Rešenja drugog kolokvijuma iz Operativnih sistema 2, decembar 2017.

1. (10 poena)

```
var forks : array 0..4 of semaphore = 1;

task type Philosopher(i:int)
  var left, right, first, second : 0..4;
begin
  left := i; right := (i+1) mod 5;
  if left<right then
    begin first:=left; second:=right end
  else
    begin first:=right; second:=left end;
  loop
    think;
    forks[first].wait;
    forks[second].wait;
    eat;
    forks[first].signal;
    forks[second].signal;
  end;
end;
```

2. (10 poena)

```
uint64* getVictim () {
  while (clockHand) {
    uint16* pCnt = ((uint16*)clockHand) + 3;
    if (*pCnt == 0) // Found the victim!
      return clockHand-1;
    (*pCnt)--; // Decrement the counter
    // Move the clock hand to the next:
    uint64 next = *clockHand;
    next |= ~(uint64)0xffffffUL;
    clockHand = (uint64*)next;
  }
  return 0; // No pages or another exception
}
```

3. (10 poena)

a)(2)

0	
1	A06000, A08000
2	A0C000
3	
4	

b)(4)

0	A07000
1	A08000
2	A0C000
3	
4	

c)(4)

0	A07000
1	
2	
3	A08000
4	