

Code No: R1631041

**R16****SET - 1**

**III B. Tech I Semester Supplementary Examinations, May - 2019**  
**COMPUTER ARCHITECTURE AND ORGANIZATION**  
(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)  
2. Answer **ALL** the question in **Part-A**  
3. Answer any **FOUR** Questions from **Part-B**
- ~~~~~

**PART -A**

1. a) Compare single bus structure and multiple bus structure. [2M]
- b) What is indirect addressing mode? [2M]
- c) What is called static and dynamic branch prediction? [2M]
- d) What do you mean by memory mapped I/O? [3M]
- e) Define Flash Memory and cache memory? [3M]
- f) What are the two approaches used for generating the control signals in proper sequence? [2M]

**PART -B**

2. a) Discuss the history of computer development. [7M]
- b) What is System Software? What the uses of System Software? [7M]
3. a) Classify the instructions of typical computers. Explain about Logic Instructions. [7M]
- b) Explain how index register and immediate addressing modes work. [7M]
4. a) Using flowchart discuss the hardware algorithm for addition & subtraction. [7M]
- b) Write an algorithm to add the magnitudes and attach the sign of A to the result, when the signs of A and B are different. [7M]
5. a) Explain about Peripheral Component Interconnect. [7M]
- b) What are the functions of typical I/O interface? [7M]
6. a) What are the features of PROM? Explain. [7M]
- b) Write Short notes on Optical Disks. [7M]
7. a) What are hardwired and micro programmed controls? [7M]
- b) Discuss about Micro program Sequencing. [7M]

\*\*\*\*\*