BASIC POWER ELECTRONICS (22427) MCQ

Ques.1. A Silicon Controlled Rectifier (SCR) Is A

1. Unijunction Device
2. Device With Three Junction
3. Device With Four Junction
4. None Of The Above

Answer.2. Device With Three Junction

Ques.2. A Thyristor Is Basically

1. PNPN Device
2. A Combination Of Diac And Triac
3. A Set Of Scrs
4. A Set Of SCR, Diac And A Triac

Answer.1. PNPN Device

Ques.3. Which Semiconductor Power Device Out Of The Following, Is Not A Current Triggering Device?

1. Thyristor
2. Triac
3. G.T.O
4. MOSFET

Answer.4. MOSFET

Ques.4. Which Of The Following Device Incorporates A Terminal For Synchronizing Purposes?

1. Diac
2. Triac
3. SUS
4. None Of The Above

Answer.3. SUS

Ques.5. The Advantages Of SCS Over SCR Is

1. Slow Switching Time And Large V
H
2. Slow Switching Time And Smallerv
h

3. Faster Switching Time And Smallerv
h
4. Faster Switching Time And Large V
H
Answer.3. Faster Switching Time And Smallerv
h

Ques.6. A Thyristor Equivalent Of A Thyratron Tube Is A
1. Diac
2. Triac
3. Silicon Controlled Rectifier
4. None Of The Above
Hide Explanation
Answer.3. Silicon Controlled Rectifier

Ques.7. A Triac Is A
1. 2 Terminal Switch
2. 2 Terminal Bilateral Switch
3. 3 Terminal Bilateral Switch
4. 3 Terminal Bidirectional Switch
Answer.4. 3 Terminal Bidirectional Switch
Ques.8. The Fig. Below Represents A
1. Triac Thyristor
2. Diac Trigger
3. Diode Rectifier
4. None Of The Above
Hide Explanation
Answer.2. Diac Trigger

Ques.9. The Triple Frequency Of A Six-Phase Half Wave Rectifier For 220
V, 60 Hz Input Will Be
1. 2160 Hz
2. 720 Hz
3. 360 Hz
4. 60 Hz
Answer.3. 360 Hz

Ques.10. The Minimum Duration Of The Pulse In A Pulse Triggering System
For Thyristors Should Be At
1. 10 Ms
2. 10 Ms

3. 30 Ms
4. 1 Sec
Hide Explanation
Answer.1. 10 μs

Ques.11. The Inverter Can Be Classified As
1. Voltage Source Inverter
2. Current Source Inverter
3. Both 1 And 2
4. Power Inverter
Hide Explanation
Answer.3. Both 1 And 2

Ques.12. During Induction Heating, The Skin Depth Of Penetration Is Proportional (F = Frequency) To
1. F
2
2. F
3. 1/F
4. 1/√F
Hide Explanation
Answer.4. 1/√F
Explanation:-
Workpieces. High Frequencies Of Up To A Few Hundred Kilohertz Are Used For Forging, Soldering, Hardening, And Annealing.

Ques.13. A Device That Cannot Be Triggered With Low Voltage Of Either Polarity Is
1. Diac
2. Triac
3. SCS
4. All Of The Above
Hide Explanation
Answer.1. Diac
.

Ques.14. The Fig. Given Below Represents
1. Silicon Controlled Rectifier

2. Field Effect Transistor
3. Photoemissive Diode
4. Tunnel Diode
Hide Explanation
Answer.1. Silicon Controlled Rectifier

Ques.15. In A Three-Phase Half-Wave Rectifier, Each Diode Conducts For A Duration Of
1. 180°
2. 120°
3. 90°
4. 60°
Hide Explanation
Answer.2. 120°

Ques.16. Which Of The Following Finds Applications In Speed Control Of A DC Motor?
1. FET
2. NPN Transistor
3. SCR
4. None Of The Above
Hide Explanation
Answer.3. SCR
.

Ques.17. The Given Fig. Below Represents

1. Triac Thyristor
2. Diac Thyristor
3. Capacitive Diode
4. None Of The Above
Hide Explanation
Answer.1. Triac Thyristor
Explanation:-
The Triac Is A Three-Terminal Ac Switch That Is Triggered Into Conduction When A Low

Ques.18. The Ward-Leonard System Is Used For Controlling The Speed Of
1. DC Motors
2. Single Phase AC Motors
3. Three Phase Motors
4. Universal Motors
Hide Explanation
Answer.1. DC Motors
Explanation:
The Basic Principle Of The DC Variable Speed Drive Is That The Speed Of A Separately Excited DC Motor Is Directly Proportional To The Voltage Applied To The Armature Of The

Ques.19. A Device That Does Not Exhibit Negative Resistance Characteristics Is
1. FET
2. UJT
3. Tunnel Diode
4. SCR
Hide Explanation
Answer 1. FET

Ques.20. A Triac
1. Conducts When Not Triggered
2. Conducts When Not Triggered In Both Direction
3. Conducts When Triggered In One Direction
4. None Of The Above
Hide Explanation
Answer. 2. Conducts When Not Triggered In Both Direction
Ques.21. For A Thyristor Shown Is
1. All The 3 Junctions Are Forward Biased
2. J , J Are Forward Biased And J Reversed Biased
1 2 3
3. J Is Forward Biased, J , J Reversed Biased
1 2 3
4. J , J Are Reversed Biased J Is Forward Biased
1 2 3
Hide Explanation

Answer. 2. J , J Are Forward Biased And J Reversed Biased
1 2 3

Answer. 3. 3/√2
Explanation:

Ques.23. A Voltage Source 200 Sin314t Is Applied To A Thyristor Controlled Halfwave Rectifier With A Resistive Load Of 50Ω. If The Firing Angle Is 30° With Respect To Supply Voltage Waveform, The Average Power In The Load Is
1. 90.6 Watts
2. 86.3 Watts
3. 60.8 Watts
4. 70.6 Watts
Hide Explanation
Answer.4. 70.6 Watts
Ques.24. RC Snubber Circuit Is Used To Limit The Rate Of
1. Rise Of Current In SCR
2. Rise Of Voltage Across SCR
3. Conduction Period
4. All Of The Above
Hide Explanation
Answer.2. Rise Of Voltage Across SCR
Explanation:

Ques.25. A Freewheeling Diode Is Connected Across An Inductive Load Is
1. To Restore Conduction Angle On Phase
2. To Avoid Negative Reversal Voltage Drop
3. To Reduce The PRV
4. All Of The Above
Hide Explanation
Answer.1. To Restore Conduction Angle On Phase

Ques.26. Equalizing Circuits Are Provided Across Each SCR In Series Operation To Provide Uniform
1. Current Distribution
2. Voltage Distribution
3. Firing Of Scrs
4. All Of The Above

Hide Explanation
Answer.2. Voltage Distribution

Ques.27. For The High-Frequency Choppers, The Device That Is Preferred Is
1. TRIAC
2. Thyristor
3. Transistor
4. GTO
Hide Explanation
Answer 3. Transistor

Explanation:-
Ques.28. The Thyristor Is Turned -Off When The Anode Current Falls Below
1. Forward Current
2. Latching Current
3. Holding Current
4. Breakover Current
Hide Explanation
Answer.3. Holding Current

Ques.29. In A Thyristor Circuit, The Angle Of Conduction Is Changed By Changing
1. Anode Voltage
2. Gate Current
3. Forward Current
4. Anode Current
Hide Explanation
Answer.2. Gate Current

