



Department of Electrical and Electronics Engineering

EE 8004 – Modern Power Converters

Unit I - MCQ Bank

1. A single phase full bridge inverter can operated in load commutation mode in case load consist of

- (a) **RLC underdamped**
- (b) RLC critically damped
- (c) RLC
- (d) RLC overdamped

Answer – a

2. The typical value of SCR for modern alternator is

- (a) **0.5**
- (b) 1.0
- (c) 1.5
- (d) 2.0

Answer—a

3. Which statement is true for latching current of the following ---

- (a) It is related to turn on process of the device
- (b) It is related to turn off process of the device
- (c) It is related to conduction process of device
- (d) **Both (a) and (b)**

Answer----d

4. The form factor for half wave rectified sine wave is—

- (a) 1.45
- (b) 1.51
- (c) **1.57**
- (d) 1.61

Answerwer---c

5. full-wave rectified sine wave, mean value is---

- (a) $0.60i_m$
- (b) $0.61i_m$
- (c) **$0.636i_m$**
- (d) $0.386i_m$

Answer ---c

6. A thyatron is a ----
- (a) **gas-filled triode**
 - (b) vacuum tube with four electrodes
 - (c) gas-filled diode
 - (d) all of the above

Answer –a

6. silicon controlled rectifier is ---
- (a) Device with two junctions
 - (b) Unijunction
 - (c) **Device with three junction**
 - (d) All of the above

Answer----c

7. a waveform more peaky than a sine wave, the form factor will be—
- (a) 1
 - (b) 11
 - (c) **More than 1.11 %**
 - (d) Less than 1.11 %

Answer----c

8. Thyristor can be protected from over voltages by using -----
- (a) heat sink
 - (b) **voltage clamping device**
 - (c) fuse
 - (d) relay

Answer----b

9. Under normal operating voltage clamping device offers impedance of ---
- (a) **Infinity**
 - (b) Low value
 - (c) High value
 - (d) Zero

Answer---- a

10. What is used to protect the SCR from over current ---
- (a) **CB and fuse**
 - (b) Snubber circuit
 - (c) Voltage clamping device
 - (d) Heat sink

Answer --- a

11. A crystal diode has ----

- (a) **One pn junction**
- (b) Two pn junction
- (c) Three pn junction
- (d) All of the above

Answer ---- a

12. A zener diode has----

- (a) **One pn junction**
- (b) Two pn junction
- (c) Three pn junction
- (d) All of the above

Answer--- a

13. zener diode is used as ----

- (a) an amplifier
- (b) a rectifier
- (c) **voltage regulation**
- (d) multivibrator

Answer--- c

14. zener diode is alwa connected-----

- (a) forward
- (b) **reverse**
- (c) both (a) and (b)
- (d) none of the above

Answer---b

15. which of the following rectifier has the lowest forward resistance---

- (a) Gas tube
- (b) Vaccume tube
- (c) **Solid State**
- (d) None

Answer----c

16. There is a need of transformer for-----

- (a) Bridge full wave rectifier
- (b) **Centre tap full wave rectifier**
- (c) Half wave rectifier
- (d) None of above

Answer ----b

17. What happened. if the PIV rating of a diode is exceeded----

- (a) **Diode is destroyed**
- (b) Diode conduct poorly
- (c) Diode behaves like zener diode
- (d) None

Answer----a

18. Max efficiency of a half-wave rectifier is ----

- (a) 25%
- (b) **40.6%**
- (c) 70%
- (d) 100%

Answer ---b

19. Most widely used rectifier is -----

- (a) Half wave rectifier
- (b) Full wave rectifier
- (c) **Centre tap full wave rectifier**
- (d) Bridge full wave rectifier

Answer---- 3

20. When transistor are used in the circuit they usually operate in the---

- (a) Breakdown region
- (b) Active region
- (c) **Saturation and cutoff**
- (d) Linear region

Answer ---- c

21. The gate of a junction gate field effect transistor (JFET) is ----- biased

- (a) **Forward**
- (b) Reverse
- (c) Both (a) and (b)
- (d) None of the above

Answer.---a

22. The charge carrier are in a p channel JFET -----

- (a) **Holes**
- (b) Electrons
- (c) Both (a) and (b)
- (d) None

Answer—a

23. MOSFET (metal oxide semiconductor field effect transistor) has _____ terminal

- (a) 1

- (b) 2
- (c) 3
- (d) **4**

Answer ----d

24. IGBT FULL FORM---

- (a) Impedance gate bipolar transistor
- (b) Integrated gate bipolar transistor
- (c) **Insulated gate bipolar transistor**
- (d) Indicating gate bipolar transistor

Answer --- c

25. HBT Full Form -----

- (a) Hexajunction bipolar transistor
- (b) **Heterojunction bipolar transistor**
- (c) Hexadecimal bipolar transistor
- (d) Herojunction bipolar transistor

Answer---b

26. In class A operation, the input circuit of a JFET is Biased

- (a) **Reverse**
- (b) Forward
- (c) Both (a) and (b)
- (d) None of the above

Answer----a

27. The channel of a JFET is between the -----

- (a) Gate and source
- (b) Gate and drain
- (c) Input and output
- (d) **Drain and source**

Answer—d

28. JFET has three terminals, namely-----

- (a)**source , gate , drain**
- (b) cathode, anode , grid
- (c) emmitter , base , collector
- (d)None

Answer ---- a

29. JFET is also called_____ - transistor

- (a) Bipolar
- (b) **Unipolar**

- (c) Unijunction
- (d) None

Answer --- b

30. The input control parameter of a JFET is---

- (a) Source voltage
- (b) **Gate voltage**
- (c) Drain voltage
- (d) Gate current

Answer --- b

31. basically termed as normally-OFF MOSFET works only with----

- (a) large negative drain voltage
- (b) **large positive gate voltage**
- (c) large positive drain voltage
- (d) large negative gate voltage

Answer ---b

32. IGBT possess ----

- (a) **high input impedance**
- (b) high on-state resistance
- (c) low input impedance
- (d) All of the above

Answer--- a

33. controlling parameter in IGBT -----

- (a) I_c
- (b) V_{GE}
- (c) V_{ce}
- (d) I_G

Answer ----- b

34. Which terminal does not belong to the SCR –

- (a) Anode
- (b) Cathode
- (c) Gate
- (d) **Base**

Answer--- d

35. thyristor (SCR) is a---

- (a) NPN
- (b) PNP
- (c) **PNPN**

(d) PN
Answer---- c

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