

Duration: 30 Mins

Total Marks: 31

ID: ITISKILL3010K3

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| Student Name: _____ | Roll No: _____ |
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1. How the drive circuits for the power MOSFETs are coupled?

- A) Using transistors B) Using logic circuitry
C) Direct coupling method D) Using pulse transformer

- A) While it holds its state B) Never consumes power
C) During switching D) Always consumes power

2. What is the advantage of MOSFET?

- A) Low driving power B) Low gate signal power requirements
C) Very low on-state voltage D) Superior current conduction capability

10. What is the advantage of IGBT?

- A) Used to isolate logic circuits B) Low gate signal power
C) Low driving power D) Fast switching speed

3. Which device is a unipolar transistor?

- A) UJT B) BJT
C) FET D) IGBT

11. What is the advantage of MOSFET?

- A) Low thermal ionisation of electron-holes B) Higher power gate signal
C) Slow switching speed D) Fast switching speed

4. What is the minimum current ratings of solid state relays available in low power packages?

- A) 50 milli Ampere B) 100 milli Ampere
C) Few micro Amperes D) 10 milli Ampere

12. Which is the N - channel FET?

- A) S-terminal connected to positive B) Main current flows through N-doped material
C) Main current flows through P-doped material D) AC supply connected to drain termin

5. How gate is biased in JFET?

- A) Reverse biased B) Dual supply function
C) AC supply function D) Forward biased

13. What is the maximum specified voltage for the TRIAC TIC 201D?

- A) 2.1 V B) 1.5 V
C) 2.5 V D) 1.7 V

6. What is the maximum blocking voltage of very high current handling IGBT modules?

- A) 1000 V B) 6000 V
C) 440 V D) 5000 V

14. Why the electronic device IGBT is preferred over the power MOSFET?

- A) Low switching speed B) Higher driving power requirement
C) Higher switching repetition rates D) Suitability for medium power applications

7. Which is the property of IGBT?

- A) High efficiency and fast switching B) Low input impedance
C) Significant power consumption D) Low gate signal

15. What is the switching speed of solid state relays?

- A) 1 to 100 milli seconds B) 1 to 25 nano seconds
C) 1 to 100 nano seconds D) 10 to 60 nano seconds

8. What is the code number of TRIAC?

- A) 2N2646 B) BT136
C) BFW10 D) 2N1597

16. What is the gate current (I_g) of the JFET, when reverse biased?

- A) Practically zero B) Practically very low
C) Practically infinity D) Practically unity

9. When does the complementary metal oxide type MOSFET configuration consumes power?

17. How many alternating layers are there in IGBT?

- A) 4 layers
- B) Single layer
- C) 3 layers
- D) 2 layers

18. What is the maximum drain- source voltage, VDS for the JFET BF 245B?

- A) 40 V
- B) 10 V
- C) 20 V
- D) 30 V

19. 6 What is the input impedance of IGBT?

- A) High
- B) Infinity
- C) Low
- D) Unity

20. What is the drawback of IGBT compared to the power MOSFET?

- A) Not suitable for power applications
- B) Higher driving power requirement
- C) Poor switching speed
- D) Poor current conduction capability

21. What is the full form of the abbreviation MOSFET?

- A) Metal oxide semiconductor FET
- B) Minimum output signal FET
- C) Metal organic serial FET
- D) Medium oscillator signal FET

22. Which insulation layer is used in MOSFET?

- A) Germanium material
- B) Arsenic material
- C) Silicon-di-oxide
- D) Antimony material

23. What is the advantage of IGBT?

- A) High efficiency and fast switching
- B) IGBT is a gate current driven device
- C) It has low input impedance
- D) Low efficiency and slow switching

24. Which circuit uses the enhancement type MOSFET?

- A) High frequency switching circuits
- B) Low power oscillator circuits
- C) High power amplifier circuits
- D) Integrated MOS switching circuits

25. What is the main advantages of IGBT over BJT?

- A) Superior current conduction capability
- B) Fast switching speed
- C) Reverse bias secondary break downs
- D) Thermal limits are pushed to the edge

26. Which is the package type for the JFET BFW10?

- A) TO-62
- B) TO-92
- C) TO-82
- D) TO-72

27. What is the term stands for TRIAC?

- A) Triode AC semiconductor
- B) Triode Access console
- C) Triode DC semiconductor
- D) Triode Alternate control

28. What is the input impedance of IGBT?

- A) Medium input impedance
- B) Low input impedance
- C) Infinity input impedance
- D) High input impedance

29. What is the common and popular application of U.J.T?

- A) Relaxation oscillator
- B) Voltage regulator
- C) Motor speed controller
- D) Multivibrator

30. Which current flows in TRIAC between MT1 and MT2?

- A) Principal current
- B) Conventional current
- C) Leakage current
- D) Reverse current

31. Which electrical quantity controls the operation of the bipolar transistor device?

- A) Current
- B) Frequency
- C) Energy
- D) Voltage