Ques.30. A Fully Controlled Natural Commutated 3-Phase Bridge Rectifier Is Operating With A Firing Angle A = 30°. The Peak To Peak Voltage Ripple Expressed As A Ratio Of The Peak Output Dc Voltage At The Output Of The Converter Bridge Is
1. 0.5
2. $\sqrt{3}/2$
3. $2/\sqrt{3}$
4. 1
Hide Explanation

Answer.1. 0.5

Ques.31. In AC Voltage Regulator, TRIACS Cannot Be Used For A
1. Back Emf Load
2. Resistive Load
3. R-L Load
4. Inductive Load
Hide Explanation
Answer.4. Inductive Load

Ques.32. In A Thyristor
1. The Holding Current Is Greater Than Latching
Current 2. The Two Current Are Equal
3. The Latching Current Is Greater The Holding Current
4. None Of The Above
Hide Explanation
Answer.3. The Latching Current Is Greater The Holding Current

Ques.33. The VI Characteristics Of UJT Is
1. Similar To CE With A Linear And Saturation Region
2. Similar To FET With A Linear And Pinch Off Region
3. Similar To Tunnel Diode In Some Respects
4. Similar To PN Junction Diode In Some Respects
Hide Explanation
Answer.3. Similar To Tunnel Diode In Some Respects

Ques.34. Chopper Control For DC Motor Provides Variation In
1. Input Voltage
2. Frequency
3. Current
4. None Of The Above
Hide Explanation
Answer.1. Input Voltage
Explanation:
Ques.35. In A Thyristor The Ratio Of Latching Current To Holding Current
Is
1. 0.5
2. 1
3. 2.7
4. 5

Hide Explanation
Answer.3. 2.7
Explanation:
The Typical Ratio Of Latching Current To Holding Current Lies In The Range Of 2.5 To 3. Therefore, Only 2.7 Is The Nearest Option.
Hence, The Correct Option Is (3).
Ques.36. In A Thyristor, Dv/Dt Protection Is Achieved Through The Use Of
1. L Across Thyristor
2. RC Across Thyristor
3. R Across Thyristor
4. RL Across Thyristor
Hide Explanation
Answer.2. RC Across Thyristor
Explanation:
Thyristor Protection Or SCR Protection

Ques.37. In A Thyristor Di/Dt Protection Is Achieved Through The Use Of
1. L In Series With The Thyristor
2. R Across Thyristor
3. RC Across Thyristor
4. RL Across Thyristor
Hide Explanation
Answer.1. L In Series With The Thyristor
Explanation:

Ques.38. UJT When Used For Triggering An SCR, Has The Waveform
1. Sine Wave
2. Square Wave
3. Sawtooth Wave
4. Trapezoidal
Hide Explanation
Answer.3. Sawtooth Wave
Ques.39. A Resistor Connected Across The Gate And Cathode Of A Thyristor Increase Its
1. Turn Off Time
2. Di/Dt Rating
3. Noise Immunity
4. Holding Current
Hide Explanation
Answer.4. Holding Current

Explanation:
D Is Connected As Shown In The Figure To Block The Positive Gate
3
Current Coming From The Supply When The Device Is Homed Biased.
Ques.40. P-Side Emitter In UJT Is
1. Not Doped
2. Feebly Doped
3. Heavily Doped
4. Moderately Doped
Hide Explanation
Answer.3. Heavily Doped

Ques.41. Inverter Converts
1. DC To AC
2. AC To DC
3. DC To DC
4. AC To AC
Hide Explanation
Answer.3. DC To AC
Explanation:

Ques.42. The Latching Current Of An SCR Is 12 Ma. Its Holding Current Will Be
1. 4 Ma
2. 12 Ma
3. 50 Ma
4. 8 Ma
Hide Explanation
Answer.1. 4 Ma
Explanation:
The Typical Ratio Of Latching Current To Holding Current Lies In The Range Of 2.5 To 3. Here For Calculation, We Are Taking The Value Of Latching Current 3
Latching Current/Holding Current = 3
Given
Latching Current = 12
12/Holding Current = 3
Holding Current = 4

Ques.43. In Series Connected Thyristors
1. L Is Used For Tuning Out Junction Capacitance

2. L & C Is Used For Filtering Out The Ripple
3. R, C Is Called Snubber Circuit
4. L Is Intended To Increase Di/Dt At Switch On
Hide Explanation
Answer.3. R, C Is Called Snubber Circuit
The RC Circuit (Snubber) Acts As A Lowpass Filter For This Voltage Transient. The Resistance Has Normally Low Value So That The Transient Is Absorbed By The Capacitor Quickly. Thus The Thyristor Is Protected Against Voltage Transients. The RC Snubber Circuit Is Very Commonly Used For Protection Of Thyristors Against Transient Voltages (High Frequency Voltage Spikes).

Ques.44. When Thyristor And Transistor As A Switch Are Compared, The True Statement Is
1. Thyristor Requires Turns Off Circuit While Transistor Does Not 2. The Voltage Drop Of The Thyristor Is Less Than Transistor 3. Thyristor Requires A Continuous Gate Current
4. Transistor Does Not Draw Continuously Base Current
Hide Explanation
Answer.1. Thyristor Requires Turns Off Circuit While Transistor Does Not
Explanation:

Ques.45. In DC Chopper, The Waveform For Input And Output Voltages Are Respectively
1. Both Discontinuous
2. Both Continuous
3. Continuous, Discontinuous
4. Discontinuous, Continuous
Hide Explanation
Answer.3. Continuous, Discontinuous

Ques.46. In DC Chopper, Per Unit Ripple Is Maximum When Duty Cycle A Is
1. 0.1
2. 0.3
3. 0.5
4. 0.7
Hide Explanation
Answer.3. 0.5

Ques.47. In A Step-Up Chopper Circuit, If Vs Is The Source Voltage And A Is Duty Cycle, Then The Output Voltage Is

1. V /(1 + A)
s
2. V (1 + A)
s
3. V (1 − A)
s
4. V /(1 − A)
s

Hide Explanation

Answer.4. V /(1 − A)
s

During Off-Period Of Switch S. As The Current Tends To Decrease, The Polarity Of Induced Emf Across L Is Reversed.

The Average Value Of Output Voltage Is Always Less Than Or Equal To Supply Voltage In Step Down The Chopper. But In The Step-Up Chopper, The Output Voltage Is More Than The Supply Voltage.

