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Score: 39/50 (78.00%)

Code: 4838

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**  
 D) 12 ns (Incorrect)

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)<sub>8</sub>?

- A) (1266)<sub>10</sub>  
 B) **(1276)<sub>10</sub> (Correct)**  
 C) (1286)<sub>10</sub>  
 D) (1296)<sub>10</sub>

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 (Correct)**  
 C) 6  
 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 (Incorrect)  
 D) **Memory circuits**

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)  $10^n$   
 B)  **$2^n$  (Correct)**  
 C)  $2^{n+1}$   
 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)**  
 B) Small scale integration (SSI)  
 C) Medium scale integration (MSI) (Incorrect)  
 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  
C) **2.0 A**  
B) 1.5 A (Incorrect)  
D) 0.55 A

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

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

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

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

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

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

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

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

24. Which type of voltage regulator is IC 723?

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

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

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

26. What is the maximum forward gate current (I<sub>g</sub>) for BFW10 JFET?

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

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

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

28. How gate is biased in JFET?

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

29. What is the gate current (I<sub>g</sub>) of the JFET, when reverse biased?

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

30. Which is the N - channel FET?

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

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

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

32. What is the maximum drain- source voltage, V<sub>DS</sub> for the JFET BF 245B?

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

33. What is the term stands for TRIAC?

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

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

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

35. What is the code number of TRIAC?

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

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

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

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

- A) 1 to 25 nano seconds  
C) **1 to 100 nano seconds (Correct)**  
B) 10 to 60 nano seconds  
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 (Correct)**  
C) 50 milli Ampere  
B) 10 milli Ampere  
D) 100 milli Ampere

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

- A) Minimum output signal FET      B) Medium oscillator signal FET

**C) Metal oxide semiconductor FET (Correct)**

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) 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 (Incorrect)

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      B) 3 layers  
**C) 4 layers (Correct)**      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