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 :	MScElectronics 12th Aug 2022 Shift 1
Subject Name :	M.Sc. Electronics
Creation Date :	2022-08-12 12:33:17
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 :	90320132
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 :	90320154
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 :	90320160
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 9032013704 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

RAM Memory is also known as

Options :

1. ✔ RWM

2. ✖ MBR

3. ✖ MAR

4. ✖ ROM

Question Number : 2 Question Id : 9032013705 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 can parallel data be taken out of a shift register simultaneously?

Options :

1. ✖ Use the Q output of the first FF

2. ✖ Use the Q output of the last FF

3. ✖ Tie all of the Q outputs together

4. ✔ Use the Q output of each FF

Question Number : 3 Question Id : 9032013706 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 Multiplexer

Options :

1. ✖ It is a type of decoder which decodes several inputs and gives many outputs

2. ✔ is a device which converts many signals into one

3. ✖ It takes one input and results into many output

4. ✖ It is a type of encoder which decodes several inputs and gives one output

Question Number : 4 Question Id : 9032013707 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

Most demultiplexers facilitate which type of conversion?

Options :

1. ✖ Decimal-to-hexadecimal

2. ✔ Single input, multiple outputs

3. ✖ AC to DC

4. ✖ Odd parity to even parity

Question Number : 5 Question Id : 9032013708 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 will be the output from a D flip-flop if D = 1 and the clock is low?

Options :

1. ✔ No change

2. ✖ Toggle between 0 and 1

3. ✖ 0

4. ✖ 1

Question Number : 6 Question Id : 9032013709 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 these flip – flops cannot be used to construct a serial shift register?

Options :

1. ✖ D – flip flop

2. ✖ SR flip – flop

3. ✔ T flip – flop

4. ✖ JK flip – flop

Question Number : 7 Question Id : 9032013710 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 number system has a base of 16

Options :

1. ✔ Hexadecimal

2. ✖ Octal

3. ✖ Binary

4. ✖ Decimal

Question Number : 8 Question Id : 9032013711 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 these sets of logic gates are known as universal gates?

Options :

1. ✖ XOR, NAND, OR

2. ✖ OR, NOT, XOR

3. ✖ NOR, NAND, XNOR

4. ✔ NOR, NAND

Question Number : 9 Question Id : 9032013712 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 the toggle mode, a JK flip-flop has

Options :

1. ✖ J = 0, K = 1

2. ✔ J = 1, K = 1

3. ✖ J = 0, K = 0

4. ✖ J = 1, K = 0

Question Number : 10 Question Id : 9032013713 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

1's complement of 1011001 is

Options :

1. ✖ 0100111

2. ✖ 0101100

3. ✔ 0100110

4. ✖ 00110110

Question Number : 11 Question Id : 9032013714 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 Digital circuit that can store only one bit is a

Options :

1. ✖ Register

2. ✖ NOR gate

3. ✔ Flip-flop

4. ✖ XOR gate

Question Number : 12 Question Id : 9032013715 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

DeMorgan's Law states that

Options :

1. ✖ (A+B)' = A'*B

2. ✔ (AB)' = A' + B'

3. ✖ (AB)' = A' + B

4. ✖ (AB)' = A + B

Question Number : 13 Question Id : 9032013716 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 DTL, the logic gating function is performed by

Options :

1. ✖ Inductor

2. ✔ Diode

3. ✖ Transistor

4. ✖ Transformer

Question Number : 14 Question Id : 9032013717 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 number of inputs in a half adder

Options :

1. ✖ 8

2. ✔ 2

3. ✖ 11

4. ✖ 16

Question Number : 15 Question Id : 9032013718 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 Register can be defined as

Options :

1. ✖ The group of transistors for storing n- a bit of information

2. ✖ The group of transistors for storing two bits of information

3. ✖ The group of flip-flops for storing 2 bit of information

4. ✔

The group of flip-flops for storing binary information.

