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**Score: 15/50 (30.00%)**

**Code: 9340**

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

- A) One (Incorrect)                      **B) Four**  
 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**                      D) + 7.5v to + 12V  
 (Incorrect)

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

- A) 5 ns    B) 8 ns (Incorrect)  
**C) 10 ns**    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)<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 (Incorrect)  
**C) 110**    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 (Incorrect)                      B) IC 7486  
**C) 74 LS 138**                                  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) 1<sup>n</sup>    **B) 2<sup>n</sup> (Correct)**  
 C) 2<sup>n+1</sup>    D) 3<sup>n</sup>

12. What is the purpose of using IC74LS190?

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

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

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

14. What is the information stored in digital registers?

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

15. 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  
 (Incorrect)                                  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) (Incorrect)  
 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 (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 (Incorrect)      B) 3A  
C) 4A      D) **5A**

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 (Incorrect)      D) **Three pin adjustable voltage regulator**

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<sub>g</sub>) for BFW10 JFET?

- A) 5 mA      B) 8 mA  
C) **10 mA (Correct)**      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**      D) Dual supply function (Incorrect)

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

- A) Practically very low (Incorrect)      B) **Practically zero**  
C) Practically unity      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<sub>DS</sub> for the JFET BF 245B?

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

33. What is the term stands for TRIAC?

- A) Triode Alternate control      B) Triode DC semiconductor  
C) **Triode AC semiconductor (Correct)**      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      D) **2.5 V (Correct)**

35. What is the code number of TRIAC?

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

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

- A) Conventional current      B) **Principal current**  
C) Reverse current (Incorrect)      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**      D) 1 to 100 milli seconds (Incorrect)

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 (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 (Incorrect)      B) 1000 V  
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 (Incorrect)  
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 (Incorrect)      D) Low driving power

44. What is the advantage of IGBT?

A) It has low input impedance (Incorrect)      B) Low efficiency and slow switching

**C) High efficiency and fast switching**      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 (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**      D) Single layer (Incorrect)

50. Which insulation layer is used in MOSFET?

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