Department of Computer Science and Engineering
Term Test: #01| Marks: 25 |Date: Mar 11, 2022

Q1	(a) What do you mean by Instruction and Instruction Set? What is ISA and Microarchitecture? Give examples if needed.
	(b) Briefly mention the meaning of the following MIPS instructions.
	   (i) add $s1,$s2,$s3
	   (ii) lw $s1,20($s2)
	   (iii) andi $s1,$s2,10
	   (iv) sltu $s1,$s2,$s3
	   (v) bne $s1,$s2,25
		2*5 = 10

Q2	(a) Draw a block diagram for Von Neumann Architecture. (b) List the five classic components of a computer system. (c) What is the stored program concept? (d) State Amdahl's Law and Moore's law	5*2 = 10
Q3	A compiler designer is trying to decide between two code sequences for a computer. The hardware designers have supplied the following facts:	5

	CPI for each instruction class		
	A	B	C
CPI	1	2	3

For a high-level language statement, the compiler writer is considering two code sequences that require the following instruction counts:

	Instruction counts for each instruction class		
Code Sequence	A	B	C
C-1	4	2	4
C-2	6	3	2

Which code sequence executes the most instructions? Which will be faster? What is the CPI for each sequence?

[Answer all the questions. A google form is provided to submit the answer script. You must submit a pdf document on the google form. You can use camscanner or other images to pdf converter tools. If the file size is too large, you need to compress the file. You can use this website https://www.ilovepdf.com/.
Format of your file should be: CSE311<your_reg_no>TT#01.pdf]