

# CSE 305 (Computer Architecture)

January 2021

## Class Test 2

Full Time: 25 minutes (including upload time)

Full Marks: 20

### Instructions

1. In this class test, you have to
  - i. Write down the answers in a paper,
  - ii. Scan the paper using mobile camera/any other scanner,
  - iii. Convert the scanned image to a pdf,
  - iv. Rename the pdf with your student id, and
  - v. Finally, upload the pdf to the Moodle.
2. Write down your student id and name first.
3. It is a closed book exam. DO NOT copy from any other person or source. Be fair. Be honest.
4. If you face any problem, give me an email to [madhusudan.buet@gmail.com](mailto:madhusudan.buet@gmail.com).
5. See the format in the following page.

### Questions:

1.	Write down the equivalent MIPS code for the following the C code considering register \$t1 and \$t2 for variable x and y respectively:  <pre>if (x&gt;y+131075)     x=1;</pre>	(5)
2.	How does jal instruction differ from an unconditional jump instruction?	(5)
3.	Suppose you have used 40 variables in your program whereas the MIPS architecture has 32 registers only. What does the compiler do in such a scenario?	(5)
4.	How is address calculation performed in PC-relative addressing?	(5)

**Answer Script Format:**

Student ID:

Name:

Answer to the Question 1

Answer to the Question 2

Answer to the Question 3

Answer to the Question 4