The Value Of Average Output Voltage Is

V = V /(1 – A)
o s

Ques.48. When Emitter Terminal Of A UJT Is Open Then The Resistance Of The Base Terminal Is

1. Very High
2. Very Low
3. Moderate
4. Any Finite Value

Hide Explanation

Answer.4. Very High

Ques.49. A Half-Controlled Single-Phase Bridge Rectifier Is Supplying An R-L Load. It Is Operated At A Firing Angle A And The Load Current Is Continuous. The Fraction Of Cycle That The Freewheeling Diode Conducts Is

1. A/ Π
2. A
3. Π + A
4. Π − A

Hide Explanation

Answer.1. A/ Π
Explanation:
Ques.50. If The Firing Angle In An SCR Rectifier Is Decreased, The Output Is
1. Increased
2. Maximum
3. Decreased
4. Remain Unaffected
Hide Explanation
Answer.1. Increased

Ques.51. A SCR Is A Switch
1. One Directional
2. Two Directional
3. Three Directional
4. Four Directional
Hide Explanation
Answer.1. One Directional
Ques.52. Comparing A Triac & SCR
1. Both Are Unidirectional Devices
2. An SCR Has Less Time For Turn Off Than Triac
3. Both Are Bidirectional Devices
4. All Of The Above
Hide Explanation
Answer.2. An SCR Has Less Time For Turn Off Than Triac
Explanation:-

Ques.53. Which Of The Following Statement Is True About Thyristor
1. The Turn Off Time Of A Thyristor Is Less Than The Turn-On Time
2. The Turn-On Time Is Less Than The Turn-Off Time
3. The Turn-Off Time For The Line Commutation Is Less Than The Forced Commutation
4. None Of The Above
Hide Explanation
Answer.2. The Turn-On Time Is Less Than The Turn-Off Time

Ques.54. In A Three-Phase Halfwave Rectifier, The Ratio Of Average Output Voltage To Per Phase Maximum AC Voltage Is
1. 1

2. 1.169
3. 0.827
4. 1.571

Hide Explanation

Answer.3. 0.827

Explanation:-

The Average D.C Output Voltage For A Phase Half-Wave Rectifier Is 0.827 Of The Peak.

$Dc = 0.827 \times Vpeak$

avg

So Ratio Of Average Output Voltage To Per Phase Maximum AC Voltage

$= Dc/V = 0.827$ V

avg peak

Ques.55. The Figure Represents The

1. Zener Diode
2. Silicon Controlled Rectifier
3. Junction Field Effect Transistor
4. Tunnel Diode

Hide Explanation

Answer.3. Junction Field Effect Transistor

Ques.56. In A 3-Phase Half Wave Rectifier Circuit, Each Diode Is Subjected To A PIV Od

1. V
m
2. √2V
m
3. √3V
m
4. 2V
m

Hide Explanation

Answer.3. √3V
m

Ques.57. In A Three-Phase Halfwave Rectifier, The Ratio Of Average Output Voltage To Per Phase Maximum AC Voltage Is

1. 0.955
2. 1.169
3. 0.827
4. 1.571

Hide Explanation

Answer.1. 0.955

Explanation:-

The Average D.C Output Voltage For A Phase Half-Wave Rectifier Is 0.827 Of The Peak.

$Dc = 0.955 \times Vpeak$

avg

So Ratio Of Average Output Voltage To Per Phase Maximum AC Voltage

$= Dc/V = 0.955\ V$

avg peak

Ques.58. In A 1φ, Half Wave Controlled Rectifier If The Input Voltage Is 400 Sin314t, The Average Output Voltage For A Firing Angle Of 60° Is

1. 100/Π
2. 200/Π
3. 300/Π
4. 400/Π

Hide Explanation

Answer.4. 400/Π

Explanation:-

The Average Output Voltage Of 1φ, Half Wave Controlled Rectifier Is

$Vo = (Vm/2\pi)\ X\ (1+Cos\alpha)$

Where

V = Maximum Voltage

m

$V = 400$

m

$400/2\pi\ X\ (1+Cos60) = 300/\Pi.$

Ques.59. Among This Alternative, PIV Rating Of Which Diode Is Lower Than That Of Equivalent Vacuum Diode?

1. PN Junction Diode
2. Crystal Diode
3. Tunnel Diode
4. Small Single Diode

Hide Explanation

Answer.2. Crystal Diode

Ques.60. In A 3-Φ Semi Converter For Firing Angle Less Than Or Equal To 60°, Wheeling Diode Conducts For

1. Zero Degree
2. 30°
3. 45°
4. 75°

Hide Explanation

Answer.1. Zero Degree

Ques.61. The Fully Controlled Thyristor Converter In The Figure Is Fed From A Single-Phase Source. When The Firing Angle Is 0°, The DC Output Voltage Of The Converter Is 300 V. What Will Be The Output Voltage For A Firing Angle Of 60°, Assuming Continuous Conduction?

1. 300
2. 150
3. 200
4. 700

Hide Explanation

Answer.2. 150

Explanation:-

The Output Voltage Of A Fully Controlled Single Phase Rectifier Is Given By

$V_o = 2V_m \cos\alpha/\Pi$

Now At A = 0° Dc Output Is 300 V

$300 = 2V_m \cos 0°/\Pi$

$300 = 2V_m/\Pi$ ————(1)

For Firing Angle 60° The Output Voltage Will Be

$V_o = 2V_m \cos 60°/\Pi$

Putting The Value Of $2V_m/\Pi$ In Equation 1 We Get

$V_o = 300\cos 60°$

V = 150 V
o
Ques.62. In A 3-Phase Voltage Source Inverter Used For Speed Control Of Induction Motor, Antiparallel Diodes Are Used Across Each Switching Device. The Main Purpose Of Diodes Is To:
1. Protect The Switching Devices Against Overvoltage
2. Provide The Path For Freewheeling Current
3. Allow The Motor To Return Energy During Regeneration
4. Help In Switching Off The Devices
Hide Explanation
Answer.3. Allow The Motor To Return Energy During Regeneration
.

Ques.63. In A 1-Φ Full Converter, Number Of Scrs Conducting During An Overlap
1. 2
2. 4
3. 6
4. 8
Hide Explanation
Answer.2. 4
Explanation:-

Ques.64. A Three-Phase AC To DC Diode Bridge Rectifier Is Supplying From A Three-Phase, 440 V Source. The Rectifier Supplies A Purely Resistive Load. The Average DC Voltage Across The Load Will Be V 1. 594.20
2. 1029.20
3. 840.40
4. 320.20
Hide Explanation
Answer.2. 1029.20

Ques.65. If The PIV Rating Of A Diode Is Exceeded
1. The Diode Conducts Poorly
2. The Diode Behaves Like A Tunnel Diode
3. The Diode Is Destroyed
4. The Diode Behaves Like A Capacitor
Hide Explanation

Answer.3. The Diode Is Destroyed
Explanation:-
Ques.66. A Forward Bias PN Junction Will Act As
A/An: 1. Amplifier
2. Open Switch
3. Closed Switch
4. Attenuator
Hide Explanation
Answer.3. Closed Switch
Explanation:-

Ques.67. In The Case Of Full Wave Rectifier, The Ripple Factor Is
1. 0.48
2. 0.5
3. 1.51
4. 1
Hide Explanation
Answer.1. 0.48

Ques.68. For A Certain Transistor, If The Value Of Beta Is Equal To 500 And Base Current Is 5ma, Then The Value Of Emitter Current Is:- 1. 2.5A
2. 2A
3. 3A
4. 2.505
Hide Explanation
Answer.4. 2.505
Explanation:-
Given Base Current I = 5ma
B
Current Gain B = 500
The Dc Current Gain B Is Defined As The Ratio Of Collector Current To dc
Base Current At A Constant V Under Dc Biasing Conditions. CE
B = I /I
C B
500 = I /50
C
I = 2500 Ma
C

The Emitter Current Is
I = I + I
E B C
I = 50 +2500
E
I = 2505ma = 2.505 A
E
Ques.69. Which Among The Characteristics Of The Crystal Diode Is Used For Rectification?
1. Opposite
2. Can’t Be Determined
3. Forward Or Reversed
4. Forward
Hide Explanation
Answer.4. Forward

