NMDC DAV Polytechnic Dantewada.

Digital Electronics IMP Questions

4th Semester

1) What are the difference between Digital System and Analog System?
2) Define digital System. Write the advantage of digital system over Analog system.
3) What are the number systems and codes in digital electronics. Explain alpha-numeric, weighted and non-weighted codes.
4) State and prove De-Morgan's theorem with example.
5) What do you mean by Universal gate? what are they? Why are they called Universal gates?
6) Explain BCD to seven segment decoder with complete working
7) What do you mean by multiplexer? Design 1x8 MUX using logic gates.
8) What do you mean by De-multiplexer? Design 8x1 De-MUX using logic gates.
9) Difference between multiplexer and demultiplexer.
10) What is difference between decoder and demultiplexer.
11) Explain 3 line to 8 line decoder, with the help of a logic diagram and a truth table.
12) Explain Full adder using 2 half adder with truth table and block diagram .
13) Explain Full subtractor using 2 half subtractor with truth table and block diagram .
14) Explain S-R Flip-flop. Also derive the excitation table and characteristic equation of the same.
15) What is 'Race around condition'? How race around can be eliminated?
16) Explain in bref a master-slave flip-flop.
17) Explain IC 7490 with pin diagram, truth table and its application.
18) Explain IC 74151 with pin diagram, truth table and its application.
19) What is shift resister ? explain different tupes shift resister with the help of a neat diagram.
20) Write the working of a J.K Flip-flop using NAND gate along with its logic diagram, characteristic equation.
21) Distinguee between EEPROM and UVPROM.
22) Explain weighted resistor D/A converter with neat diagram
23) Explain R-2R ladder type D/A converter with examples.
24) Explain Dual-slope A/D converter with neat diagram.
25) Successive approximation type A/D converter with a proper diagram.
26) Explain the following:-
    1)EPROM
    2).PRROM
    3).Volatile memory
    4).Static RAM
    5) Dynamic RAM
    6) Semiconductor memories
    7) Flash memories
    8) RAM
    9) ROM
    10)EEPROM
    11) UVEPROM
    12) Flash ROM