Question Number : 16 Question Id : 9032013719 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 NOR gate is OR gate followed by

Options :

1. ✖ AND gate

2. ✖ NAND gate

3. ✔ NOT gate

4. ✖ X-OR gate

Question Number : 17 Question Id : 9032013720 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

Analog to Digital conversion includes

Options :

1. ✖ Sampling

2. ✖ Quantization

3. ✔ Sampling & Quantization

4. ✖ Decoding

Question Number : 18 Question Id : 9032013721 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

Disadvantages of digital communication are

Options :

1. ✖ Needs less bandwidth

2. ✖ Is more complex

3. ✔ Needs more bandwidth & Is more complex

4. ✖ Requires large amount of power

Question Number : 19 Question Id : 9032013722 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 type of digital modulation, widely used for digital data transmission is

Options :

1. ✖ Pulse amplitude modulation

2. ✖ Pulse width modulation

3. ✖ Pulse position modulation

4. ✔ Pulse code modulation

Question Number : 20 Question Id : 9032013723 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 pulse modulation systems is Analog

Options :

1. ✖ PCM

2. ✖ Differential PCM

3. ✔ PWM

4. ✖ Delta modulation

Question Number : 21 Question Id : 9032013724 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 biggest disadvantages of PCM is

Options :

1. ✖ Its inability to handle Analog signals

2. ✖ The high error rate which its quantizing noise reduces

3. ✖ Its incompatibility with TDM

4. ✔ The large bandwidth that are required for it

Question Number : 22 Question Id : 9032013725 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 form of pulse modulation?

Options :

1. ✖ Pulse amplitude modulation

2. ✖ Pulse width modulation

3. ✖ Pulse position modulation

4. ✔ Pulse frequency modulation

Question Number : 23 Question Id : 9032013726 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 digital transmission, the modulation technique that requires minimum bandwidth is

Options :

1. ✔ Delta modulation

2. ✖ PCM

3. ✖ DPCM

4. ✖ PAM

Question Number : 24 Question Id : 9032013727 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 polarities in NRZ format use

Options :

1. ✔ Complete pulse duration

2. ✖ Half duration

3. ✖ Both positive as well as negative value

4. ✖ Each pulse is used for twice the duration

Question Number : 25 Question Id : 9032013728 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

Parity check bit coding is used for

Options :

1. ✖ Error correction

2. ✔ Error detection

3. ✖ Error correction and detection

4. ✖ Error deletion

Question Number : 26 Question Id : 9032013729 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 hamming distance d_{min} and number of errors D, the condition for receiving invalid codeword is

Options :

1. ✖ $D \leq d_{min} + 1$

2. ✔ $D \leq d_{min} - 1$

3. ✖ $D \leq 1 - d_{min}$

4. ✖ $D \leq d_{min}$

Question Number : 27 Question Id : 9032013730 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 interference caused by the adjacent pulses in digital transmission is called

Options :

1. ✔ Inter symbol interference

2. ✖ White noise

3. ✖ Image frequency interference

4. ✖ Transit time noise

Question Number : 28 Question Id : 9032013731 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 Digital modulation scheme in which the step size is not fixed is known as

Options :

1. ✖ Delta modulation

2. ✔ Adaptive delta modulation

3. ✖ DPCM

4. ✖ PCM

Question Number : 29 Question Id : 9032013732 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 advantage of using Manchester format of coding is

Options :

1. ✔ Power saving

2. ✖ Polarity sense at the receiver

3. ✖ Noise immunity

4. ✖ Low cost

Question Number : 30 Question Id : 9032013733 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 cellular telephone system?

Options :

1. ✖ Accommodate a large number of users

2. ✖ Large geographic area

3. ✖ Limited frequency spectrum

4. ✔ Large frequency spectrum

Question Number : 31 Question Id : 9032013734 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

Typical conversion speed of ADC is

Options :

1. ✖ Less than 1μs

2. ✔ Less than 100 μs

3. ✖ Less than 500 μs

4. ✖ Greater than 1000 μs

Question Number : 32 Question Id : 9032013735 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 counter circuit is usually constructed of

Options :

1. ✖ A number of latches connected in cascade form

2. ✖ A number of NAND gates connected in cascade form

3. ✔ A number of flip-flops connected in cascade

4. ✖ A number of NOR gates connected in cascade form

Question Number : 33 Question Id : 9032013736 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 of an AND gate is Low

Options :

1. ✖ All the time

2. ✔ When any input is LOW

3. ✖ When any input is HIGH

4. ✖ When all inputs are HIGH

Question Number : 34 Question Id : 9032013737 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 of a NOT gate is HIGH when

Options :

1. ✔ The input is LOW

2. ✖ The input is HIGH

3. ✖ The input changes from LOW to HIGH

4. ✖ Voltage is removed from the gate

Question Number : 35 Question Id : 9032013738 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 major advantage of the R/2R ladder Digital-to-Analog (DAC) converter, as compared to a binary-weighted Digital-to-Analog DAC converter is

