JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

(T-2 Examination April-2019)

B.Tech. 4TH Semester

COURSE CODE:10B22CI421   MAX. MARKS:25

COURSE NAME: Computer Organization

COURSE CREDITS: 4   MAX. TIME: 1.5Hrs

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

Q.1   [CO 3]

What is Cache Mapping and Illustrate the concept of 4-way Set Associate Mapping with 4   (5)
GB Main Memory and 8 KB Cache Memory?

Q.2   [CO 3]

Illustrate the LRU and LFU for performance parameters based on 3 Page Frame Main   (5)
Memory with Processor requires pages from Virtual Memory in the following sequence of
Page Numbers 7,5,3,2,1,0,4,1,6,7,4,2 .

Q.3   [CO 2]

Discuss Hardwired Control Units based on sequence counter method and Delay Element   (5)
Method?

Q.4   [CO 2]

(a) Illustrate the concept of Micro-Operation &Control Signal for Control Unit?   (2+3)

(b) Illustrate Micro-Operation for Register and Indirect Addressing Modes based on SUB
Instruction?

Q.5   [CO 2]

(a) Discuss Booth's Algorithm for Signed Multiplication in arithmetic Logic Unit with   (3+2)
Flowchart?

(b) Solve -9 * 10 with Booth's Algorithm for Signed Multiplication.