

**GROUP 10**  
**OPERATING SYSTEM**  
**MCQ ASSIGNMENT**

**GROUP MEMBERS**

1. UCHEOHA GRACIOUS SHALOM	12569814
2. OSEI YEBOAH MAXWELL	2567814
3. YEBAH DESMOND OKYERE	2570114
4. ADU MENSAH KINGLORD	1113313
5. SAMUEL NII ARYEETAY	2562314
6. BELLO OPEYEMI	2563114
7. RCHMOND OSEI	2567714
8. ADJEI ELIAS	2560814
9. JOSEPH KYEI	2566014
10. ADIENU-DOE JENNIFER	2560614
11. LARBO MICHAEL	2566114

## CHAPTER ONE

1. Operating systems for single computer users are usually designed mostly for
  - a. Resource utilization
  - b. Performance
  - c. Ease of use
  - d. No user view
  - e. User experience
2. A program that initializes all aspects of the system, from CPU registers to device controllers to memory contents and loads in a kernel is called
  - a. Operating system
  - b. System program
  - c. Bootstrap
  - d. System call
  - e. BIOS
3. On a UNIX environment the first system daemon loaded into memory is the
  - a. Grub
  - b. Lino
  - c. Init
  - d. Bootloader
  - e. /dev
4. Hardware may trigger an interrupt by sending a signal to the CPU while a software may trigger an interrupt by executing a special operation called
  - a. User process
  - b. System process
  - c. Interrupt signal
  - d. Flag
  - e. Monitor call
5. The mode (s) of operation of the operating system are user mode and
  - a. Privileged mode
  - b. Kernel mode
  - c. Supervisor mode
  - d. System mode
  - e. Use mode
6. A situation which is usually a hardware issue where the value of a variable in one cache when updated should reflect in all caches where the variable resides is called
  - a. Cache referencing

- b. Cache duplication
- c. Cache coherency
- d. Cache update
- e. Cache consistence

7. A stack is a sequentially ordered data structure that uses..... principle for adding and removing items.
- a. FCFS
  - b. FIFO
  - c. SIRO
  - d. LIFO
  - e. LILO
8. A ..... is a string of n binary digits that can be used to represent the status of n items.
- a. Bitmap
  - b. String map
  - c. Literal
  - d. Binary map
  - e. String literal
9. .... are the several thousands of individual units a medium-sized disk drive can be divided into.
- a. Disk partitions
  - b. Disk parts
  - c. Disk blocks
  - d. Disk fragments
  - e. Disk sectors
10. A structure for a distributed system where a client and a server may act as either depending on whether it is requesting for a service or providing a service is called
- a. Client - Server
  - b. Server - server
  - c. Client - client
  - d. Peer - peer
  - e. Peer - client

## CHAPTER TWO

1. All are services provide by the operating system except:
  - a) Program execution
  - b) File system manipulation
  - c) Communication
  - d) Virus Detection**
  - e) Error Detection
2. The function of system programs is?
  - a) A platform for application to run on
  - b) Programs need by a network
  - c) Providing basic functionality to users to avoid writing own programs**
  - d) Protecting systems from authorized entry
  - e) Helps in backing systems data to secondary storage
3. CDE stands for?
  - a) Computer Disk Encode
  - b) Common Desktop Environment**
  - c) Central Disk Event
  - d) Compact Desktop Environment
  - e) Common Demand Entity
4. What system calls have to be executed by a command interpreter or shell in order to start a new process in Unix?
  - a) A "fork" system call followed by "exec" system call.**
  - b) A "init" system call followed by "exec" system call.
  - c) A "boot()" system call followed by "init" system call.
  - d) A "init" system call
  - e) A "boot()" system call
5. The function of the operation system that shares resource to multiple users is?
  - a) Resource Deallocation**
  - b) Accounting
  - c) Management
  - d) Resource Allocation
  - e) System calls
6. What are the three major activities of an operating system with regard to second-storage management?
  - a) Free-space management, Storage allocation, Process control
  - b) Storage allocation, Disk Scheduling, Process control
  - c) Free-space management, storage allocation, disk scheduling**
  - d) Command interpreting, storage allocation, Process control
  - e) Storage allocation, Free-space management, command interpreting

