Total Duration : 3 Hrs.   **Total Marks : 60**

Section A

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

1. What is TRIAC? Explain TRIAC construction and working with suitable sketch.

2. Prepare notes on Serial parallel registers.

3. classify the active filters circuits.

4. Describe the Registers and Flags with few examples.

5. Revise the Programmable peripheral device 8255.

6. Apply the conditions in UJT relaxation oscillator.

7. Show the design of synchronous counter.

8. Determine and sketch the time diagram for memory READ and Memory WRITE cycles.

Section B

Part A

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

9. Predict the SCR for power control and sketch the suitable diagram.

10. Explain the successive approximation method of ADC and how do you determine the dual slope ADC.

11. Diagnose the timer 555 – monostable operations with suitable diagram and prepare output of it.

12. Prepare notes on Hand shaking operations. Compare I/O mapped I/O and memory mapped I/O.

Part B

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

13. Recommend stepper motor interface and assess the clockwise and anticlockwise mode.

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