SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)
(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.
B.Sc. Physics - END SEMESTER EXAMINATIONS APRIL - 2024
SEMESTER - VI
20UPHCT6014 - Integrated Electronics

Total Duration : 2 Hrs. 30 Mins. Total Marks : 60

Section B

Answer any **SIX** questions $(6 \times 5 = 30$ Marks)

1. Explain how NAND gate can be used as a Universal logic gate.
2. Illustrate the working of a 1 to 4 De Multiplexer.
3. Predict the output of a clocked RS flip flop using NAND gate and discuss its working.
4. Sketch the circuit and also discuss the working of an OPAMP as a differentiator.
5. Describe the working of 555 timer IC connected as Schmitt trigger.
6. Predict with a neat diagram and truth table the working of a MOD – 10 BCD counter.
7. Compute the working of an OPAMP summing amplifier.
8. Examine the working of a binary weighted resistor DA convertor.

Section C

Answer any **THREE** questions $(3 \times 10 = 30$ Marks)

9. Illustrate on four variable K map using min terms.
10. Prepare a combinational circuit which can be used for addition of three input bits.
11. Examine the circuit of a ring counter and discuss its working.
12. Classify and explain the various parameters in relation with operational Amplifier.
13. Evaluate with necessary block diagram, the working of a successive approximation A/D counter and also enlist its advantages and disadvantages.

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