Options :

1. ✔ It uses only two different resistor values

2. ✖ It has fewer parts for the same number of inputs

3. ✖ Its operation is much easier to analyse

4. ✖ The virtual ground is eliminated and the circuit is therefore easier to understand and troubleshoot

Question Number : 36 Question Id : 9032013739 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

TTL is called transistor–transistor logic because both the logic gating function and the amplifying function are performed by

Options :

1. ✖ Resistors

2. ✔ Bipolar junction transistors

3. ✖ One transistor

4. ✖ Resistors and transistors respectively

Question Number : 37 Question Id : 9032013740 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

There are _____ cells in a 4-variable K-map.

Options :

1. ✖ 12

2. ✔ 16

3. ✖ 18

4. ✖ 8

Question Number : 38 Question Id : 9032013741 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

Product-of-Sums expressions can be implemented using

Options :

1. ✖ 2-level OR-AND logic circuits

2. ✖ 2-level NOR logic circuits

3. ✖ 2-level XOR logic circuits

4. ✔ Both 2-level OR-AND and NOR logic circuits

Question Number : 39 Question Id : 9032013742 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

BCD counter is also known as

Options :

1. ✖ Parallel counter

2. ✔ Decade counter

3. ✖ Synchronous counter

4. ✖ VLSI counter

Question Number : 40 Question Id : 9032013743 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 noise be reduced in Amplitude Modulation signal by

Options :

1. ✖ Increasing amplitude

2. ✖ Increasing wavelength

3. ✖ Increasing bandwidth

4. ✔ Increasing frequency deviation

Question Number : 41 Question Id : 9032013744 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 transistor configuration which provides highest output impedance is

Options :

1. ✔ Common-Base

2. ✖ Common-Emitter

3. ✖ Common-Collector

4. ✖ Common- Emitter and Common-Collector

Question Number : 42 Question Id : 9032013745 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

n-p-n transistors are preferred over p-n-p transistors, because

Options :

1. ✖ High mobility of holes

2. ✖ Low mobility of holes

3. ✖ Equal mobility of holes and electrons

4. ✔ Higher mobility of electrons than mobility of holes in p-n-p transistors

Question Number : 43 Question Id : 9032013746 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 BJT transistor, if $\alpha = 0.97$ then the value of β is

Options :

1. ✖ 35

2. ✔ 32.33

3. ✖ 42

4. ✖ 1.0

Question Number : 44 Question Id : 9032013747 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 BJT is said to be operating in the saturation region, if

Options :

1. ✖ B-E junction reverse biased & B-C junction forward biased

2. ✖ B-E junction reverse biased & B-C junction reverse biased

3. ✔ B-E junction forward biased & B-C junction forward biased

4. ✖ B-E junction forward biased & B-C junction reverse biased

Question Number : 45 Question Id : 9032013748 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 statement is true about FET (Field-Effective Transistor)

Options :

1. ✖ It has high output impedance

2. ✔ It has high input impedance

3. ✖ It has low input impedance

4. ✖ It has low output impedance

Question Number : 46 Question Id : 9032013749 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-channel FET, the direction of current flow is

Options :

1. ✖ Source to Drain

2. ✔ Drain to source

3. ✖ Gate to Source

4. ✖ Gate to Drain

Question Number : 47 Question Id : 9032013750 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

FET is a ------ controlled device

Options :

1. ✔ Voltage

2. ✖ Current

3. ✖ Resistance

4. ✖ Inductance

Question Number : 48 Question Id : 9032013751 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 MOSFET combines the areas of _____ & _____

Options :

1. ✔ Field effect & MOS technology

2. ✖ Semiconductor & TTL

3. ✖ MOS technology & CMOS technology

4. ✖ Semiconductor & MOS technology

Question Number : 49 Question Id : 9032013752 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 forward bias condition of P-N junction

Options :

1. ✖ The potential barrier increases

2. ✖ The potential barrier remains unchanged

3. ✔ The potential barrier decreases

4. ✖ The potential barrier becomes zero

Question Number : 50 Question Id : 9032013753 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 reverse saturation current in diodes approximately doubles for every

Options :

1. ✖ 20^0C rise of temperature

2. ✔ 10^0C rise of temperature

3. ✖ 40^0C rise of temperature

4. ✖ 1000^0C rise of temperature

Question Number : 51 Question Id : 9032013754 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 diode is mostly used as Voltage regulator?