Ques.70. Which Among The Following Indicates Early Effect In BJT?
1. Zener Breakdown
2. Base Narrowing
3. Avalanche Breakdown
4. Thermal Breakdown
Hide Explanation
Answer.2. Base Narrowing

Ques.71. When The Collector Junction In A Transistor Is Biased In The Reverse Direction And The Emitter Junction In The Forward Direction, The Transistor Is Said To Be Is The:-
1. Saturation
2. Cutoff Region
3. Active Region
4. None Of These
Hide Explanation
Answer.3. Active Region
Explanation:-
.
Ques.72. In A BJT The Base Current(I) Is About Of Emitter Current
B
(IE)
1. 5%
2. 20%
3. 25%

4. 35%
Hide Explanation
Answer.1. 5%
Explanation:-

Ques.73. Among These Which One Is Correct About The Characteristics Of The Transistor?
1. It Has Very Low Input Impedance
2. It Has Zero Input Impedance
3. It Has The High Input Impedance
4. It Has Low Input Impedance
Hide Explanation
Answer.3. It Has The High Input Impedance

Ques.74. A Transistor When Connected In CE Mode Has:-
1. A Medium Input Resistance And Low Output Resistance
2. A Low Input Resistance And Low Output Resistance
3. A Low Input Resistance And High Output Resistance
4. A High Input Resistance And High Output Resistance
Hide Explanation
Answer.1. A Medium Input Resistance And Low Output Resistance

Ques.75. If The Cathode Of The Thyristor Is Made +Ve With Respect To The Anode & No Gate Current Is Applied Then:-
1. Only The Middle Junction Is Forward Biased
2. Only The Middle Junction Is Reversed Biased
3. All The Junction Are Forward Biased
4. All The Junction Are Reversed Biased
Hide Explanation
Answer.1. Only The Middle Junction Is Forward Biased

Ques.76. The Region Has The Highest Area In The Transistor
1. Base
2. Collector
3. Base-Emitter
4. Emitter
Hide Explanation
Answer.2. Collector
Explanation:-
A Bipolar Junction Transistor (BJT) Is A Three-Layer, Two Junction Semiconductor Device Consisting Of Either Two N-Type And One P-Type

Layer Of Material (NPN Transistor) Or Two P-Type And One N-Type Layer Of Material (PNP Transistor).

Ques.77. Which Configuration In Bipolar Junction Transistor Is Also Known As Voltage Follower Circuit?

1. Common Base
2. Common Collector
3. Common Emitter
4. None Of These

Hide Explanation

Answer.2. Common Collector

Ques.78. The Effective Turning Off SCR After The Anode Current Has Reached Zero Value.

1. The Charge Is Removed By Applying Reverse Anode-Cathode Voltage
2. Chargers Are Injected By Applying Reverse Anode-Cathode Voltage 3. Chargers Are Injected By Applying The Gate Signal
4. None Of These

Hide Explanation

Answer.1. The Charge Is Removed By Applying Reverse Anode-Cathode Voltage

Explanation:-

Ques.79. In The Forward Blocking Mode, The Middle Junction (J) Has The 2

Characteristics Of That Of A:

1. Inductor
2. Transistor
3. Capacitor
4. None Of These

Hide Explanation

Answer.3. Capacitor

Ques.80. During The Transition Time Or Turn On Time

1. The Forward Anode Voltage Is Increased From 10% To 90% & The Anode Current Decreases From 90% To 10% Of The Initial Value 2.

The Forward Anode Voltage Is Decreased From 90% To 10% & The Anode Current Decreases From 90% To 10% Of The Initial Value 3. The Forward Anode Voltage Is Decreased From 90% To 10% & The Anode Current Increases From 10% To 90% Of The Initial Value 4. The Forward Anode Voltage Is Increased From 10% To 90% & The Anode Current Also Increases From 10% To 90% Of The Initial Value
Hide Explanation
Answer.3. The Forward Anode Voltage Is Decreased From 90% To 10% & The Anode Current Increases From 10% To 90% Of The Initial Value
Explanation:-

Ques.81. The Forward Dv/Dt Rating Of An SCR:-
1. Decrease With The Decrease In The RMS Value If Forward Anode Cathode Voltage
2. Decrease With The Increase In The Junction Temperature 3. Increase With An Increase In The Junction Temperature 4. Increase With The Decrease In The RMS Value Of Forward Anode Cathode Voltage
Hide Explanation
Answer.3. Increase With An Increase In The Junction Temperature
Explanation:-
Ques.82. The Two Transistor Model Of The SCR Can Be Obtained By:-
1. Bisecting The SCR Vertically
2. Bisecting The Scrs Middle Two Layer
3. Bisecting The SCR Horizontally
4. Bisecting The Scrs Top Two And Bottom Two Layers
Hide Explanation
Answer.4. Bisecting The Scrs Top Two And Bottom Two Layers

Ques.83. Latching Current For An SCR Is 100 Ma, A Dc Source Of 200 V Is Also Connected To The SCR Which Is Supplying An R-L Load. Compute The Minimum Width Of The Gate Pulse Required To Turn On The Device. Take L = 0.2 H & R = 20 Ohm Both In Series.
1. 81 Msec
2. 100.5 Msec
3. 62.7 Msec
4. 56.9 Msec
Hide Explanation
Answer.2. 100.5 Msec

Explanation:-

Ques.84. What Is The Most Suitable Method To Turn On The SCR Device Among The Following?
1. Gate Triggering Method
2. Forward Voltage Triggering Method
3. Temperature Triggering Method
4. Dv/Dt Triggering Method
Hide Explanation
Answer.1. Gate Triggering Method

Ques.85. What Is The Total Anode Current Of SCR In The Equivalent Circuit From The Two Transistors (T & T) Analogy Of SCR? 1 2
1. The Sum Of Both Base Current
2. The Sum Of Both Collector Current
3. The Sum Of The Base Current Of T & Collector Current Of T 2 1
4. The Sum Of The Base Current Of T & Collector Current Of T 1 2
Hide Explanation
Answer.2. The Sum Of Both Collector Current

Ques.86. For An SCR, The Gate-Cathode Characteristics Have A Slope Of 130. The Gate Power Dissipation Is 0.5 Watt. Find Ig.
1. 6.2 Ma
2. 0.62 A
3. 620 Ma
4. 62 Ma
Hide Explanation
Answer.4. 62 Ma

Ques.87. When Both The Junctions Of Bipolar Junction Transistor (BJT) Are In Forward Biased, Then In Which Region BJT Will Operate? 1. Ohmic Region
2. Cut-Off Region
3. Saturation Region
4. Active Region
Hide Explanation
Answer.3. Saturation Region

Ques.88. What Kind Of Device Is A Field Effect Transistor? 1. Non-Semiconductor
2. Unipolar Semiconductor
3. Bipolar Semiconductor
4. Insulator
Hide Explanation
Answer.2. Unipolar Semiconductor
Explanation:-
Ques.89. The Value Of Anode Current Required To Maintain The Conduction Of An SCR Even Though The Gate Signal Is Removed Is Called As The:-
1. Latching Current
2. Holding Current
3. Switching Current
4. All Of These
Hide Explanation
Answer.1. Latching Current

