OWER ELECTRONICS\_R16

Time: 1 hour Max. Marks: 50

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Note to the students: - All the Questions are compulsory and carry equal marks .

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| Q1.  | If firing angle in an SCR circuit is increased, the output ………… |
| Option A: | Remains the same |
| Option B: | Is increased |
| Option C: | Is decreased |
| Option D:  | Initially increase then decrease |
|  | If firing angle in an SCR circuit is increased, the output ………… |
| Q2. |  Ideally the voltage drop across a conducting diode must be |
| Option A: | ∞ |
| Option B: | 0 |
| Option C: | higher than the forward biased voltage |
| Option D: | equal to the forward biased voltage |
|  |  |
| Q3. | An SCR is a ………………. triggered device  |
| Option A: | Voltage |
| Option B: | Current |
| Option C: | Voltage as well as current |
| Option D: | Temperature |
|  |  |
| Q4. | Which semiconductor power device out of the following, is not a current triggering device? |
| Option A: |

|  |  |  |  |
| --- | --- | --- | --- |
| Thyristor |  |  |  |

 |
| Option B: | Triac |
| Option C: | G.T.O |
| Option D: | MOSFET |
|  |  |
| Q5. | The conduction losses in IGBT is |
| Option A: | More than that of MOSFET |
| Option B: | Lower than that of MOSFET |
| Option C: | Equal to that of MOSFET |
| Option D:  | Equal to that of BJT |
|  |  |
| Q6. | The power MOSFET device is a |
| Option A: | Current controlled unipolar device |
| Option B: | Voltage controlled unipolar device |
| Option C: | Current controlled bipolar device |
| Option D:  | Voltage controlled bipolar device |
|  |  |
| Q7.  | Which of the following heat sink is more durable? |
| Option A: | Stamped heat sink |
| Option B: | Ball bearing type heat sink |
| Option C: | Sleeve bearing type heat sink |
| Option D:  | Aluminum heat sink |
|  |  |
| Q8.  | What component is used to protect a thyristor from high di / dt condition? |
| Option A: | Fuse |
| Option B: | Snubber circuit |
| Option C: | Inductor |
| Option D:  | Voltage clamping device |
|  |  |
| Q9. | Single phase fully controlled bridge rectifier uses |
| Option A: | 2 scrs |
| Option B: | 4 scrs |
| Option C: | 6 scrs |
| Option D:  | 8 scrs |
|  |  |
| Q10.  | A freewheeling diode is used in a controlled rectifier circuits in case of  |
| Option A: | inductive loads |
| Option B: | capacitive loads |
| Option C: | resistive loads |
| Option D:  | under no load |
|  |  |
| Q11.  | A single-phase full convertor is connected across 250V ac. Its output voltage when firing angle is 30 degrees is given by  |
| Option A: | 210V |
| Option B: | 195V |
| Option C: | 250V |
| Option D:  | 240V |
|  |  |
| Q12.  | A single phase fully controlled line commutated ac to dc converter operates as an inverter, when |
| Option A: |  |
| Option B: |   |
| Option C: |   |
| Option D: |  |
|  |  |
| Q13. | Voltage Source Inverters using GTOs are turned off by  |
| Option A: | line commutation |
| Option B: | load commutation |
| Option C: | applying a negative gate pulse |
| Option D:  | removing the base signal |
|  |  |
| Q14.  |  In a single-phase half wave inverter how many SCR gated at the time |
| Option A: | one |
| Option B: | two |
| Option C: | three |
| Option D:  | four |
|  |  |
| Q15. | In the SPWM, the modulating signal is |
| Option A: | Sinusoidal |
| Option B: | Square |
| Option C: | Triangular |
| Option D:  | Saw - tooth |
|  |  |
| Q16.  | Output of Inverter send back to the input of Inverter then it is known as |
| Option A: | Motoring mode operation |
| Option B: | Braking mode operation |
| Option C: | Regenerative mode operation |
| Option D:  | Generative mode operation |
|  |  |
| Q17. | In voltage source inverter internal impedance |
| Option A: | of DC source Is negligible |
| Option B: | of DC source Is very high |
| Option C: | of AC source Is negligible |
| Option D: | of AC source Is very low |
|  |  |
| Q18. | In a switching voltage regulator, the switch acts in |
| Option A: | only on state |
| Option B: | only off state |
| Option C: | either on or off state |
| Option D:  | active state |
|  |  |
| Q19.  | In A buck converter the output voltage is \_\_\_\_\_\_\_\_\_\_\_\_\_ than the input voltage |
| Option A: | greater |
| Option B: | less than |
| Option C: | equal to |
| Option D:  | there is no output voltage |
|  |  |
| Q20. | In A boost converter the output voltage is \_\_\_\_\_\_\_\_\_\_\_\_\_ than the input voltage |
| Option A: | greater |
| Option B: | less than |
| Option C: | equal to |
| Option D: | there is no output voltage |
|  |  |
| Q21. | In A buck boost converter, the output voltage is \_\_\_\_\_\_\_\_\_\_\_\_\_ than the input voltage |
| Option A: | `greater |
| Option B: | less than |
| Option C: | equal to |
| Option D:  | greater than or less than |
|  |  |
| Q22.  | In a cuk converter the output voltage is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ than the input voltage |
| Option A: | greater |
| Option B: | less than |
| Option C: | equal to |
| Option D:  | greater than or less than  |
|  |  |
| Q23. | In a phase controlled 3 phase ac voltage controller, the harmonic present is |
| Option A: | 2nd  |
| Option B: | 3nd  |
| Option C: | 5th |
| Option D:  | 7th |
|  |  |
| Q24.  | A cycloconverter is operating on a 50 Hz supply. The range of output frequency that can be obtained with acceptable quality, is |
| Option A: | 0 - 16 Hz |
| Option B: | 0 - 32 Hz |
| Option C: | 0 - 64 Hz |
| Option D:  | 0 - 128 Hz |
|  |  |
| Q25. | The single-phase bridge type cycloconverter uses \_\_\_\_\_\_\_\_\_\_ number of SCRs.  |
| Option A: | 4 |
| Option B: | 8 |
| Option C: | 6 |
| Option D:  | 2 |