

Class test #2 CSE 317 Fall 2021 MARKS: i= 3; ii= 10; iii= 7;

Time: 45 min.

Sec A

Wednesday, February 16, 2022

1.

i) Suppose you have an implementation of 16 bits processor. Draw the flow graph of optimized multiplication algorithm for this 16-bit processor. Also draw the hardware organization for this.

ii) For the following high-level statement write the MIPS machine Code.

$X[i] = Z + X[i+7];$

$A = X[i] - Y;$  Where  $i$  = last two digits of your registration number.

iii)

Solve the following using **Booth's** logic.  $m*(mx)$  using 5-bits multiplier.

Where  $m$  = multiplicand =  $\{(\text{last digit of your registration}) \bmod 6\} + 2$ .  $mx$  = multiplier = -4.

\*\*\*\* write your id number and page number in all page\*\*\*\*