Multiple Choice Questions:

1. The general role of an operating system is to:
   1. Act as an interface between various computers
   2. Provide a set of services to system users
   3. Manage files for application programs
   4. None of the above
2. The four main structural elements of a computer system are:
   1. Processor, Registers, I/O Modules & Main Memory
   2. Processor, Registers, Main Memory & System Bus
   3. Processor, Main Memory, I/O Modules & System Bus
   4. None of the above
3. The two basic types of processor registers are:
   1. User-visible and Control/Status registers
   2. Control and Status registers
   3. User-visible and user-invisible registers
   4. None of the above
4. Address registers may contain:
   1. Memory addresses of data
   2. Memory addresses of instructions
   3. Partial memory addresses
   4. All of the above
5. A Control/Status register that contains the address of the next instruction to be fetched is called the:
   1. Instruction Register (IR)
   2. Program Counter (PC)
   3. Program Status Word (PSW)
   4. All of the above
6. The two basic steps used by the processor in instruction processing are:
   1. Fetch and Instruction cycles
   2. Instruction and Execute cycles
   3. Fetch and Execute cycles
   4. None of the above
7. A fetched instruction is normally loaded into the:
   1. Instruction Register (IR)
   2. Program Counter (PC)
   3. Accumulator (AC)
   4. None of the above
8. A common class of interrupts is:
   1. Program
   2. Timer
   3. I/O
   4. All of the above
9. When an external device becomes ready to be serviced by the processor, the device sends this type of signal to the processor:
   1. Interrupt signal
   2. Halt signal
   3. Handler signal
   4. None of the above -> Interrupt request signal
10. Information that must be saved prior to the processor transferring control to the interrupt handler routine includes:
    1. Processor Status Word (PSW)
    2. Processor Status Word (PSW) & Location of next instruction
    3. Processor Status Word (PSW) & Contents of processor registers
    4. None of the above
11. One accepted method of dealing with multiple interrupts is to:
    1. Define priorities for the interrupts
    2. Disable all interrupts except those of highest priority
    3. Service them in round-robin fashion
    4. None of the above
12. In a uniprocessor system, multiprogramming increases processor efficiency by:
    1. Increasing processor speed
    2. Taking advantage of time wasted by long wait interrupt handling
    3. Eliminating all idle processor cycles
    4. All of the above
13. As one proceeds down the memory hierarchy (i.e., from inboard memory to offline storage), the following condition(s) apply:
    1. Increasing cost per bit
    2. Decreasing capacity
    3. Increasing access time
    4. All of the above
14. Small, fast memory located between the processor and main memory is called:
    1. WORM memory
    2. Cache memory
    3. CD-RW memory
    4. None of the above
15. When a new block of data is written into cache memory, the following determines which cache location the block will occupy:
    1. Block size
    2. Cache size
    3. Write policy
    4. None of the above
16. Direct Memory Access (DMA) operations require the following information from the processor:
    1. Address of I/O device
    2. Starting memory location to read from or write to
    3. Number of words to be read or written
    4. All of the above