7. System calls can be grouped roughly into \_\_ major categories?
- a) 4
  - b) 3
  - c) 5
  - d) 8
  - e) 6**
8. What does the term SYSGEN refer to?
- a) A program that obtains information concerning the specific configuration to hardware system.**
  - b) A program that fires when code is executed with a provider, capturing state data and sending it to consumer
  - c) The failure of an application to generate a core dump file
  - d) Operating system failure to generate a crash dump file
  - e) Generating of log files containing error information
9. What is the name of the small piece of code that located the kernel and loads it into the main memory?
- a) Unix
  - b) Init
  - c) Bootstrap**
  - d) Windows loader
  - e) Macintosh
10. Some of the errors that occurs in the CPU and memory hardware includes all these except;
- a) Memory error
  - b) Power failure
  - c) Parity error on disk
  - d) Virus detection**
  - e) Arithmetic overflow

### CHAPTER 3

1. The systems which allows only one process execution at a time, are called
- a) uniprogramming systems
  - b) uniprocessing systems**
  - c) unitasking systems
  - d) single tasking
  - e) none of the above

2. In operating system, each process has its own
  - a) address space and global variables
  - b) open files
  - c) pending alarms, signals and signal handlers
  - d) all of the mentioned
  - e) none of the mentioned
  
3. In Unix, Which system call creates the new process?
  - a) fork
  - b) create
  - c) new
  - d) start
  - e) none of the above
  
4. A process can be terminated due to
  - a) normal exit
  - b) fatal error
  - c) killed by another process
  - d) all of the mentioned
  - e) none of the mentioned
  
5. What is the ready state of a process?
  - a) when process is scheduled to run after some execution
  - b) when process is unable to run until some task has been completed
  - c) when process is using the CPU
  - d) when a process enters a system
  - e) none of the mentioned
  
6. What is interprocess communication?
  - a) communication within the process
  - b) communication between two process
  - c) communication between two threads of same process
  - d) communication between tow threads of different process
  - e) none of the above

7. A set of processes is deadlock if

- a) each process is blocked and will remain so forever
- b) each process is terminated
- c) all processes are trying to kill each other
- d) each process await an event
- e) none of the above

8. The possible state of a process may include

- a) New
- b) Waiting
- c) Ready
- d) New and Waiting
- e) New, Waiting and Ready

9. As processes enters the system, they are put in the

- a) job queue
- b) waiting queue
- c) ready queue
- d) all the above
- e) none of the above

10. The address of the next instruction to be executed by the current process is provided by the

- a) CPU register
- b) program counter
- c) process stack
- d) pipe
- e) heap

## CHAPTER FOUR

- 1) If one thread opens a file with read privileges then
  - A) Other threads in another process can also read from that file
  - B) Other threads in another process cannot read from that file
  - C) Other threads in the same process can also read from that file
  - D) Other threads in the same process cannot read from that file
  - E) Both threads in the same process and another process can read from that file
  
- 2) The register context and stacks of a thread are de-allocated when the thread
  - A) Terminates
  - B) Blocks
  - C) Unblocks
  - D) Spawns
  - E) Synchronizes
  
- 3) When a thread immediately terminates the target thread, it is called
  - A) Deferred Cancellation
  - B) Systematic Cancellation
  - C) Sudden Cancellation
  - D) Asynchronous Cancellation
  - E) Purposeful Cancellation
  
- 4) When the target thread periodically checks if it should terminate and terminates itself in an orderly manner, it is called
  - A) Asynchronous Cancellation
  - B) Systematic Cancellation
  - C) Sudden Cancellation
  - D) Deferred Cancellation
  - E) Purposeful Cancellation



5) When a web page is loading, and the user presses a button on the browser to stop loading the page

- A) The thread loading the page continues with the loading
- B) The thread loading the page does not stop, but continues with another task
- C) The thread loading the page is paused
- D) The thread loading the page is cancelled
- E) The thread loading the page is interrupted

6) What is multi-threaded programming?

- A) It's a process in which two different processes run simultaneously
- B) It's a process in which two or more parts of the same process run simultaneously
- C) It's a process in which many different processes are able to access same information
- D) It's a process in which a single process can access information from many sources
- E) It's a process in which no single process can access information from any source

7) Thread priority in Java is?

- A) Integer
- B) Float
- C) Double
- D) Long
- E) Boolean

8) What will happen if two threads of the same priority are called to be processed simultaneously?

