

Batuhan Aktan  
CISC 324 Assignment 1

- 1) True
- 2) Cache Memory
- 3) MDR and MAR are two registers that work together, the computer uses the address register to refer to the location of the data whereas the data register is used to store the data that the address register references to. The computer uses these two registers everytime it alters the data that is stored in the memory.
- 4) Context switching is when the CPU that is currently preoccupied with a task suspends the process and saves the current state on the PCB, then the CPU switches to a task that is in the ready state. First example is when the system call fork() is used since a child is created the context is switched and the data is stored in the PCB. Another would be exit() since the exit would kill the child and the parent would be restored from the PCB to be continued.
- 5) Firstly the kernel is located by using the bootstrap program or the boot loader, then the kernel is loaded into the memory and ran. The kernel initializes the hardware to make sure that it can use the hardware can be recognized by the OS to be used. Then lastly the root file system is mounted.
- 6) Begin

```

    S0
    .ParBegin
        S1
        .ParBegin
            S4
            S5
            S6
        ParEnd
        S2
        .ParBegin
            S7
        ParEnd
        S3
        .ParBegin
            S8
        ParEnd
    ParEnd
    S9
End
```