gain?

Options :

the common-base amplifier

1. ✖

the common-collector amplifier

2. ✖

the common-emitter amplifier

3. ✔

the emitter follower

4. ✖

Question Number : 89 Question Id : 1815208203 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A differential amplifier has an A_d of 100 and an A_{CM} of 0.1. what is its CMRR in dB?

Options :

1. ✖ 10dB

2. ✖ 30dB

3. ✖ 50dB

4. ✔ 60dB

Question Number : 90 Question Id : 1815208204 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An operational amplifier comparator that uses positive feedback is known as

Options :

1. ✖ zero crossing detector

2. ✔ Schmit trigger

3. ✖ peak detector

4. ✖ voltage follower

Question Number : 91 Question Id : 1815208205 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The slew-rate specification of an operational amplifier is the

Options :

1. ✖ maximum value of positive or negative output voltage

2. ✔ maximum rate at which its output voltage can change

3. ✖ attenuation against a common-mode signal

4. ✖ frequency where the voltage gain is unity

Question Number : 92 Question Id : 1815208206 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Negative feedback in an amplifier

Options :

1. ✔ reduces gain

2. ✖ increases frequency and phase distortions

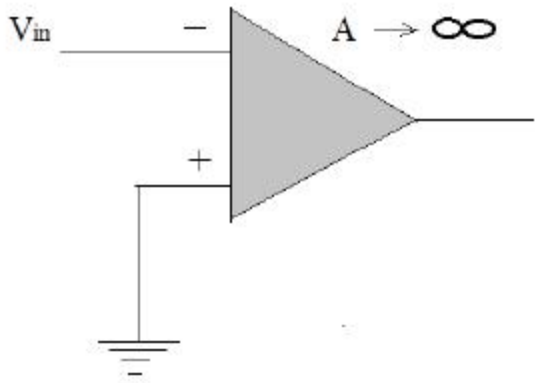
3. ✖ reduces bandwidth

4. ✖ increases noise

Question Number : 93 Question Id : 1815208207 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the input (V_{in}) to the following circuit is a sine-wave, the output will be



Options :

1. ✖ half-wave rectified sine wave

2. ✖ sinusoidal wave

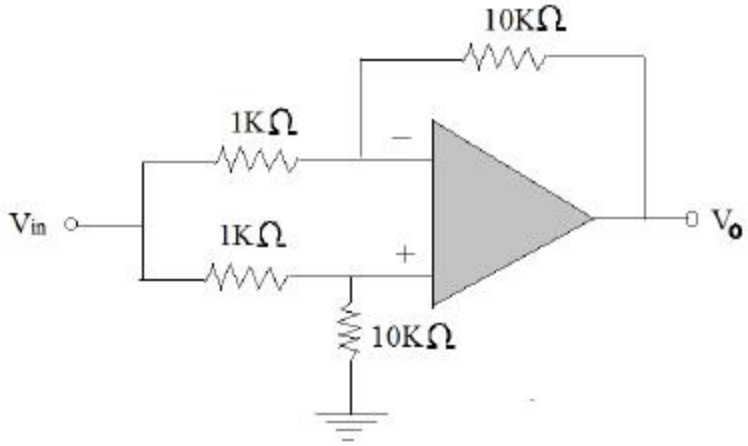
3. ✖ triangular wav

4. ✔ square wave

Question Number : 94 Question Id : 1815208208 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The output voltage (V_o)of the circuit shown below is



Options :

1. ✖ $11V_{in}$

2. ✖ $10V_{in}$

3. ✖ $1V_{in}$

4. ✔ 0

Question Number : 95 Question Id : 1815208209 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An amplitude modulation is given by

$x_c(t) = 10\cos 1200\pi t + 40\cos \pi t + 10\cos 1600\pi t$

the modulating signal frequency and modulation index are

Options :

1. ✔ 200Hz, 0.5

2. ✖ 400Hz, 0.25

3. ✖ 200Hz, 0.25

4. ✖ 400Hz, 0.5

Question Number : 96 Question Id : 1815208210 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a diode detector circuit, if the ac load for the diode is very much smaller than the dc load, it can result in

Options :

1. ✖ poor sensitivity of the receiver

2. ✖ poor AGC

3. ✔ negative peak clipping

4. ✖ diagonal clipping

Question Number : 97 Question Id : 1815208211 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An FM signal has a center frequency of 100MHz but is swinging between 100.001 MHz and 99.999 MHZ at a rate of 100 times per second. Then the intelligent frequency (f_i) will be

Options :

1. ✖ 12 Hz

2. ✖ 25Hz

3. ✖ 50Hz

4. ✔ 100Hz

Question Number : 98 Question Id : 1815208212 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A certain FM receiver provides a vo;tage gain of 200,000 (106 dB) prior to its limiter. The limiter's quieting voltage is 200mV. Then the receiver's sensitivity is

Options :

1. ✖ 0.2μV

2. ✖ 0.4 μV

3. ✖ 0.6 μV

4. ✔ 1 μV

Question Number : 99 Question Id : 1815208213 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For a 500-W carrier is to be modulated to a 90 percent level, the total transmitted power will be

Options :

1. ✖ 701.5W

2. ✔ 702.5W

3. ✖ 704.5W

4. ✖ 706.5W

Question Number : 100 Question Id : 1815208214 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following analog modulation scheme requires the minimum transmitted power and minimum channel band-width?

Options :

1. ✖ VSB

2. ✖ DSB-SC

3. ✔ SSB

4. ✖ AM