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.
M.Sc.Physics - END SEMESTER EXAMINATIONS - NOV' 2024
SEMESTER - I
22PPHCT1004 - Integrated Electronics and Microprocessor

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

Section B

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

1. Explain with the circuit diagram the working principle of a UJT relaxation oscillator.

2. Elucidate the principle and working of flash type ADC.

3. Appraise the working of a logarithmic amplifier using IC 741.

4. Write an ALP to move a block of 0A bytes of data from one memory space to another.

5. Give the construction and operation of gunn diode.

6. Explain the interfacing structure of a 2Kx8 EPROM to 8085 microprocessor.

7. Distinguish the function of RRC and RLC instructions with suitable examples.

8. Explain the four main types of filters? Explain any two types of filters.

Section C

I - Answer any **TWO** questions $(2 \times 10 = 20$ Marks)

9. Draw the SCR half-wave power control circuit and explain its working. Explain the wave shapes of the SCR Current and anode voltage with necessary diagrams.

10. Explain how shift register can be used to shift left and shift right operations.

11. With a neat circuit diagram explain the working of a Astable multivibrator.

12. Write a basic program for final square and square root of HEX number using 8085.

II - Compulsory question $(1 \times 10 = 10$ Marks)

13. Explain the use of PIA 8255. Describe the working of a 4 junction traffic lights control simulation with 8085. Give the necessary assembly language program.

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