19. Describe the hardware and software interrupts in the 8085 microprocessor.

20. Write an assembly language program to control traffic lights.

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(For candidates admitted from 2010–2015 Batch)

B.Sc. DEGREE EXAMINATION, APRIL 2022

Part III – Computer Science– Major

MICROPROCESSOR AND ITS APPLICATIONS

Time : Three hours Maximum : 75 marks

PART A — (10 × 2 = 20)

Answer ALL questions.

1. What is microprocessor?

2. List few applications of microprocessor-based system?

3. What is an opcode?

4. What is the role of Assembler

5. Define Assembly Language Program.

6. Define Macro.

7. What is address space partitioning?

8. How I/O ports are interfaced.

9. How to do frequency measurement?

10. Define seven segment delay.

PART B — (5 × 5 = 25)

Answer ALL questions, choosing either (a) or (b).

11. (a) What are operations performed on data in 8085?

Or

(b) Explain the timing diagram of 8085 microprocessor?

12. (a) Steps involved to fetch a byte in 8085?

Or

(b) List out the five categories of the 8085 instructions. Give ex of the instructions for each group?

13. (a) Write an assembly language program for addition between two numbers.

Or

(b) Write an assembly language program for multiplying two numbers.

14. (a) Differentiate Memory and I/O interfacing.

Or

(b) Write short notes on programmable peripheral interface.

15. (a) How to interface Delay subroutine in a program.

Or

(b) Write an assembly program for water level indicator.

PART C — (3 × 10 = 30)

Answer any THREE questions.

16. Draw the architecture of Microprocessor and explain the blocks in detail.

17. Explain the stack and subroutine in 8085 microprocessor.

18. Write an assembly language program to perform subtraction operation.