- A) Any one will be executed first lexicographically
- B) Both of them will be executed simultaneously
- C) None of them will be executed
- D) It is dependent on the operating system
- E) It is dependent on the programming language

9) Which of these statements is incorrect

- A) By multithreading CPU's idle time is minimized and we can make maximum use of it

- B) By multitasking CPU's idle time is minimized and we can make maximum use of it
- C) Two threads in Java can have same priority
- D) A thread can exist only in two states, running and blocked
- E) Process and thread based multitasking are types of multitasking

10) Cancelling a thread asynchronously

- A) Frees all the resources properly
- B) May not free each resource
- C) Spoils the process execution
- D) Does nothing at all
- E) Depends on the operating system

## CHAPTER FIVE

1. Cooperating processes are affected by other processes executing in the system, they also share logical space address and

- a) Use space address
- b) Use thread and share data
- c) Allowed to share data
- d) Use threads in their operation
- e) Use threads and space address

2. Pick the odd one out

- a) Mutual Exclusion
- b) Threads
- c) Bounded waiting
- d) Progress
- e) Threads and progress

3. **Locking** can be described as

- a) The process of denying all other process in the job pool access to resources
- b) The process of ensuring that all resources are locked by the kernel
- c) The process of protecting the critical region through the use of locks

- d) The process of ensuring and protecting all resources
- e) The process of denying the critical region

4. A situation where two or more process are waiting for an event that can only be caused by one of the process in the queue is called?

- a) Process Jam
- b) **Deadlock**
- c) Threadlock
- d) Clogging
- e) Process

5. Pick the odd one out

- a) Starvation
- b) Indefinite blocking
- c) Deadlock
- d) **Threadlock**
- e) Deadlock and starvation

6. One of the solution to priority inversion is \_\_\_\_\_?

- a) Priority dampening
- b) Priority-inheritance
- c) **priority-inheritance dialog**
- d) Priority vector
- e) Priority dialog

7. The power of synchronization primitives is commonly illustrated by \_\_\_\_\_?

- a) Rounded-buffer problem
- b) **Bounded-buffer problem**
- c) Structured-buffer problem
- d) Synchronization-buffer problem
- e) Buffer problem

8. A \_\_\_\_\_ is a queue structure containing threads blocked on a lock

- a) Interrupt Vector
- b) Thread List
- c) **Turnstile**

d) Thread queue

e) Turnstile List

9. A memory transaction is \_\_\_\_\_

a) Extensive

b) Parallel

c) Atomic

d) Desctructive

e) Intensive

10. Functional languages do maintain what?

a) Line

b) Memory

c) State

d) storage

e) State and Storage

## CHAPTER SIX

1. The simplest CPU-scheduling algorithm is .....

a. **First Come First Serve**

b. Shortest Job First

c. Round Robin

d. Multi-Level Queuing

e. Shortest Deadline first

2. The operating system needs to accept interrupts at almost all times, why?

a. **Output might be lost or input overwritten**

b. Input might be lost or output overwritten

c. To prevent the system from freezing

d. To ensure input and output are consistent

e. To enable the system prevent deadlocks

3. The turnaround time is generally limited by the

a. Deadline of the process

b. Quality of the output device

c. Make of the output device

- d. Response time of the output device
  - e. **Speed of the output device**
4. Which of these scheduling algorithms is most optimal?
- a. **SJF**
  - b. FCFS
  - c. RR
  - d. MLQ
  - e. FJS
5. In Earliest Deadline First, the earlier the deadline, the
- a. Lower the priority
  - b. **Higher the priority**
  - c. Higher the time slice of the process
  - d. More likely the process could be preempted
  - e. The higher the total time the process needs to run
6. When a running process moves into the foreground, Microsoft's Windows increases the scheduling quantum by a factor of
- a. 4
  - b. **3**
  - c. 2
  - d. 5
7. The most flexible scheduling algorithms are those that can be:
- a. **Altered by the system managers or by the users so that they can be tuned for a specific application or set of applications.**
  - b. Optimized for every kind of scenario
  - c. Modified to suit increasing scheduling requirements
  - d. Altered by the system managers or by the users so that they can be tuned for a specific system
  - e. Properly optimized to perform better scheduling
8. CPU scheduling is the task of selecting a waiting process from the ready queue and allocating the CPU to it. The CPU is allocated to the selected process by the
- a. Scheduler
  - b. Operating system
  - c. **Dispatcher**
  - d. Cache
  - e. Static Memory

