

Code: EC5T1

III B.Tech - I Semester – Regular Examinations - November 2015

**COMPUTER ARCHITECTURE AND
ORGANIZATION
(ELECTRONICS & COMMUNICATION ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

- 1 a) Explain various Arithmetic Micro Operations. 7 M
- b) Design a circuit for 4 bit Arithmetic Adder 7 M
- 2 a) Explain various phases of Instruction Cycle in a basic computer. 7 M
- b) Explain Memory Reference Instructions. 7 M
- 3 Explain working of Micro Program Sequencing with the help of neat sketch. 14 M
- 4 a) Explain Stack Organization 7 M
- b) Give any 3 different instruction formats for basic computer. 7 M

- 5 a) Explain DMA Transfer in detail with a neat diagram. 10 M
- b) Write the differences between isolated versus memory mapped I/O. 4 M
- 6 a) What is an Associate Memory? Explain its operations with the help of neat sketch. 7 M
- b) Explain virtual memory. 7 M
- 7 Write & Explain floating point Addition, Subtraction algorithms with flowcharts. 14 M
- 8 a) What is a pipeline and explain the hazards of pipeline. 7 M
- b) Explain Arithmetic pipeline with an example. 7 M