

## **Operating Systems, Synchronization,**

I. Explain the following terminology:

(1) busy waiting,

(2) mutex

II. Fill the blanks of the following program segments:

The structure of process  $P_i$  in Peterson's solution is:

```
Do {  
    Flag[i] = TRUE;  
    Turn = ____;  
    While (Flag[____] && Turn = ____)_  
        Critical section;  
    Flag[i] = ____;  
    Remainder section  
} while (TRUE);
```

III. What are the operations of a semaphore? How are such operations implemented?

IV. Write an example to the following questions:

(1) race (conditions),

(2) atomic instruction ,