

This question paper contains **2** printed pages]

**BR—34—2016**

**FACULTY OF COMPUTER SCIENCE**

**M.Sc. (C.S.) (First Semester) EXAMINATION**

**OCTOBER/NOVEMBER, 2016**

**(CBCS Pattern)**

**COMPUTER SCIENCE**

**Paper CS-101**

**(Computer Architecture and Microprocessor)**

**Wednesday, 16-11-2016)**

**Time : 10.00 a.m. to 1.00 p.m.**

*Time—Three Hours*

*Maximum Marks—75*

*N.B. :—* (i) All questions are compulsory.

(ii) Each question carries equal marks.

(iii) Figures to the right indicate full marks.

(iv) Draw figures wherever necessary.

(v) Write answers brief and to the point.

1. Attempt any *three* of the following : 15

(a) Explain system modelling for design methodology.

(b) Floating point arithmetic.

(c) A microprogrammed control unit

(d) Random access memories

(e) Features of 8086 microprocessor.

2. Answer the following (any *three*) : 15

(a) Describe working of registers and counters.

(b) Describe fixed point addition algorithm.

(c) Explain RISC, CISC, vector processor concepts.

(d) What is main memory ? Describe segmentation used in main memory.

P.T.O.

3. Solve the following (any *three*) : 15
- (a) Describe Hardwired control unit.
  - (b) Describe demultiplexing of address/data bus in 8085 microprocessor.
  - (c) Describe flag register of 8086 microprocessor.
  - (d) Explain working of a microprogram sequencer.
4. Answer the following (any *three*) : 15
- (a) Explain in brief working of multiplexer.
  - (b) Describe a multilevel hierarchies of memory.
  - (c) What is addressing mode ? Describe various addressing modes of 8085 microprocessor.
  - (d) Describe logical instructions of 8086 microprocessor.
5. Write short notes on (any *three*) : 15
- (a) Processor level design
  - (b) Virtual memory
  - (c) Pin diagram of 8085 microprocessor
  - (d) Memory segmentation in 8086 microprocessor
  - (e) Information representation.