9. A real-time computer system requires that results arrive within a deadline period; results arriving after the deadline has passed are

- a. **Useless**
- b. Recycled
- c. Disregarded
- d. Used for further processing
- e. Flagged

10. Operating systems supporting threads at the kernel level must schedule .....for execution

- a. **threads**
- b. processes
- c. user processes
- d. Kernel processes
- e. init

## **CHAPTER EIGHT**

1. One lock-order verifier, which works on BSD versions of UNIX such as FreeBSD, is known as \_\_\_\_\_

- a) **Witness**
- b) Claim edge
- c) Mutex lock
- d) Semaphore
- e) Deadlock

2. If preemption is required to deal with deadlocks, there is selecting a victim, Rollback and .....

- a) Circular wait
- b) Starvation**
- c) Rollback wait
- d) Select Rollback
- e) Waiting

3. Deadlock-prevention algorithms prevent deadlocks by \_\_\_\_\_
- a) granting requests on time
  - b) executing processes with the higher priorities first
  - c) executing processes with longer execution periods
  - d) detecting deadlocks and avoiding them
  - e) Limiting how requests can be made**
4. We can deal with the deadlock problem if we \_\_\_\_\_
- a) Allow the system to enter a deadlocked state, detect it, and recover**
  - b) Restart the system
  - c) Create a backup for the system
  - d) Ensure that there are no waiting processes
  - e) Use systems with higher processor speed
5. Deadlocks can be described more precisely in terms of a directed graph called a \_\_\_\_\_ graph
- a) process-allocation
  - b) system-allocation
  - c) resource-allocation**
  - d) request –allocation
  - e) Performance-allocation
6. A deadlock situation can arise if there is mutual exclusion, hold and wait, No preemption and ..... occur simultaneously in a system
- a) Resource allocation
  - b) I/O interrupt
  - c) Circular wait**
  - d) Waiting
  - e) Circularly Waiting

7. A state is safe if the system \_\_\_\_\_
- a) execute more processes
  - b) has a shorter queue of waiting processes
  - c) executes processes with higher priorities before ones with lower priorities
  - d) can allocate resources to each process**
  - e) prevent processes from requesting a resource
8. If a system does not employ a protocol to ensure that deadlocks will never occur, then a \_\_\_\_\_ may be employed.
- a) Detection-and-recovery scheme**
  - b) Detection-and-avoidance scheme
  - c) Avoidance-and-recovery scheme
  - d) Deadlock-recovery scheme
  - e) Deadlock-avoidance scheme
9. An alternative method of avoiding deadlocks is to \_\_\_\_\_
- a) Require additional information about how resources are to be requested**
  - b) Reduce the number of processes for the system
  - c) Avoid processes with higher execution periods
  - d) Using the system checker routine
  - e) Granting requests timely
10. Which algorithm can be used to find out whether or not a system is in a safe state?
- a) Banker's algorithm
  - b) Safety algorithm**
  - c) Resource-Request algorithm
  - d) Resource-Allocation algorithm
  - e) System-Safety algorithm



1. The ..... holds the smallest legal physical memory address.
  - a. Base register
  - b. Memory register
  - c. Memory
  - d. Register
  - e. Base memory
2. .... is the process on the disk that are waiting to be brought into memory for execution.
  - a. Queue
  - b. Input queue
  - c. Output queue
  - d. Stack
  - e. List
3. An address generated by the CPU is commonly referred to as .....
  - a. Physical address
  - b. Logical address
  - c. Memory address
  - d. Memory address register
  - e. Real address
4. The run-time mapping from virtual to physical address is done by a hardware device called the .....
  - a. Memory management unit
  - b. Management unit
  - c. Memory space
  - d. Register management unit
  - e. Memory allocation
5. .... are system libraries that are linked to user programs when the programs are run.
  - a. System libraries
  - b. Dynamic libraries
  - c. Dynamically linked libraries
  - d. Sequential libraries
  - e. Linked list
6. .... Involves moving the process between the main memory and a backing store.
  - a. Swapping
  - b. Standard swapping
  - c. Primary swapping
  - d. Backing store
  - e. Back swap
7. The set of all physical address corresponding to these logical addresses is called .....
  - a. Address space
  - b. Logical space

