CSE321: Operating Systems
Quiz 5 SET A

Name:	ID:	Section:

Marks: 10 **Time: 15 minutes**

Instructions: Answer all questions on the space provided below for each.

Question 1: [CO2] For TLB search associative look up (**ε**) is 25 ns, Hit ratio (**α**) is 85% and time needed for memory access is 70 ns. **Calculate** effective access time for the scenario. **[Marks 2]**

Question 2: [CO2] Consider a physical memory of size 16 bytes and page size of 2 bytes. The table below shows some **logical addresses** that have to be mapped to its physical addresses. Using the information provided below, calculate the **binary physical addresses** and map the page contents to its correct memory frames. **[Marks 8]**

Logical Memory
Logical Address
13
11
12
5
3

Page Content	
P0	abc
P1	def
P2	ghi
P3	jkl
P4	mno
P5	pqr
P6	stu

Page table	
Page number	**Frame number**
P0	6
P1	2
P2	5
P3	1
P4	3
P5	4
P6	0

Main memory

CSE321: Operating Systems
Quiz 5 SET B

Name:	**ID:**	**Section:**

Marks: 10 **Time: 15 minutes**

Instructions: Answer all questions on the space provided below for each.

Question 1: [CO2] For TLB search associative look up (**ε**) is 15 ns, Hit ratio (**α**) is 75% and time needed for memory access is 100 ns. **Calculate** effective access time for the scenario. **[Marks 2]**

Question 2: [CO2] Consider a physical memory of size 16 bytes and page size of 2 bytes. The table below shows some **logical addresses** that have to be mapped to its physical addresses. Using the information provided below, calculate the **binary physical addresses** and map the page contents to its correct memory frames. **[Marks 8]**

Logical Memory
Logical Address
7
6
10
3
5

Page Content	
P0	abc
P1	def
P2	ghi
P3	jkl
P4	mno
P5	pqr
P6	stu

Page table	
Page number	**Frame number**
P0	1
P1	2
P2	0
P3	6
P4	3
P5	4
P6	5

Main memory

CSE321: Operating Systems
Quiz 5 SET C

Name:	**ID:**	**Section:**

Marks: 10 **Time: 15 minutes**

Instructions: Answer all questions on the space provided below for each.

Question 1: [CO2] For TLB search associative look up (**Ɛ**) is 5 ns, Hit ratio (**α**) is 65% and time needed for memory access is 80 ns. **Calculate** effective access time for the scenario. **[Marks 2]**

Question 2: [CO2] Consider a physical memory of size 16 bytes and page size of 2 bytes. The table below shows some **logical addresses** that have to be mapped to its physical addresses. Using the information provided below, calculate the **binary physical addresses** and map the page contents to its correct memory frames. **[Marks 8]**

Logical Memory
Logical Address
4
8
13
7
5

Page Content	
P0	abc
P1	def
P2	ghi
P3	jkl
P4	mno
P5	pqr
P6	stu

Page table	
Page number	**Frame number**
P0	6
P1	2
P2	1
P3	5
P4	4
P5	3
P6	0

Main memory