Options :

1. ✖ Tunnel diode

2. ✖ Varactor diode

3. ✖ Light emitting diode

4. ✔ Zener diode

Question Number : 52 Question Id : 9032013755 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 diode is generally used as

Options :

1. ✔ Variable capacitor

2. ✖ Variable inductor

3. ✖ Variable resistor

4. ✖ Variable impedance

Question Number : 53 Question Id : 9032013756 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 equation for the resonance frequency of a series LCR circuit is given by

Options :

1. ✖ $f_0 = 1 / 2 \Pi \sqrt{RC}$

2. ✔ $f_0 = 1 / 2 \Pi \sqrt{LC}$

3. ✖ $f_0 = 1 \Pi / 2 \sqrt{RC}$

4. ✖ $f_0 = 1 / 2 \sqrt{LC}$

Question Number : 54 Question Id : 9032013757 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 quality factor in an LCR circuit is a

Options :

1. ✔ Measure of the efficiency of energy stored in an L or C when an AC is applied

2. ✖ Measure of the efficiency of energy stored in an R or C when an AC is applied

3. ✖ Measure of the efficiency of voltage stored in an L or C when an AC is applied

4. ✖ Measure of the efficiency of current stored in an L or C when an AC is applie

Question Number : 55 Question Id : 9032013758 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 LCR circuit, to have sharp bandwidth

Options :

1. ✖ R must be large and L must be large

2. ✖ R must be small and L must be small

3. ✔ R must be small and L must be large

4. ✖ R must be large and L must be small

Question Number : 56 Question Id : 9032013759 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 transient response of a series RC circuit is at maximum equal to

Options :

1. ✔ 5 times of time constant

2. ✖ 15 times of time constant

3. ✖ 10 times of time constant

4. ✖ 12 times of time constant

Question Number : 57 Question Id : 9032013760 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 RL circuit of high pass filter the circuit _____ low frequency and _____ high frequency.

Options :

1. ✔ Stop, Pass

2. ✖ Pass, Stop

3. ✖ Stop, Stop

4. ✖ Pass, Pass

Question Number : 58 Question Id : 9032013761 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 passive integrator RC Circuit

Options :

1. ✖ The input is connected to capacitance and output taken from resistor

2. ✖ The input is connected to resistor and output also taken from resistor

3. ✖ The input is connected to capacitor and output also taken from capacitor

4. ✔ The input is connected to resistor and output taken from capacitor

Question Number : 59 Question Id : 9032013762 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

Cathode Ray Oscilloscope gives

Options :

1. ✖ Actual representation

2. ✔ Visual representation

3. ✖ Approximate representation

4. ✖ Incorrect representation

Question Number : 60 Question Id : 9032013763 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 CRO electron beam is deflected in

Options :

1. ✖ 1 direction

2. ✖ 4 directions

3. ✖ 3 directions

4. ✔ 2 directions

Question Number : 61 Question Id : 9032013764 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

Typically, oscilloscope represents

Options :

1. ✖ Current and time

2. ✖ Resistance and time

3. ✔ Voltage and time

4. ✖ Power and time

Question Number : 62 Question Id : 9032013765 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 any linear network, if a source of emf E located in one mesh produces current i in the second mesh, then the same emf acting in the second mesh would produce the same current I in the first mesh. This statement is

Options :

1. ✖ Superposition theorem

2. ✔ Reciprocity theorem

3. ✖ Thevenin's theorem

4. ✖ Norton's theorem

Question Number : 63 Question Id : 9032013766 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 maximum transfer of power, internal resistance of the source should be

Options :

1. ✔ Equal to load resistance

2. ✖ Less than the load resistance

3. ✖ Greater than the load resistance

4. ✖ No relation between load and source resistances

Question Number : 64 Question Id : 9032013767 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

Application of Norton's theorem to a circuit yields

Options :

1. ✔ Equivalent current source and impedance in parallel

2. ✖ Equivalent impedance

3. ✖ Equivalent current source

4. ✖ Equivalent current source and impedance in series

Question Number : 65 Question Id : 9032013768 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

Kirchhoff's Current Law is based on

Options :

1. ✖ The charge can be accumulated at the node

2. ✔ Charge cannot be accumulated at the node

3. ✖ Energy is stored at the node

4. ✖ Depending on the circuit charge can be accumulated at the circuit

Question Number : 66 Question Id : 9032013769 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 algebraic sum of voltages around any closed path in a network is equal to

