**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ID: \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Department of Computer Science and Engineering**

**CSE340: Computer Architecture   
Spring 2016**

**Quiz-4, Set-A**

**Full Marks: 15 Time: 20 Mins**

1. Give the logic for Load-use Hazard Detection Unit? and explain the logic. **5**
2. Consider the below MIPS instruction. Identify the data hazard in the given sequence. Overcome the hazard by using stall and forwarding method. 10

lw $1,40($2)

add $3,$1,$3

add $4,$5,$1

or $8,$1,$9

xor $4,$1,$5

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ID: \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Department of Computer Science and Engineering**

**CSE340: Computer Architecture   
Spring 2016**

**Quiz-4, Set-B**

**Full Marks: 15 Time: 20 Mins**

1. What do the control unit needs to implement the stall? **5**
2. Consider the below MIPS instruction. Identify the data hazard in the given sequence. Overcome the hazard by using stall and forwarding method. 10

add $1, $2,$3

or $8,$1,$9

xor $4,$1,$5

sub $4,$1,$5

and $6,$1,$7

**Department of Computer Science and Engineering**

**CSE340: Computer Architecture   
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**Quiz-4, Set-C**

**Full Marks: 15 Time: 20 Mins**

1. Give an example of Ex/MEM stage data hazard. Write the forwarding logic for EX/MEM stage data hazard. **5**
2. Consider the below MIPS instruction. Identify the data hazard in the given sequence. Overcome the hazard by using stall and forwarding method. 10

**lw $1,40($8)**

**add $1, $2,$3**

**or $8,$1,$9**

**xor $4,$1,$5**

**and $6,$1,$7**

**Department of Computer Science and Engineering**

**CSE340: Computer Architecture   
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**Quiz-4, Set-D**

**Full Marks: 15 Time: 20 Mins**

1. Give an example of MEM/WB stage data hazard. Write the forwarding logic for MEM/WB stage data hazard. **5**
2. Consider the below MIPS instruction. Identify the data hazard in the given sequence. Overcome the hazard by using stall and forwarding method. 10

**lw $1,40($8)**

**add $1, $2,$3**

**sw $1,44($8)**

**xor $4,$1,$5**

**and $6,$1,$7**

**Department of Computer Science and Engineering**

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**Quiz-4, Set-E**

**Full Marks: 15 Time: 20 Mins**

1. What forward logic you should use for scenario given below: 5

**add $2,$1,$2**

**add $2,$2,$3**

**add $2,$2,$4**

1. Consider the below MIPS instruction. Identify the data hazard in the given sequence. Overcome the hazard by using stall and forwarding method. 10

**lw $1,40($8)**

**sw $1,44($8)**

**add $1, $2,$3**

**xor $4,$1,$5**

**and $6,$1,$7**