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Daffodil International University

Faculty of Science & Information Technology

Department of Software Engineering

Course Code: SE222, Course Title: Computer Architecture

Quiz-2 Section: 46 L Marks: 15

Student ID :

Location	Data / instruction
500	33601
501	53602
502	63603
503	73604
504	23603
. . .	. . .
3601	008
3602	004
3603	002
3604	012

Opcode

0010 = Subtract memory value from AC

0011 = Load AC from memory

0101 = Add memory value to AC

0110 = Store AC into memory

0111 = If AC > memory value, AC = AC + 1;
else, AC = AC + 2

1. Execute the instructions sequentially and complete the table below. Whenever a memory value changes, **rewrite** the corresponding entry directly in the memory table provided above. **(10 Marks)**

Step	PC	IR	Operation	AC

2. Assume the CPU is executing a sequence of instructions in a program, and an interrupt can occur while the program is running. **Visualize** the instruction execution cycle considering interrupts. **(5 marks)**