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Score: 15/50 (30.00%)

Code: 0359

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

10. What is the use of flip - flop?

A) It stores energy

C) It stores current (Incorrect)

B) It stores voltage

D) It stores binary information

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

- A) 1
B) 2
C) 2
D) 3 (Incorrect)

12. What is the purpose of using IC74LS190?

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

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

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

14. What is the information stored in digital registers?

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

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

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

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

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

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

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

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

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

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

- A) 1.0 A (Incorrect) B) 1.5 A
C) **2.0 A** D) 0.55 A

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

- A) 2A B) 3A
C) 4A D) **5A (Correct)**

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

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

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

- A) **0.1 A** B) 0.2 A
C) 0.3 A (Incorrect) D) 0.4 A

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

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

24. Which type of voltage regulator is IC 723?

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

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

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

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

- A) 5 mA (Incorrect) B) 8 mA
C) **10 mA** D) 20 mA

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

- A) TO-72 (Incorrect) B) **TO-92**
C) TO-82 D) TO-102

28. How gate is biased in JFET?

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

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

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

30. Which is the N - channel FET?

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

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

- A) TO-62 B) **TO-72 (Correct)**
C) TO-82 D) TO-92

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

- A) 10 V B) 20 V
C) **30 V** D) 40 V (Incorrect)

33. What is the term stands for TRIAC?

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

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

- A) 1.5 V B) 1.7 V
C) 2.1 V (Incorrect) D) **2.5 V**

35. What is the code number of TRIAC?

- A) 2N2646 B) BFW10
C) **BT136 (Correct)** D) 2N1597

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

- A) Conventional current (Incorrect) B) **Principal current**
C) Reverse current D) Leakage current

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

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

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

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

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

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

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

- A) 440 V B) 1000 V (Incorrect)
C) 5000 V D) **6000 V**

41. What is the input impedance of IGBT?

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

42. What is the advantage of MOSFET?

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

43. What is the advantage of MOSFET?

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

44. What is the advantage of IGBT?

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

45. What is the advantage of IGBT?

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

46. 6 What is the input impedance of IGBT?

- A) Low (Incorrect) B) **High**
C) Unity D) Infinity

47. Which is the property of IGBT?

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

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

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

49. How many alternating layers are there in IGBT?

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

50. Which insulation layer is used in MOSFET?

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