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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

(T-3 Examination May - 2019)

B. Tech. 4<sup>TH</sup> Semester

COURSE CODE: 10B22CI421

MAX. MARKS: 35

COURSE NAME: Computer Organization

COURSE CREDITS: 4

MAX. TIME: 2 Hrs

*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

- Q.1 [CO 4]  
(a) Discuss Interrupt Driven I/O with Interrupt Handling Mechanism? (3+2)  
(b) Differentiate between Interrupt Driven I/O and Polled I/O?
- Q.2 [CO 4]  
What is DMA? Discuss it with a circuit of DMAC (8257/8237) evolved in Peripheral operations? (5)
- Q.3 [CO 3]  
(a) Illustrate the FIFO, LRU and Optimal for performance parameters based on 3 Page Frame Memory with Processor requires pages from Virtual Memory in the following sequence of Page Numbers 4,7,3,0,1,7,3,8,5,4,5,4,4,7. (3+2)  
(b) Illustrate Micro-Operation for Register and Indirect Addressing Modes based on Mov Instruction?
- Q.4 [CO 1,2]  
(a) Convert  $(12.125)_{10}$  into Temp real formats? (2+3)  
(b) Discuss floating Point ALU with Floating Point addition algorithm?
- Q.5 [CO 2]  
(a) Discuss Restoring Algorithm for Unsigned Division in arithmetic Logic Unit with circuit diagram? (3+2)  
(b) Solve  $-19 / 7$  with Restoring Algorithm for signed Division.
- Q.6 [CO 4]  
What are interleaved Memories? Differentiate between High Order Interleaving and lower order Interleaving with support of Illustrations? (5)
- Q.7 [CO 4]  
(a) What is Flynn's taxonomy also discuss Flynn's classification (SISD, SIMD, MISD, MIMD)? Discuss the concept with suitable illustrations. (3+2)  
(b) Discuss RISC, CISC and EPIC microprocessor and specify the difference between CISC and RISC in tabular form.