

Code No: RT22054

R13**SET - 1****II B. Tech II Semester Supplementary Examinations, November - 2018****COMPUTER ORGANIZATION**

(Com. to CSE, ECC)

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 **THREE** Questions from **Part-B**
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PART -A

1. a) Convert the following binary number to hexadecimal number (4M)
i) 1.11010 ii) 1110.10
- b) What is register transfer bus (4M)
- c) For a RISC machine, the effective value of S is 1.25 and the average value of N is 200. If the clock rate is 500MHz, calculate the total program execution time (4M)
- d) Explain the Hardware implementation for signed magnitude data (4M)
- e) Explain the memory hierarchy (3M)
- f) What is the need of I/O interface module (3M)

PART -B

2. a) What are the advantages of Grey codes? Discuss areas of application (8M)
- b) Draw the functional diagram of a computer and explain each block (8M)
3. a) Explain about the shift micro operations (8M)
- b) Explain the design of basic computer (8M)
4. a) Differentiate between hardwired and micro programmed computers (8M)
- b) Explain the types of Interrupts (8M)
5. a) Draw and explain the division of floating point numbers (8M)
- b) Explain the Booth's multiplication algorithm (8M)
6. a) Explain about the direct mapping (8M)
- b) Explain the relation between address and memory space in a virtual memory systems (8M)
7. a) Explain the characteristics of multiprocessor system (8M)
- b) Explain the data transfer procedure for source initiated using handshaking (8M)