

S.No. 3235

P 16 PYE 1

(For candidates admitted from 2016–2017 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022.

Physics — Elective

MICROPROCESSOR AND MICROCONTROLLER

Time : Three hours

Maximum : 75 marks

PART A — ($10 \times 2 = 20$)

Answer ALL questions.

1. What is a microprocessor?
2. What is ALE pin [8085] μ P ?
3. Define mnemonics.
4. What is the need for a timing diagram?
5. Define stepper motor.
6. Write a short note on Intel 8255.
7. Discuss some common feature of Intel of 8051 family of μ C.
8. Define Interrupt 8051.

9. Draw a flow chart of multiplication of 16 bit no.

10. Draw pin diagram of 8085 μ P.

PART B — ($5 \times 5 = 25$)

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

11. (a) Explain various Addressing mode 8085.

Or

(b) Draw a Timing diagram for op-code fetch cycle and explain its features.

12. (a) Draw a neat flow chart and explain program largest number in data set.

Or

(b) Draw a neat flow chart and explain program subtraction of 8 bit and 16 bit number.

13. (a) Draw neat diagram and explain working of stepper motor.

Or

(b) Explain salient feature of 8255A.

14. (a) Difference between μ P and μ C.

Or

(b) Explain the concept of memory organization.

15. (a) Draw neat flow chart and explain 8 bit subtraction in 8051.

Or

(b) Draw a neat flow chart and explain 8 bit division in 8051.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

16. Draw neat block diagram explain the architecture of 8085.

17. Draw neat flow chart, Algorithm of descending order program 8085.

18. (a) Draw neat block diagram explain 8253 Architecture.

(b) Explain various operating modes 8253.

19. Draw a pin diagram 8051 and explain its discription.

20. Explain the data transfer instruction of 8051 with example for each.