Options :

1. ✖ 1

2. ✖ Infinity

3. ✔ Zero

4. ✖ Negative polarity

Question Number : 67 Question Id : 9032013770 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

All _____ are loops but _____ are not meshes

Options :

1. ✖ Loops, Meshes

2. ✔ Meshes, loops

3. ✖ Branches, loops

4. ✖ Nodes, Branches

Question Number : 68 Question Id : 9032013771 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

RMS stands for _____

Options :

1. ✔ Root Mean Square

2. ✖ Root Mean Sum

3. ✖ Root Maximum sum

4. ✖ Root Minimum Sum

Question Number : 69 Question Id : 9032013772 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 sinusoidal wave, average current is always _____ RMS current.

Options :

1. ✖ Greater than

2. ✔ Less than

3. ✖ Equal to

4. ✖ Not related

Question Number : 70 Question Id : 9032013773 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 admittance is the reciprocal of

Options :

1. ✖ Voltage

2. ✖ Current

3. ✖ Frequency

4. ✔ Impedance

Question Number : 71 Question Id : 9032013774 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 terminals of a unijunction transistor are

Options :

1. ✖ Collector, Base and Emitter

2. ✔ Emitter, Base 1 and Base 2

3. ✖ Gate, Drain and Source

4. ✖ Gate, Drain, Body and Source

Question Number : 72 Question Id : 9032013775 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

Unijunction transistors is widely used for

Options :

1. ✖ Amplifying a circuit

2. ✖ Circuit breaker

3. ✖ Splitting device

4. ✔ Triggering device for silicon control rectifier (SCR) and TRIAC

Question Number : 73 Question Id : 9032013776 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 working regions of a unijunction transistor is

Options :

1. ✔ Negative Resistance region

2. ✖ Linear region

3. ✖ Saturation region

4. ✖ Cut-off region

Question Number : 74 Question Id : 9032013777 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

SCR is a _____ type of device.

Options :

1. ✖ Resistor

2. ✔ Thyristor

3. ✖ Capacitor

4. ✖ Diode

Question Number : 75 Question Id : 9032013778 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

SCR has three terminals ,namely

Options :

1. ✖ Emitter, base and collector

2. ✖ Emitter, base 1 and base 2

3. ✔ Cathode, Anode and Gate

4. ✖

Cathode, Anode and Grid

Question Number : 76 Question Id : 9032013779 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 SCR is made of

Options :

1. ✔ Silicon

2. ✖ Germanium

3. ✖ Carbon

4. ✖ Gallium Arsenide

Question Number : 77 Question Id : 9032013780 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 intensity of light is increased the resistance of LDR

Options :

1. ✖ Increases

2. ✔ Decreases

3. ✖ Remains same

4. ✖ Becomes zero

Question Number : 78 Question Id : 9032013781 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 there is no incident light, the reverse current in a photodiode is essentially non-existent and is referred to as

Options :

1. ✖ Zener current

2. ✖ Photocurrent

3. ✖ PIN current

4. ✔ Dark current

Question Number : 79 Question Id : 9032013782 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 region where the electrons and holes diffused across the junction is called

Options :

1. ✖ Depletion Junction

2. ✔ Depletion region

3. ✖ Depletion space

4. ✖ Depletion boundary

Question Number : 80 Question Id : 9032013783 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 light emitting diode is a

Options :

1. ✔ Heavily doped diode

2. ✖ Lightly doped diode

3. ✖ Intrinsic semiconductor diode

4. ✖ Zener diode

Question Number : 81 Question Id : 9032013784 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

Ripple factor of half wave rectifier is

Options :

1. ✖ 1.414

2. ✔ 1.21

3. ✖ 1.3

4. ✖ 0.48

Question Number : 82 Question Id : 9032013785 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

Efficiency of bridge full wave rectifier is

Options :

1. ✔ 81.2%

2. ✖ 50%

3. ✖ 40.6%

4. ✖ 45.3%

Question Number : 83 Question Id : 9032013786 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 choke L section filter

Options :

1. ✖ The inductor and capacitor are connected across the load

2. ✔ The inductor is connected in series and capacitor is connected across the load

3. ✖ The inductor is connected across and capacitor is connected in series to the load

4. ✖ The inductor and capacitor are connected in series

Question Number : 84 Question Id : 9032013787 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 temperature coefficient of output voltage expressed in fixed voltage regulator as

Options :

