

35074 B

M.Sc. DEGREE EXAMINATION, OCTOBER/NOVEMBER 2019.

THIRD SEMESTER

Physics

Paper IV (B) – ELECTRONICS-I: ADVANCED ELECTRONICS

Time: Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Mention the difference between minimum and maximum modes of operation of 8086.
2. Discuss the branch control instructions of 8086 microprocessor.
3. Discuss three addressing modes of 80386 microprocessor with examples.
4. Write a note on Pentium Pro processor.
5. Discuss the assembler format for PIC 16 controller.
6. Discuss the ACALL and LCALL instructions of PIC 16 controller.
7. Explain the JUMP instructions of 8051 microcontroller.
8. Describe the capture registers of 16F87XA microcontroller.

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Explain the internal architecture of 8086 microprocessor with the help of functional diagram.  
Or
10. Discuss the Program-memory and Stack-memory addressing modes of 8086 microprocessor.

11. Explain the functional blocks of 80486 processor with a block diagram.

Or

12. With examples explain the various addressing modes of 80586 microprocessor.

13. Discuss the ALU function of PIC 16 controller. Explain how to create programs by using Assemblers with a flow chart.

Or

14. Discuss the Logical and Arithmetic instructions of PIC 16 controller with examples.

15. With a functional block diagram, explain the internal architecture of 8051 microcontroller.

Or

16. With a suitable circuit diagram, explain how LED display can be interfaced to 16F87XA controller.

