

18. (a) Draw the pin diagram of ADC 0800. Explain its working.

Or

- (b) Explain the interfacing of DAC 0800 with 8085 A with a neat diagram.

19. (a) Write an assembly language program to find the square root of a number.

Or

- (b) Explain the direct and indirect addressing modes of 8085 A.

20. (a) Describe the temperature measurement system designing with a neat diagram.

Or

- (b) Explain the microprocessor interfaced traffic control system.

Reg. No. :

Code No. : 8105

Sub. Code : C 1 AP

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2011.

First Semester

Physics

Elective — MICROPROCESSOR AND INTERFACING

(For those who joined in July 2008 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

1. What do you understand by a μP ?
2. What is a Bus?
3. What are T states?
4. Why is Assembly language needed?
5. What is the need for interfacing devices?
6. Give two examples for interfacing devices.

7. Draw the timing diagram of ADC 0800.
8. What is the range of clock frequency used in ADC?
9. What are transducers?
10. Draw the display of two decimal numbers in seven segment LEDs.

PART B — ($5 \times 5 = 25$ marks)

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

11. (a) Write briefly about the evolution of microprocessors.

Or

- (b) Explain the Bus system used in 8085 μP .

12. (a) Explain the different data formats used in 8085 μP .

Or

- (b) Discuss briefly about the instruction cycle.

13. (a) What is an address space? Give its significance.

Or

- (b) Give the Pin diagram of PPI 8255 and explain the functions of its various pins.

14. (a) What are hold circuits? Draw one such circuit and give its working.

Or

- (b) Write down the operating principle of DAC.

15. (a) Discuss the role of transducers in physical instruments.

Or

- (b) Explain the working of a digital clock.

PART C — ($5 \times 8 = 40$ marks)

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

16. (a) Describe the architecture of 8085 μP with a neat diagram.

Or

- (b) Explain the working of synchronous counter with necessary diagram.

17. (a) Explain the parallel data transfer scheme.

Or

- (b) With a neat pin diagram, explain the working of DMA controller.