Ques.90. Consider An N-Channel MOSFET Having Width W, Length L And Electron Mobility In The Channel Is μ And Capacitance Per Unit Area Is n C_Ox. If Gate To Source Voltage V_GS = 0.7V, Drain To Sour Voltage V_DS = 0.2 V, μ_Nc._Ox = 120μa/V, Threshold Voltage V_T = 0.4V And (W/L) = 60. Calculate The Transconductance Gm In Ma/V 1. 2.5ma
2. 1.65ma
3. 3ma
4. 1.44ma
Hide Explanation
Answer.4. 1.44ma

Ques.91. What Is The Value Of B In A Transistor Having I = 100.2ma And
C
I = 100ma?
E
1. 101
2. About 1
3. 501
4. 201
Hide Explanation

Answer.3. 501

Ques.92. Which Of The Following Are The Functions Of A Transistor?
1. Rectifier And Fixed Resistor
2. Switching Device And Fixed Resistor
3. Tuning Device And Rectifier
4. Variable Resistor And Switching Device
Hide Explanation
Answer.4. Variable Resistor And Switching Device
Ques.93. Number Of Diodes Required In The Ordinary Full-Wave Rectifier Is
1. 1
2. 2
3. 3
4. 4
Hide Explanation
Answer.2. 2

Ques.94. In A Rectifier Circuit, The Primary Function Of The Filter Is To
1. Control The DC Level Of The Output Voltage
2. Remove Ripples From Rectified Output
3. Minimize AC Input Variations
4. Suppress Odd Harmonics In The Rectifier Output
Hide Explanation
Answer.2. Remove Ripples From Rectified Output

Ques.95. A Rectifier For Welding Has Voltage/Current Characteristics As
1. Drooping
2. Rising
3. Static
4. Variable
Hide Explanation
Answer.1. Drooping

Ques.96. During Forward Blocking State, The SCR Has
1. Low Current, Medium Voltage
2. Low Current, Large Voltage
3. Medium Current, Large Voltage

4. Large Current, Low Voltage
Hide Explanation
Answer.2. Low Current, Large Voltage

Ques.97. The Function Of SCR Contactor In Resistance Welding Machine Is
1. To Provide An Accurate Weld Time For Each Weld
2. To Connect The Large Power Supply To Welding By Closing A Small Switch
3. To Provide Full Wave Rectification Of The Welding Current 4. To Avoid Saturation Of Transformation Core
Hide Explanation
Answer.2. To Connect The Large Power Supply To Welding By Closing A Small Switch

Ques.98. A Single Phase Full Bridge Inverter Is Fed From A 48 V Battery And Is Delivering Power To A Pure Resistance Load What Is The Value Of Fundaments Output Voltage?
1. 15.80
2. 22.26
3. 8.36
4. 43.22
Hide Explanation
Answer.4. 43.22
Explanation:-
The Output Dc Voltage Of Single Phase Full Bridge Inverter Is Given As
$E_{o} = 2\sqrt{2}E_{dc}/\Pi$
Where
E = Input DC Voltage = 48 V
dc
$E_{o} = 2\sqrt{2} \times 48/\Pi$
$E_{o} = 43.22$ V

Ques.99. A Three-Phase Diode Bridge Rectifier Is Fed From A 400 V RMS, 50 Hz, Three-Phase AC Source. If The Load Is Purely Resistive, Then Peak Instantaneous Output Voltage Is Equal To
1. 400 V
2. $\sqrt{2} \times 400$

3. 400/√2
4. √2/400
Hide Explanation
Answer.2. √2 × 400

Ques.100. The Peak Inverse Voltage, In Case Of A Bridge Rectifier, For Each, The Diode Is: (Where E = Peak Value Of Input Voltage) o
1. E
o
2. 2E
m
3. 3E
m
4. 4E
m
Hide Explanation
Answer.1. E
1) The power demand can be estimated approximately by

- Published on 21 Nov 15

a. Load survey method.

b. Mathematical method.

c. Statistical method.

d. Economic parameters.
Answer Explanation Related Ques

ANSWER: Statistical method.

Explanation:

No explanation is available for this question!

2) What is the advantage of HRC fuses over Rewirable fuses?

- Published on 17 Nov 15

a. High speed operation

b. High rupturing capacity

c. No ageing effect.

d. All of the above.
Answer Explanation Related Ques

ANSWER: All of the above.

Explanation:

No explanation is available for this question!

3) If a shunt motor is started with its field winding open then

- Published on 23 Oct 15

a. It will rotate at the same speed as that with its field winding closed

b. It will rotate at less speed as that with its field winding closed

c. It will rotate at dangerously high speed

d. None of these
Answer Explanation Related Ques
ANSWER: It will rotate at dangerously high speed
Explanation:
No explanation is available for this question!
4) Electrical power output in a d.c. generator is equal to
- Published on 19 Oct 15

a. Electrical power developed in armature – copper losses

b. Mechanical power input – iron and friction losses

c. Electrical power developed in armature – iron and copper losses

d. Mechanical power input – iron and friction losses – copper losses
Answer Explanation Related Ques

ANSWER: Mechanical power input – iron and friction losses – copper losses

Explanation:

No explanation is available for this question!

5) The quadrant operation of BJT is represented by

- Published on 08 Sep 15
a. 1

b. 2

c. 3

d. 4
Answer Explanation Related Ques
ANSWER: 2
Explanation:

No explanation is available for this question!

6) The switching function of semiconductor devices can be characterized with

- Published on 08 Sep 15

a. Duty ratio only

b. Frequency only

c. Duty ratio and frequency

d. Duty ratio, frequency and time delay
Answer Explanation Related Ques

ANSWER: Duty ratio, frequency and time delay

Explanation:

No explanation is available for this question!

7) AC power in a load can be controlled by using

- Published on 08 Sep 15

a. two SCR’s in parallel opposition

b. two SCR’s in series

c. three SCR’s in series

d. four SCR’s in series
Answer Explanation Related Ques

ANSWER: two SCR’s in parallel opposition

Explanation:

No explanation is available for this question!

8) An SCR is made up of silicon because
- Published on 08 Sep 15

a. silicon has large leakage current than germanium
b. silicon has small leakage current than germanium

c. silicon has small leakage voltage than germanium
d. silicon has large leakage voltage than germanium

Answer Explanation Related Ques
ANSWER: silicon has small leakage current than germanium
Explanation:
No explanation is available for this question!

9) The output power of the cascaded amplifier / attenuator system can be determined using - Published on 08 Sep 15

a. Actual gain of amplifier
b. Actual gain of amplifier and attenuator
c. Gain in dB of amplifier and attenuator
d. Actual gain of attenuator
Answer Explanation Related Ques
ANSWER: Actual gain of amplifier and attenuator
Explanation:
No explanation is available for this question!

10) LISN is a device used to measure conducted emissions. LISN stands for - Published on 08 Sep 15

a. Line integrated stabilization network
b. Line impedance stabilization network
c. Line integrated stored network
d. Laser integrated stabilization networking
Answer Explanation Related Ques
ANSWER: Line impedance stabilization network

11) In current commutated DC-DC choppers, the voltage spike appears across the load wh - Published on 08 Sep 15

a. Voltage across the commutating inductances collapses

b. The capacitance voltage adds to the supply voltage

c. Both (a) and (b)

d. None of these

Answer Explanation Related Ques
ANSWER: Both (a) and (b)

Explanation:

No explanation is available for this question!

