HAMOUD ALQUSAIR | XXXXXX | HW6 , OS

Q1)

to prevent interrupt during execution of these instruction to prevent race condition which violate mutual exclusion..

Q2)

busy waiting meansthataprocessiswaitingfora condition to be satisfied in a tight loop without relinquishing the processor. Alternatively, a process could wait by relinquishing the processor, and block on a condition and wait to be awakened at some appropriate time in the future. Busy waiting can be avoided but incurs the overhead associated with putting a process to sleep and having to wake it up when the appropriate program state is reached

Q3)

in paging the system allocates memory and with segmentation memory is allocated to a specific function.

Paging has no separate protection and segmentation does.

Paging has no shared code and segmentation does.

Q4)

a. Logical address: 13 bits (213 = 8K)

b. Physical address: 15 (215 = 32K)

Q5)

With segmentation, you only need a small amount of information ­ the segment descriptor ­ to

share, instead of changing protection on a large number of pages. In addition, you don't have to worry about mapping the code to the same address ­ the addresses within the code are relative to the segment, so it can be relocated more easily.

Q6)

a) 219 + 430 = 649

b) 90 + 500 = trap, segment 2 has length of 100

c) 1327 + 400 = 1727