

BRAC UNIVERSITY
Department of Computer Science and Engineering
Semester: Fall 2023
Section-9

Quiz-4

Duration: 45minutes

Full Marks: 15

CSE 340: Computer Architecture

Name:

ID:

1a. [CO1] Explain how **Control Unit** sends signals to **ALU** for different types of instructions. **[4 marks]**

b. [CO1] Construct the complete single cycle datapath for the following instruction:
sw \$s3,32(\$s2) **[5 marks]**

2. [CO3] For the following code sequence **outline** the pipeline stages and remove the hazards using the necessary removal methods such as stalls and forwarding. **[6 marks]**

```
sw R1, 0(R2)
add R4, R1, R5
or R6, R4, R7
and R8, R1, R6
```