JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

(T-1 Examination Feb-2019)

B. Tech. 4th Semester

COURSE CODE: 10B22CI421   MAX. MARKS: 15

COURSE NAME: Computer Organization

COURSE CREDITS: 3   MAX. TIME: 1 Hrs

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

Q.1   [CO 1]   (3+2)

(a) Discuss Instruction Pipeline with processors evolution chart? Design a 3-stage pipelined processor for 8 instructions in contrast to a non pipelined Processor?

(b) Design the circuit diagram for Signed Multiplication by Booth algorithm?

Q.2   [CO 1,2]   (3+2)

(a) Design a circuit for Floating Point addition and discuss IEEE 754 32 & 64 bit formats?

(b) Convert 2A3BH into Short Real Format?

Q.3   [CO 2,3]   (3+2)

(a) Discuss Addressing Modes for IA-32 Architecture by taking "ADD" Assembly Language Instruction?

(b) Discuss Restoring Division for Unsigned numbers? Solve 9 divided by 2 with the same algorithm?