1. ✔ millivolts/^{o}C

2. ✖ Volts

3. ✖ millivolts

4. ✖ °C/ millivolts

Question Number : 85 Question Id : 9032013788 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 feedback circuit usually employs _____ type of circuit

Options :

1. ✖ Inductive

2. ✖ Capacitive

3. ✖ Shunt

4. ✔ Resistive

Question Number : 86 Question Id : 9032013789 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 negative feedback is employed in

Options :

1. ✖ Oscillators

2. ✖ Filters

3. ✔ Amplifiers

4. ✖ Rectifiers

Question Number : 87 Question Id : 9032013790 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 oscillator, for sustained oscillations, Barkhausen criterion is $A\beta$ equal to
(A= voltage gain without feedback, β= feedback factor)

Options :

1. ✖ zero

2. ✖ 1/2

3. ✖ 2/3

4. ✔ 1

Question Number : 88 Question Id : 9032013791 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 will be the output voltage obtained for an ideal op-amp?

Options :

1. ✔

Amplifies the difference between the two input voltages

2. ✖ Amplifies individual voltages input voltages

3. ✖ Amplifies products of two input voltage

4. ✖ Amplifies individual currents

Question Number : 89 Question Id : 9032013792 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

Op-amps used as high- and low-pass filter circuits employ which configuration?

Options :

1. ✖ Open loop

2. ✔ Inverting

3. ✖ Non-inverting

4. ✖ Comparator

Question Number : 90 Question Id : 9032013793 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 astable multivibrator is also known as a:

Options :

1. ✖ One-shot multivibrator

2. ✖ Bistable multivibrator

3. ✔ Free-running multivibrator

4. ✖ Monostable multivibrator

Question Number : 91 Question Id : 9032013794 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 noninverting amplifier has Ri of 1 KΩ and Rf of 100 KΩ. The closed-loop voltage gain is

Options :

1. ✖ 100,000

2. ✖ 1000

3. ✖ 100

4. ✔ 101

Question Number : 92 Question Id : 9032013795 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

CMRR stands for

Options :

1. ✔ Common Mode Rejection Ratio

2. ✖ Community model resistance ratio

3. ✖ Common Mode Resistance Ratio

4. ✖ Common multiple rejection ratio

Question Number : 93 Question Id : 9032013796 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

Step input given to op-amp integrator yields

Options :

1. ✖ Sine wave

2. ✖ Sawtooth wave

3. ✔ Ramp wave

4. ✖

Square wave

Question Number : 94 Question Id : 9032013797 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

Slew rate is defined as the rate of change of

Options :

1. ✔ Output voltage with respect to time

2. ✖ Input voltage with respect to time

3. ✖ Both output input voltage with respect to time

4. ✖ Input voltage with respect to output voltage

Question Number : 95 Question Id : 9032013798 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 Television Transmission

Options :

1. ✔ Amplitude modulation for picture and frequency modulation for sound are employed

2. ✖

Frequency modulation for picture and Amplitude modulation for sound are employed

3. ✖ Amplitude modulation for both picture and sound are employed

4. ✖ Frequency modulation for both picture and sound are employed

Question Number : 96 Question Id : 9032013799 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 stage is present in FM receiver but not in AM receiver

Options :

1. ✖ Demodulator

2. ✖ AM amplifier

3. ✖ Mixer

4. ✔ Amplitude Limiter

Question Number : 97 Question Id : 9032013800 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 frequency modulation, the modulation index is given by

Options :

1. ✖ Modulation frequency/frequency deviation

2. ✔ Frequency deviation/modulation frequency

3. ✖ Frequency deviation X modulation frequency

4. ✖ Frequency deviation/bandwidth

Question Number : 98 Question Id : 9032013801 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 main advantage of frequency modulation over amplitude modulation

Options :

1. ✔ Improved signal to noise ratio

2. ✖ Decrease in signal to noise ratio

3. ✖ Increase in bandwidth

4. ✖ Increase in amplification

Question Number : 99 Question Id : 9032013802 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 gain over mid-frequency range in an RC coupled amplifier

Options :

1. ✖ Changes instantly with frequency

2. ✖ Is independent of coupling

3. ✔ Is constant

4. ✖ Is maximum

Question Number : 100 Question Id : 9032013803 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 RC Coupling, the value of coupling capacitor is about

Options :

1. ✖ 100 pF

2. ✖ 0.1μf

3. ✖ 0.01μf

4. ✔ 10μf