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R-11 / R-13

Code: 1G457

III B.Tech. I Semester Supplementary Examinations May 2018

Computer System Architecture

(Electronics and Communication Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any **Five** questions

All Questions carry equal marks (**14 Marks** each)

- 1. a) What is a Bus? Explain Single and Multiple Bus Structure in an Architecture 7M
b) Define MIPS and Throughput rate for Performance of Computer 7M

- 2. What are the phases of instruction cycle? Explain each. 14M

- 3. a) Illustrate three categories of computer instructions with an Example 6M
b) Explain any 4 addressing modes in computer Architecture 8M

- 4. a) Explain address sequencing with neat diagram. 7M
b) Discuss the design of control unit. 7M

- 5. Explain the flow chart for Division Operation with division Algorithm 14M

- 6. What is virtual memory? What is the relation between address and memory space in a virtual memory system? Explain with the help of example 14M

- 7. What is the difference between isolated I/O and memory-mapped I/O? what are advantages and disadvantages of each 14M

- 8. a) Write short notes on SIMD Array Processor 8M
b) Explain in detail arithmetic pipeline 8M
