Code No: R1631041 **R16** SET - 1

III B. Tech I Semester Supplementary Examinations, October/November - 2020

COMPUTER ARCHITECTURE AND ORGANIZATION

(Common to Electronics and Communication Engineering, Electronics and Instrumentation 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**

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PART –A (14 Marks)

1. a) What is the elapsed time of a computer system? [2M]
   b) What is the role of Queues in computer programming equation? [2M]
   c) What are the actions performed when we execute the instruction Add (R3) RI? [2M]
   d) What are the different methods used for handling the situation when multiple interrupts occur? [3M]
   e) What are the features of the PROM? [3M]
   f) What are the features of the hardwired control? [2M]

PART –B (56 Marks)

2. a) Discuss the evolution of Computer Architecture. [7M]
   b) Describe the Basic Operational concepts of Computers. [7M]

3. a) Discuss the Basic Input/output Operations. [7M]
   b) Classify the instructions of typical computers. Explain about shift Instructions. [7M]

4. a) Discuss hardware implementation for signed magnitude for addition and subtraction. [7M]
   b) With a neat Flowchart explain Floating-Point Addition and Subtraction. [7M]

5. a) Define Interrupts? Explain about Interrupt Hardware. [7M]
   b) What are the functions of the standard I/O interface? Explain. [7M]

6. a) What are the Basic memory circuits? Explain. [7M]
   b) Write short notes on Magnetic Hard Disks. [7M]

7. a) Distinguish between the hardwired control unit and micro programmed control unit. [7M]
   b) Discuss the Wide Branch Addressing. [7M]

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