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Score: 38/50 (76.00%)

Code: 2098

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

- A) One
 B) **Four (Correct)**
 C) Seven
 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
 B) **10 mW/gate (Correct)**
 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 (Correct)**
 C) (1286)₁₀
 D) (1296)₁₀

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

- A) 100
 B) 101
 C) **110 (Correct)**
 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
 C) **74 LS 138 (Correct)**
 D) 74 LS 151

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

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

10. What is the use of flip - flop?

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

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

- A) 1^n
 B) **2^n (Correct)**
 C) 2^{n+1} (Incorrect)
 D) 3^n

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
 B) IC 7447
 C) IC 7493
 D) **IC 7495 (Correct)**

14. What is the information stored in digital registers?

- A) Analog values
 B) **Binary values (Correct)**
 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
 D) **LM 317 (Correct)**

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

- A) 1.0 A
B) 1.5 A (Incorrect)
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 (Correct)**
B) 0.2 A
C) 0.3 A
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 (Incorrect)
C) 0 to 32 V
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
C) **Relaxation oscillator (Correct)**
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
B) **TO-92 (Correct)**
C) TO-82
D) TO-102

28. How gate is biased in JFET?

- A) AC supply function
B) Forward biased
C) **Reverse biased (Correct)**
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 (Correct)**
C) Practically unity
D) Practically infinity

30. Which is the N - channel FET?

- A) AC supply connected to drain termin
B) **Main current flows through N-doped material (Correct)**
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 (Correct)**
D) 40 V

33. What is the term stands for TRIAC?

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

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

- A) 1.5 V (Incorrect)
B) 1.7 V
C) 2.1 V
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
B) **Principal current (Correct)**
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
D) 100 milli Ampere (Incorrect)

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

- A) Minimum output signal FET
B) Medium oscillator signal FET (Incorrect)
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
C) 5000 V
D) **6000 V (Correct)**

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

43. What is the advantage of MOSFET?

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

44. What is the advantage of IGBT?

- A) It has low input impedance
B) Low efficiency and slow switching
C) Antimony material
D) Germanium material

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 (Correct)**
B) Low gate signal power
C) Fast switching speed
D) Used to isolate logic circuits

46. 6 What is the input impedance of IGBT?

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

47. Which is the property of IGBT?

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

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

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

49. How many alternating layers are there in IGBT?

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

50. Which insulation layer is used in MOSFET?

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