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Code No. 4337 / CBCS / NON-CBCS / N

## FACULTY OF SCIENCE

M.Sc. IV – Semester Examination, May / June 2015

Subject: Physics (Electronic Instrumentation Spl.)

Paper – IV New / III Old

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 (8x4 = 32 Marks)

[Short Answer Type]

- 1 What is an interrupt? Discuss different types of interrupts
- 2 What are instruction codes?
- 3 Explain subroutine
- 4 Define a) Micro operation b) Microinstruction c) Micro program d) Micro code
- 5 Explain stack organization.
- 6 Explain the division algorithms.
- 7 Write an algorithm for multiplication of two floating point numbers
- 8 Write the differences between programmed I/O and interrupt initiated I/O.

### PART – B (4x12 = 48 Marks)

[Essay Answer Type]

- 9 a) Discuss in detail the four different phases of instruction cycle.  
OR  
b) With a flow chart of computer operation, explain the design of a basic computer.
- 10 a) Explain double precision addition with a suitable example write a program for the same.  
OR  
b) Discuss microinstruction format with suitable examples.
- 11 a) Explain different addressing modes with suitable examples.  
OR  
b) Write a flow chart for division operation.
- 12 a) What is handshaking. Discuss DMA transfer using DMA controller.  
OR  
b) Draw a flow chart for addition and subtraction of floating point members.

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