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Code No. 4183 / CBCS / NONCBCS / N

FACULTY OF SCIENCE

M.Sc. II-Semester (CBCS/NON-CBCS) (New) Examination, May / June 2015

Subject : Physics and Applied Electronics

Paper : V

Electronics – II

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 the characteristics of ideal operational amplifier.
- 2 Explain the operation of logarithmic amplifier using Op-Amp.
- 3 Describe the working of half adder and full adder using truth table and circuit diagram.
- 4 Explain the race around condition in J-K flipflop.
- 5 Explain how the Ripple counter can be converted into mod 10 counter.
- 6 Explain accuracy and resolution in A/D converters.
- 7 Briefly explain the addressing modes of 8085.
- 8 Write about the flag registers in 8085 microprocessor.

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

- 9 a) Describe the block diagram of an IC Op-Amp.
OR
b) Describe the working of inverting and non-inverting amplifiers.
- 10 a) Draw the logic diagram of demultiplexer and explain it's working.
OR
b) Describe the functioning of RS and JK flip-flops.
- 11 a) Explain the working of decade counter with suitable diagram.
OR
b) Explain the working of R-2R ladder type D/A converter.
- 12 a) Explain the data transfer and branch instructions with suitable examples in 8085 μ P.
OR
b) Write the assembly language programme of 8085 μ P to perform the addition of two 8-bit numbers.
