

## National University of Computer and Emerging Sciences, Lahore Campus



Course: Operating System Lab  
Program: BS(Computer Science)  
Duration: 45 minutes  
Quiz Date: 26-Oct-2018  
Section: A  
Exam: Quiz 1

Course Code: CL205  
Semester: Fall 2018  
Total Marks: 15  
Weight: 5  
Page(s): 1  
Roll No:

### Question # 1 (10)

There are exactly 3 threads generate string a, b and c in an arbitrary order. In an absence of any synchronization mechanism there will be no order in generation of a, b and c. In the form of regular expression the string  $(a | b | c)^*$  { \* means many times a character can occur, | means or, so different combinations can be aaaaaa... , bbbbbbbbbbb... , cccc... }. Synchronize threads using semaphore in such a way that your printed string will be  $(cbbba)^*$  { \* means many times cbbba can occur, so different combinations will be cbbba, cbbba , cbbba,... }.

Note you are not allowed to add or delete any cout statement

<pre>//thread 1 While(1) {      Cout &lt;&lt; 'a';  }</pre>	<pre>//thread 2 While(1) {      Cout &lt;&lt; 'b';  }</pre>	<pre>//thread 3 While(1) {      Cout &lt;&lt; 'c';  }</pre>
---	---	---