12) In a load commutated DC - DC chopper, the capacitor has a

- Published on 08 Sep 15

a. Symmetric triangular voltage across itself

b. Symmetric rectangular voltage across itself

c. Symmetric trapezoidal voltage across itself
d. Symmetric sinusoidal voltage across itself

Answer Explanation Related Ques

ANSWER: Symmetric trapezoidal voltage across itself

Explanation:

No explanation is available for this question!

13) Voltage commutation circuit can be converted into a current commutation by intercha

positions of

- Published on 08 Sep 15

a. Diode and capacitor

b. Capacitor and SCR

c. Inductor and capacitor

d. Capacitor and load
Answer Explanation Related Ques

ANSWER: Diode and capacitor

Explanation:

No explanation is available for this question!
14) For swept frequency measurements, the input impedance of the mismatched transmiss would vary with frequency as the electrical length of the transmission line would - Published

on 08 Sep 15

a. Decrease with frequency

b. Remains same with change in frequency

c. Increase with frequency

d. Either (a) or (b)

Answer Explanation Related Ques
ANSWER: Increase with frequency
Explanation:
No explanation is available for this question!

15) In EMC signal, the source delivers maximum power to the input of transmission line wh transmission line input impedance
- Published on 08 Sep 15

a. Is equal to the source resistance

b. Greater than the source resistance

c. Smaller than the source resistance

d. None of these

Answer
Explanation Related Ques
ANSWER: Is equal to the source resistance
Explanation:
No explanation is available for this question!

16) In radiative coupling, the emitter radiation field
- Published on 08 Sep 15

a. Decays as 1 / R, where R is the separation distance between the emitter and the receptor
b. Decays as R, where R is the separation distance between the emitter and the receptor

c. Decays as 1 / 2 R, where R is the separation distance between the emitter and the recepto

d. Decays as 2R, where R is the separation distance between the emitter and the receptor

Answer Explanation Related Ques

ANSWER: Decays as 1 / R, where R is the separation distance between the emitter and the receptor

Explanation:

No explanation is available for this question!

17) The effects of EMI can be reduced by

- Published on 08 Sep 15

a. Suppressing emissions
b. Reducing the efficiency of the coupling path

c. Reducing the susceptibility of the receptor

d. All of these

Answer Explanation Related Ques

ANSWER: All of these

Explanation:

No explanation is available for this question!

18) Between the incoming and outgoing devices in voltage commutation
- Published on 08 Sep 15

a. Large overlapping takes place

b. Small overlapping operation

c. No overlapping operation

d. None of these

Answer Explanation Related Ques
ANSWER: No overlapping operation

Explanation:

No explanation is available for this question!
19) During the commutation period in 3 phase converter, overlap time is

- Published on 08 Sep 15

a. Dependent on the load current

b. Dependent on the voltage

c. Dependent on both the load current and load voltage behind the short circuit current

d. Independent on both the load current and load voltage

Answer Explanation Related Ques

ANSWER: Dependent on both the load current and load voltage behind the short circuit current

Explanation:

No explanation is available for this question!

20) In a three phase converter, the number of notches per cycle is

- Published on 08 Sep 15

a. One

b. Three

c. Six

d. Nine

Answer Explanation Related Ques
ANSWER: Six
21) In a 3 phase CSI, if the required line output voltages are balanced and 120 degree out o then the chopping angles are used to eliminate only the harmonics at frequencies -
Published on 08 Sep 15
a. 5

b. 7

c. 11

d. All of these

Answer Explanation Related Ques
ANSWER: All of these

Explanation:

No explanation is available for this question!

22) For similar carrier and modulating signals, the line current used in CSI is

- Published on 08 Sep 15

a. Identical to line voltage in a VSI

b. Identical to line current in VSI

c. Identical to phase voltage in VSI

d. Identical to phase voltage in CSI

Answer Explanation Related Ques

ANSWER: Identical to line voltage in a VSI

Explanation:

No explanation is available for this question!

23) Under harmonic free load voltages, the 3 phase VSI

- Published on 08 Sep 15

a. Does not contains second harmonic

b. Does not contains third harmonic

c. Does not contains fifth harmonic

d. Does not contains seventh harmonic
Answer Explanation Related Ques

ANSWER: Does not contains second harmonic

Explanation:

No explanation is available for this question!

24) The square wave operation of 3 phase VSI lines contains the harmonics. The amplitude

- Published on 08 Sep 15

a. Directly proportional to their harmonic order

b. Inversely proportional to their harmonic order

c. Not related to their harmonic order
d. None of these

Answer Explanation Related Ques

ANSWER: Inversely proportional to their harmonic order

Explanation:

No explanation is available for this question!

25) Unipolar modulation is generally used in

- Published on 08 Sep 15

a. AC - AC converters

b. AC - DC converters

c. DC - AC converters

d. DC - DC converters

Answer Explanation Related Ques
ANSWER: DC - DC converters

Explanation:

No explanation is available for this question!
26) In bipolar modulation, the carrier is symmetric about zero with amplitude equal to Cm,

output

- Published on 08 Sep 15

a. Zero

b. Switches between - 1 / 2 and + 1 / 2

c. Switches between - 1 and + 1

d. Switches between 0 and + 1

Answer Explanation Related Ques

ANSWER: Switches between - 1 / 2 and + 1 / 2

Explanation:

No explanation is available for this question!
27) Double fourier series analysis of PWM is

- Published on 08 Sep 15

a. Two dimensional functions

b. Three dimensional functions

c. One dimensional functions

d. All of these

Answer Explanation Related Ques

ANSWER: Two dimensional functions

Explanation:

No explanation is available for this question!

28) In single phase VSI, the harmonic which is not present is
- Published on 08 Sep 15

a. 2nd
b. 3rd
c. 5th

d. 7th

Answer Explanation Related Ques

nd
ANSWER: 2

Explanation:

No explanation is available for this question!

29) Very large values of modulation index (greater than 3.24) lead to

- Published on 08 Sep 15

a. Square AC output voltage

b. Sine AC output voltage

c. Triangular AC output voltage
d. Trapezoidal AC output voltage

Answer Explanation Related Ques

ANSWER: Square AC output voltage

Explanation:

No explanation is available for this question!

30) Single phase VSI are mainly used in
- Published on 08 Sep 15

a. Power supplies

b. Ups

c. Multilevel configuration

d. All of these

Answer Explanation Related Ques
ANSWER: All of these

31) For bidirectional operation of converters

- Published on 08 Sep 15

a. A parallel combination of controllable switch and a diode is used

b. A parallel combination of controllable switch and capacitor is

used

c. A series combination of controllable switch and a diode is used

d. A series combination of controllable switch and a capacitor is used

Answer Explanation Related Ques

ANSWER: A parallel combination of controllable switch and a diode is used

Explanation:

No explanation is available for this question!

32) For a buck converter to reduce the conduction losses in diode

- Published on 08 Sep 15

a. A high on - resistance switch can be added in parallel

b. A low on - resistance switch can be added in parallel

c. A high on - resistance switch can be added in series
d. A low on - resistance switch can be added in series

Answer Explanation Related Ques

ANSWER: A low on - resistance switch can be added in parallel

Explanation:

No explanation is available for this question!

