Second Semester, 2018-2019   Instructor: Dr. Adnan H. Yahya,
Quiz1   Wednesday, 26/2/2019   Time 10 minutes

Given the following Critical Section code for two processes:

```
Pi  do                                  Pj   do {
     flag[i] = TRUE;                          flag[j] = TRUE;
     turn = j;                                turn = i;
     while(flag[j]&& turn == j);              while(flag[i]&& turn == i);
     critical section…..                      critical section…..
     flag[i] = FALSE;                         flag[j] = FALSE;
     remainder section…..                     remainder section…..
   } while (1)                          } while (1)
```

1. If we both i and j want to enter their critical sections and Process i works first. How will the processes enter their critical sections: □ I then J,   □ J then I, □ I but not J, □ J but not I □ none of the above.

2. If only **i** wants to enter its critical section (j does not) then allow both processes to work. Mark all that apply:
   □ J Can progress if given CPU. □ I Can progress if given CPU. □ Both Can progress if given CPU.
   □ None Can progress if given CPU?

3. If interested, Mark all that apply: □ I Can enter its Critical section twice in a row.
   □ J Can enter its Critical section twice in a row. □ They have to work alternatively: one then the other.

4. If we allow both processes to work and J is not interested then I will wait indefinitely and cannot finish: □ True □ False

5. In Test-and-Set instruction: the old variable is copied, the variable new value is set to 1 **the action is based on the old value of the variable**. □ True □ False

6. If the cars on an intersection obey the rule: Right of way is given to the car on the right. **Deadlock** (nobody moves) is possible when the intersection has (all that apply) □ 2 cars □ 3 cars □   4 cars

7. Threads are preferable to processes because: (all that apply)
   □ Context switching time is low for threads
   □ Process Creation time is low for threads
   □ Threads communicate faster than processes
   □ Processes use more registers than threads