

FACULTY OF SCIENCE

M. Sc. IV – Semester Examination, May/June 2016

Subject : physics (Electronic Instrumentation Spl.)

Paper – IV : P. C. Architecture

Time : 3 Hours

Max. Marks: 80

Note : Answer all questions from Part–A and Part–B. Each question carries 4 marks in Part–A and 12 marks in Part – B.

PART – A (8 x 4 = 32 Marks)
(Short Answer Type)

- 1 Explain briefly the order in which various control signals are generated in executing a move instruction.
- 2 What is programmed control transfer? Explain.
- 3 Describe various types of arithmetic and logic operations performed by a computer.
- 4 What is microprogrammed control? Explain its role in computer organization.
- 5 Describe the instruction formats used in basic computer.
- 6 Explain different types of addressing modes in computer system.
- 7 What is decimal arithmetic unit? How does it perform decimal arithmetic operations?
- 8 Explain the serial communication in I/O organization.

PART – B (4 x 12 = 48 Marks)
(Essay Answer Type)

- 9 (a) Describe in detail the four different phases of instruction cycle.
OR
(b) Discuss in detail the organization of a basic computer and explain the I/O structure.
- 10 (a) Describe the programming related to arithmetic and logical operations with suitable examples. Discuss the role of subroutines in programming.
OR
(b) Discuss microinstruction format with suitable examples.
- 11 (a) What is stack? Describe salient feature of various stack operations. Discuss various types of instruction formats.
OR
(b) Explain the addressing modes of a CPU of a PC. Mention its program control and RISC.
- 12 (a) Explain in detail the floating point and decimal arithmetic operations with suitable examples.
OR
(b) What is asynchronous data transfer? How is it achieved? Mention typical examples where such data transferring is utilized.