33) The conduction losses in IGBT is
- Published on 08 Sep 15

a. More than that of MOSFET
b. Lower than that of MOSFET

c. Equal to that of MOSFET

d. Equal to that of BJT

Answer Explanation Related Ques

ANSWER: Lower than that of MOSFET

Explanation:

No explanation is available for this question!
34) The power MOSFET device is a

- Published on 08 Sep 15

a. Current controlled unipolar device

b. Voltage controlled unipolar device

c. Current controlled bipolar device

d. Voltage controlled bipolar device

Answer Explanation Related Ques

ANSWER: Voltage controlled unipolar device

Explanation:

No explanation is available for this question!

35) With increase in firing angle,
- Published on 08 Sep 15

a. Both harmonic distortion and quality of input current increases b.

Harmonic distortion increases and quality of input current decreases c.

Harmonic distortion decreases and quality of input current increases

d. Both harmonic distortion and quality of input current decreases

Answer Explanation Related Ques
ANSWER: Harmonic distortion increases and quality of input current decreases

Explanation:

No explanation is available for this question!

36) The most suited gate pulses given to the AC regulator with R - L load can be in the form

- Published on 08 Sep 15

a. Continuous signal

b. Large isolating pulse transformer

c. A train of pulses

d. None of these

Answer Explanation Related Ques

ANSWER: A train of pulses

Explanation:
No explanation is available for this question!

37) Harmonics in 3 phase inverters can be reduced by using

- Published on 08 Sep 15

a. Passive filter

b. Active filter

c. Both passive and active filters

d. None of these

Answer Explanation Related Ques

ANSWER: Both passive and active filters

Explanation:

No explanation is available for this question!

38) The advantage of using free - wheeling diode in half controlled bridge converter is that

- Published on 08 Sep 15

a. There is always a path for the dc current independent of the ac line

b. There is always a path for the ac current independent of the ac line

c. There is always a path for the dc current dependent of the ac line

d. There is always a path for the ac current independent of the ac line

Answer Explanation Related Ques

ANSWER: There is always a path for the dc current independent of the ac line

Explanation:

No explanation is available for this question!

39) The input current waveform of a bridge controlled rectifier when the load is perfectly fil

- Published on 08 Sep 15

a. Sine wave
b. Square wave

c. Saw - tooth wave

d. Trapezoidal wave

Answer Explanation Related Ques

ANSWER: Square wave

Explanation:

No explanation is available for this question!

40) A full wave rectifier with resistive load produces
- Published on 08 Sep 15

a. Second harmonic

b. Third harmonic
c. Fifth harmonic

d. Do not produce harmonics

Answer Explanation Related Ques

ANSWER: Do not produce harmonics

41) A crowbar is a circuit which is used to protect a
- Published on 08 Sep 15

a. voltage sensitive load from excessive dc power supply output voltages

b. current sensitive load from excessive dc power supply output voltages

c. voltage sensitive load from excessive ac power supply output voltages

d. current sensitive load from excessive ac power supply output voltages

Answer Explanation Related Ques

ANSWER: voltage sensitive load from excessive dc power supply output voltages

Explanation:

No explanation is available for this question!

42) An SCR can be used

- Published on 08 Sep 15

a. as static conductor

b. for power control

c. for speed control of dc shunt motor

d. all of these

Answer Explanation Related Ques

ANSWER: all of these

Explanation:

No explanation is available for this question!
43) TRIAC is a semiconductor power electronic device which contains

- Published on 08 Sep 15

a. Two SCR’s connected in reverse parallel

b. Two SCR’s connected in parallel

c. Two SCR’s connected in series
d. Two BJT’s connected in series

Answer Explanation Related Ques

ANSWER: Two SCR’s connected in reverse parallel

Explanation:

No explanation is available for this question!

44) Silicon controlled rectifier can be turned on

- Published on 08 Sep 15

a. By applying a gate pulse and turned off only when current becomes zero

b. And turned off by applying gate pulse

c. By applying a gate pulse and turned off by removing the gate pulse

d. By making current non zero and turned off by making current zero

Answer Explanation Related Ques

ANSWER: By applying a gate pulse and turned off only when current becomes zero

Explanation:

No explanation is available for this question!

45) In a square - wave operation of 3 phase CSIs, the power values are on for
- Published on 08 Sep 15

a. 60 degree

b. 90 degree
c. 120 degree

d. 150 degree

Answer Explanation Related Ques

ANSWER: 120 degree

Explanation:

No explanation is available for this question!

46) A carrier based PWM technique in CSI is composed of

- Published on 08 Sep 15
a. A switching pulse generator and a shorting pulse generator

b. A shorting pulse distributor

c. A switching and shorting pulse combination

d. All of these

Answer Explanation Related Ques

ANSWER: All of these

Explanation:

No explanation is available for this question!

47) In variable frequency, PWM gain

- Published on 08 Sep 15

a. Phase lead helps to increase the phase margin of the control loop

b. Phase lag helps to increase the phase margin of the control loop

c. Phase lead helps to decrease the phase margin of the control loop

d. Phase lag helps to decrease the phase margin of the control loop

Answer Explanation Related Ques
ANSWER: Phase lead helps to increase the phase margin of the control loop
Explanation:

No explanation is available for this question!

48) In constant frequency PWM, at perturbation the amplitude of the sinusoidal component

- Published on 08 Sep 15

a. Linear function

b. Non linear function

c. Constant function

d. None of these

Answer Explanation Related Ques
ANSWER: None of these

Explanation:

No explanation is available for this question!

49) The transfer function of PWM is generally developed in

- Published on 08 Sep 15

a. Time domain

b. Frequency domain

c. Either (a) or (b)

d. None of these

Answer Explanation Related Ques

ANSWER: Either (a) or (b)

Explanation:

No explanation is available for this question!
50) In the SPWM, the modulating signal is

- Published on 08 Sep 15

a. Square

b. Sinusoidal

c. Triangular

d. Saw - tooth

Answer Explanation Related Ques

ANSWER: Sinusoidal

51) In a full bridge VSI, in order to avoid the short circuit across the DC bus and the

undefi output voltage condition, the modulating technique should ensure that

- Published on 08 Sep 15

a. Top switch of each leg is on at any instant

b. Bottom switch of each leg is on at any instant
c. Either (a) or (b)

d. None of these

Answer Explanation Related Ques

ANSWER: Either (a) or (b)

Explanation:

No explanation is available for this question!

52) In a lossless inverter, the average power absorbed in one period by the load must be
- Published on 08 Sep 15

a. Equal to the average power supplied by the dc source

b. Greater than the average power supplied by the dc source

c. Lesser than the average power supplied by the dc source

d. Equal to the average power supplied by the ac source
Answer Explanation Related Ques

ANSWER: Equal to the average power supplied by the dc source

Explanation:

No explanation is available for this question!
53) A step - down choppers can be used in

- Published on 08 Sep 15

a. Electric traction

b. Electric vehicles

c. Machine tools

d. All of these

Answer Explanation Related Ques

ANSWER: All of these

Explanation:

No explanation is available for this question!

54) The output current in PWM DC - DC converters is equal to

- Published on 08 Sep 15

a. Average value of the output inductor current

b. Product of an average inductor current and a function of duty ratio

c. Either (a) or (b)

d. None of these

Answer Explanation Related Ques

ANSWER: Either (a) or (b)

Explanation:

No explanation is available for this question!

55) The opposite of susceptibility is

- Published on 08 Sep 15

a. Immunity

b. Emission
c. Interference

d. Electromagnetic compatibility

Answer Explanation Related Ques

ANSWER: Immunity

Explanation:

No explanation is available for this question!

