

Duration: 30 Mins

Total Marks: 50

Q.ID: ITISKILL2096A3

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

- A) 1ⁿ B) 3ⁿ
C) 2ⁿ D) 2ⁿ⁺¹

Answer: C) 2ⁿ

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

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

Answer: B) (1276)₁₀

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

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

Answer: B) 2.5 V

4. What is the advantage of MOSFET?

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

Answer: B) Fast switching speed

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

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

Answer: C) 10 mW/gate

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

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

Answer: C) Memory circuits

7. What is the advantage of IGBT?

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

Answer: B) Low driving power

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

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

Answer: A) 110

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

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

Answer: A) IC 7905

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

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

Answer: D) + 4.75v to + 5.25V

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

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

Answer: D) 1000 and above

12. What is the maximum drain- source voltage, V_{DS} for the JFET BF 245B?

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

Answer: A) 30 V

13. Which type of voltage regulator is IC 723?

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

Answer: A) Three pin adjustable voltage regulator

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

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

Answer: C) LM 317

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

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

Answer: A) 1 to 100 nano seconds

16. How many alternating layers are there in IGBT?

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

Answer: D) 4 layers

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

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

Answer: A) Metal oxide semiconductor FET

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

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

Answer: A) 5A

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

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

Answer: B) 6000 V

20. What is the input impedance of IGBT?

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

Answer: B) High input impedance

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

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

Answer: B) 10 ns

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

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

Answer: A) 1.2 V to 32 V

23. Which insulation layer is used in MOSFET?

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

Answer: A) Silicon-di-oxide

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

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

Answer: B) Principal current

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

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

Answer: C) Large scale integration (LSI)

26. Which is the N - channel FET?

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

Answer: C) Main current flows through N-doped material

27. How gate is biased in JFET?

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

Answer: D) Reverse biased

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

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

Answer: A) 74 LS 138

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

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

Answer: B) Logical approach method

30. Which is the property of IGBT?

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

Answer: A) High efficiency and fast switching

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

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

Answer: C) Relaxation oscillator

32. What is the term stands for TRIAC?

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

Answer: D) Triode AC semiconductor

33. What is the advantage of IGBT?

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

Answer: D) High efficiency and fast switching

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

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

Answer: B) Practically zero

35. What is the code number of TRIAC?

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

Answer: A) BT136

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

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

Answer: C) 2.0 A

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

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

Answer: A) IC 7495

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

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

Answer: B) Few micro Amperes

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

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

Answer: D) TO-92

40. What is the information stored in digital registers?

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

Answer: A) Binary values

41. What is the input impedance of IGBT?

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

Answer: D) High

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

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

Answer: D) Four

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

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

Answer: C) TO-72

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

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

Answer: C) 0.1 A

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

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

Answer: B) 5

46. What is the use of flip - flop?

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

Answer: B) It stores binary information

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

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

Answer: C) Superior current conduction capability

48. What is the purpose of using IC74LS190?

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

Answer: A) Up/down counter

49. What is the advantage of MOSFET?

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

Answer: B) Low gate signal power requirements

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

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

Answer: B) 10 mA