Total No. of Questions—**8**] [Total No. of Printed Pages—**2**

Seat No.	

[5559]-202

S.E. (I.T.) (First Semester) EXAMINATION, 2019

COMPUTER ORGANISATION AND ARCHITECTURE

(2015 PATTERN)

Time : 2 Hours **Maximum Marks : 50**

N.B. **:—** (*i*) Answer four questions.

(*ii*) Neat diagrams must be drawn wherever necessary.

(*iii*) Figures to the right side indicate full marks.

(*iv*) Assume suitable data if necessary.

1. (*a*) Multiply –7 and 3 using Booths Algorithm. [6]

(*b*) Describe the computer performance parameters such as CPU time, CPI, MIPS, MFLOPS, Amdahl's law and clock rate. [6]

Or

2. (*a*) Explain any *three* addressing modes with suitable example. [6]

(*b*) Differentiate between RISC and CISC Architecture. [6]

3. (*a*) Draw and explain single bus processor organisation. [6]

(*b*) What is Micro-instruction ? Explain micro-programmed control unit with the help of suitable diagram. [6]

Or

4. (*a*) How virtual memory is managed using paging and TLB ? [6]

(*b*) List and explain cache replacement policy. [6]

P.T.O.

5. (*a*) Explain basic performance issue of pipelining. [6]

(*b*) Explain data hazards and control hazards. [7]

Or

6. (*a*) Write short note on superscalar processor. [6]

(*b*) Explain five stage pipeline for MIPS architecture with diagram. [7]

7. (*a*) With the help of suitable diagram explain Flynn's Taxonomy for multiple processor organisation. [7]

(*b*) What is clustering ? Explain cluster architecture. [6]

Or

8. (*a*) What is Multicore Organisation ? Explain hardware and software issues involved in multi core organisation. [7]

(*b*) Explain loosely coupled and closely coupled microprocessor system. [6]