56) The ability of an electronic system to function properly in its intended electromagnetic environment and should not be a source of pollution to that electromagnetic environment is

- Published on 08 Sep 15

a. Susceptibility

b. Emission

c. Interference
d. Electromagnetic compatibility

Answer Explanation Related Ques

ANSWER: Electromagnetic compatibility

Explanation:

No explanation is available for this question!

57) If all the SCR's of 3 phase PAC is replaced by diodes, they would be triggered
- Published on 08 Sep 15

a. 120 degree after the zero crossing of the corresponding line voltages
b. 60 degree after the zero crossing of the corresponding line voltages

c. 120 degree before the zero crossing of the corresponding line voltages

d. 60 degree before the zero crossing of the corresponding line voltages

Answer Explanation Related Ques

ANSWER: 60 degree after the zero crossing of the corresponding line voltages

Explanation:

No explanation is available for this question!

58) For commutation in three phase PAC, normally balanced three phase voltages VR, VY

connected to the three legs of the converter via

- Published on 08 Sep 15

a. Three inductances

b. Three capacitances

c. Three resistance

d. Three transistors

Answer Explanation Related Ques

ANSWER: Three inductances

Explanation:

No explanation is available for this question!

59) In square wave operation mode of 3 phase VSI, the VSI
- Published on 08 Sep 15

a. Can control the load voltage

b. Cannot control the load voltage

c. Cannot control the load voltage except by means of dc link voltage

d. Cannot control the load voltage except by means of dc link current
Answer Explanation Related Ques

ANSWER: Cannot control the load voltage except by means of dc link voltage

Explanation:

No explanation is available for this question!

60) In a 3 phase VSI SPWM to use a single carrier signal and preserve the features of PWM the normalized carrier frequency should be

- Published on 08 Sep 15

a. Multiple of two

b. Odd multiple of three

c. Odd multiple of five

d. Odd multiple of seven

Answer Explanation Related Ques

ANSWER: Odd multiple of three

61) Regulator sampling PWM is usually used in

- Published on 08 Sep 15

a. High power inverters

b. Rectifiers

c. Low power inverters

d. Only (a) and (b)

Answer Explanation Related Ques

ANSWER: Only (a) and (b)

Explanation:

No explanation is available for this question!

62) A combination of synchronized leading edge and trailing edge modulation has also bee control a

- Published on 08 Sep 15

a. Boost single - phase power factor converter

b. A buck dc - dc converter to reduce ripple in the intermediate dc bus capacitor

c. Both (a) and (b)

d. None f these
Answer Explanation Related Ques
ANSWER: Both (a) and (b)
Explanation:
No explanation is available for this question!
63) If energy is taken from the AC side of the inverter and sends it back into the DC side, th known as
- Published on 08 Sep 15

a. Motoring mode operation

b. Braking mode operation

c. Regenerative mode operation

d. None of these
Answer Explanation Related Ques
ANSWER: Regenerative mode operation
Explanation:
No explanation is available for this question!
64) The ac output voltage waveform of VSI and AC output current waveform of CSI respect composed of
- Published on 08 Sep 15
a. High dv / dt, low di / dt

b. Low dv / dt, low di / dt

c. Low dv / dt, high di / dt

d. High dv / dt, high di / dt

Answer Explanation Related Ques

ANSWER: High dv / dt, high di / dt

Explanation:

No explanation is available for this question!

65) Advantages of Cuk converter is / are

- Published on 08 Sep 15

a. Large number of reactive component

b. Low stress on switch

c. Low stress on capacitor

d. None of these

Answer Explanation Related Ques

ANSWER: None of these

Explanation:

No explanation is available for this question!

66) In a flyback converter, the inductor of the buck-boost converter has been replaced by a

- Published on 08 Sep 15

a. Flyback capacitor

b. Flyback resistor

c. Flyback transformer

d. Flyback transistor

Answer Explanation Related Ques

ANSWER: Flyback transformer

Explanation:

No explanation is available for this question!

67) In a push - pull converter, the filter capacitor can be obtained as

- Published on 08 Sep 15

a. Cmin = V / (Vr L f2)

b. Cmin= (1 – D) V / (Vr L f2)

c. Cmin= (1 – 2 D) V / 32 (Vr L f2)

d. Cmin= (1 – 2 D) V / 42 (Vr L f2)

Answer Explanation Related Ques

2
ANSWER: C = (1 – 2 D) V / 32 (V L f)
min r

Explanation:

No explanation is available for this question!

68) MOSFET stands for

- Published on 08 Sep 15

a. Metal - oxide semiconductor field effect transistor b.

Molybdenum - oxide semiconductor field effect transistor c.

Metal - oxide silicon field effect transistor

d. Metal - oxide semiconductor field effect transmitter

Answer Explanation Related Ques

ANSWER: Metal - oxide semiconductor field effect transistor

Explanation:

No explanation is available for this question!
69) A MOSFET, for its conduction uses

- Published on 08 Sep 15

a. Only minority carriers

b. Only majority carriers

c. Both minority and majority carriers

d. None of these

Answer Explanation Related Ques

ANSWER: Only majority carriers

Explanation:

No explanation is available for this question!

70) An RC snubber network used in BJT

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a. Divert the collector current during turn - off

b. Improves the reverse bias safe operating area

c. Dissipates a fair amount of switching power

d. All of these

Answer Explanation Related Ques
ANSWER: All of these
71) The ac voltage controller can be used for
- Published on 08 Sep 15

a. Lighting and heating control

b. On - line transformer tap changing

c. Soft starting

d. All of these

Answer Explanation Related Ques
ANSWER: All of these
Explanation:

No explanation is available for this question!

72) The phase angle of gate signal in TRIAC can be shifted by using

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a. A capacitor

b. A variable resistor

c. An inductor

d. Only (a) and (b)

Answer Explanation Related Ques

ANSWER: Only (a) and (b)

Explanation:

No explanation is available for this question!
73) A TRIAC can be turned on with

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a. Positive voltage at the gate terminal

b. Negative voltage at the gate terminal

c. Either (a) or (b)

d. None of these

Answer Explanation Related Ques

ANSWER: Either (a) or (b)

Explanation:

No explanation is available for this question!

74) DIAC and TRIAC both are semiconductors devices and conduct in

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a. DIAC conducts in forward direction and TRIAC conducts in reverse direction

b. Both conducts in forward direction

c. Both conducts in reverse direction

d. Both conducts in either direction

Answer Explanation Related Ques

ANSWER: Both conducts in either direction

Explanation:

No explanation is available for this question!

75) The Graetz bridge makes excellent use

of - Published on 08 Sep 15

a. Current transformer

b. Potential transformer
c. Power transformer

d. SCR

Answer Explanation Related Ques

ANSWER: Power transformer

Explanation:

No explanation is available for this question!

76) If the firing angle becomes negative, then the rectifier begins to work as
- Published on 08 Sep 15

a. A rectifier

b. An inverter
c. A chopper

d. A regulator

Answer Explanation Related Ques

ANSWER: An inverter

Explanation:

No explanation is available for this question!
77) In a 3 phase half wave rectifier, when firing angle is less than 90 degree, then the avera

output voltage becomes

- Published on 08 Sep 15

a. Positive

b. Negative

c. Zero

d. None of these

Answer Explanation Related Ques

ANSWER: Positive

Explanation:

No explanation is available for this question!