

Duration: 30 Mins

Total Marks: 50

ID: ITISKILL2096A3

Student Name: _____ Roll No: _____

1. Which three terminal voltage regulator IC has adjustable output?

- A) LM 305 B) LM 105
C) LM 317 D) LM 100

- A) 3A B) 4A
C) 2A D) 5A

2. Which is the N - channel FET?

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

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

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

3. How much is the maximum load current of the negative voltage regulator IC 7912?

- A) 0.55 A B) 2.0 A
C) 1.5 A D) 1.0 A

11. How gate is biased in JFET?

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

4. What is the digital signal value for the analog signal value 6V?

- A) 111 B) 101
C) 100 D) 110

12. What is the maximum possible number of flip-flops in a decade counter?

- A) $1 ⁿ$ B) $3 ⁿ$
C) $2 ⁿ$ D) $2 ⁿ⁺¹$

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

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

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

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

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

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

14. What is the current rating of voltage regulator IC LM317L?

- A) 0.2 A B) 0.3 A
C) 0.1 A D) 0.4 A

7. Which IC is used for the function of 4 bit shift register?

- A) IC 7404 B) IC 7493
C) IC 7495 D) IC 7447

15. Which IC package consist of 100 to 1000 transistors?

- A) Large scale integration (LSI) B) Small scale integration (SSI)
C) Very large scale integration (VLSI) D) Medium scale integration (MSI)

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

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

16. What is the power supply required to operate the most standard TTL ICs properly?

- A) + 7.5v to + 12V B) + 4.75v to + 5.25V
C) - 1.5v to - 2.5V D) + 1.5v to +2.5V

9. What is the current rating of voltage regulator IC LM338K?

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

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

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

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

19. What is the advantage of MOSFET?

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

20. Which type of voltage regulator is IC 723?

- A) Three pin adjustable voltage regulator
- B) Three pin negative voltage regulator
- C) Multipin variable voltage regulator
- D) Three pin positive voltage regulator

21. What is the information stored in digital registers?

- A) Binary values
- B) Decimal values
- C) Analog values
- D) Alphanumeric values

22. What is the purpose of using IC74LS190?

- A) Attenuator
- B) Up/down counter
- C) Comparator
- D) Modulator

23. What is the power dissipation of the standard TTL chip?

- A) 15 mW/gate
- B) 5 mW/gate
- C) 20 mW/gate
- D) 10 mW/gate

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

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

25. How many alternating layers are there in IGBT?

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

26. Which is the property of IGBT?

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

27. What is the propagation delay of the standard TTL chip?

- A) 12 ns
- B) 5 ns
- C) 10 ns
- D) 8 ns

28. What is the decimal conversion number for the octal number (2374)₈?

- A) (1276)₁₀
- B) (1296)₁₀
- C) (1266)₁₀
- D) (1286)₁₀

29. How many transistors are built inside the Very Large Scale Integration (VLSI) IC package?

- A) 1000 and above
- B) 1 to 10 transistors
- C) 10 to 100 transistors
- D) 100 to 1000 transistors

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

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

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

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

32. What is the package type for BF 245B?

- A) TO-92
- B) TO-82
- C) TO-72
- D) TO-102

33. How many inputs are available in the 7447 BCD-to-seven segment decoder used to drive the LED display?

- A) Eight
- B) Seven
- C) Four
- D) One

34. What is the term stands for TRIAC?

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

35. What is the advantage of IGBT?

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

36. What is the maximum forward gate current (I_g) for BFW10 JFET?

- A) 5 mA
- B) 8 mA
- C) 20 mA
- D) 10 mA

37. What is the decimal number for the binary number 0101?

- A) 6
- B) 5
- C) 7
- D) 4

38. Which IC is used for (DEMUX) function in data transmission?

- A) 74 LS 151
- B) IC 7486
- C) 74 LS 138
- D) IC 7483

39. What is the minimum current ratings of solid state relays

available in low power packages?

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

40. 6 What is the input impedance of IGBT?

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

41. Which insulation layer is used in MOSFET?

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

42. What is the input impedance of IGBT?

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

43. What is the use of flip - flop?

- A) It stores energy
- B) It stores binary information
- C) It stores current
- D) It stores voltage

44. What is the code number of TRIAC?

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

45. Which circuits requires the flip - flops for their operation?

- A) Memory circuits
- B) Modulator circuits
- C) Amplifier circuits
- D) Oscillator circuits

46. What is the range of output voltage of regulator IC LM 317?

- A) 0 to 25 V
- B) 1.2 V to 32 V
- C) 0 to 32 V
- D) 0 to 30 V

47. What is the advantage of IGBT?

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

48. 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

49. Which is the 3 terminal, negative voltage regulator IC?

- A) LM 320
- B) LM 340
- C) IC 7812
- D) IC 7905

50. Which method is followed to troubleshoot the problem causing section by the symptom?

- A) Sensory test method
- B) Step by step method
- C) Trial and error method
- D) Logical approach method