- c. Physical space
  - d. Physical address space
  - e. Logical address space
8. .... Is a process by which a routine is not loaded until it is called.
- a. Loading
  - b. Dynamic loading
  - c. Continuous loading
  - d. Load shedding
  - e. Routine load
9. One of the simplest method for allocating memory is to divide memory into several fixed-size called .....
- a. Partitions
  - b. Memory parts
  - c. Division
  - d. Bits
  - e. Memory space
10. One solution to the problem of external fragmentation is .....
- a. Compaction
  - b. Diversion
  - c. Segmentation
  - d. Addition
  - e. partition

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## CHAPTER 9

1. The technique that allows the execution of process that is not completely in memory is called,
- (a) Stack
  - (b) Registers
  - (c) Heap storage
  - (d) Virtual memory
  - (e) Scheduling

2. The logical or virtual view of how a process is stored in memory is called -----

(a) Storage process.

(b) Virtual address space of a process.

(c) Memory allocation

(d) Process scheduling

(e) Process counter

3. The large blank space or hole between the stack and the heap is called -----

(a) empty- blank space

(b) Stack space

(c) Sparse address space

(d) Register

(e) Flag space

4. ----- allows files and memory to be shared by two or more processes.

(a) Virtual memory

(b) Counter

(c) ROM

(d) RAM

(e) Monitor

5. The techniques that involves the loading of pages only when they are needed is called -----  
-----

(a) Swapper

(b) Demand paging

(c) CPU Utilization

(d) Scheduling

(e) Virtual memory

6. ----- involves the separation of logical memory as perceived by users from physical memory.

(a) Virtual memory

(b) ROM

(c) RAM

(d) CPU

(e) Storage space

7. In connection to demand paging ----- term is used.

(a) Swapping

(b) Pager

(c) Overload

(d) Overflow

(e) Organizing

8. Accessing a page that is not valid causes -----

(a) System crashing

(b) Complete short down of the computer

(c) System error

(d) Page fault

(e) Restarting of the computer

9. An operating system is a program that ----- the computer hardware.

(a) Download

(b) Executes

(c) Restarts

(d) Manages

(e) Design

10. A virtual memory allows ----- and ----- to be shared by two or more processes.

- (a) Files and memory
- (b) Facts and data
- (c) Information and data
- (d) Inputs and outputs
- (e) Heap and stack

## CHAPTER 10

- 1) ..... Provide the bulk secondary storage for modern computer systems.
  - a) Optical disk
  - b) Magnetic disk
  - c) Flash drive
  - d) Platter
  - e) ROM
- 2) The surface of a platter is logically divided into circular .....which are subsided into .....
  - a) Cylinder
  - b) Cylinder and tracks
  - c) Tracks and Sectors
  - d) Sectors and Cylinder
  - e) Sectors and tracks
- 3) The ..... is the rate at which data flow between the drive and the computer.
  - a) Transfer rate
  - b) Seek time
  - c) Platter
  - d) Random rate
  - e) Access rate
- 4) The positioning time which consists of two parts is also known as?
  - a) Transfer rate
  - b) Random-access time
  - c) Random time
  - d) Access time
  - e) Access rate

- 5) A disk drive is attached to a computer by a set of wires called an I/O
- a) System
  - b) Interrupt
  - c) Bus
  - d) Channel
  - e) Device
- 6) The data transfers on a bus are called out by special electronic processors known as?
- a) Bus
  - b) Controllers
  - c) FC
  - d) ATA
  - e) Serial ATA
- 7) The ..... Is the time for the disk arm to move the heads to the cylinder containing the desired sector.
- a) Seek time
  - b) Transfer rate
  - c) Bandwidth
  - d) Random-access time
  - e) Access time
- 8) The scan algorithm is also known as ..... Algorithm
- a) SSTF
  - b) Elevator
  - c) High
  - d) Top
  - e) C-SCAN
- 9) The low –level formatting of a new magnetic disk is called ..... formatting
- a) Physical
  - b) Soft
  - c) Hard
  - d) Logical
  - e) ECC raw
- 10) The bootstrap program in most computers is stored in the .....
- a) RAM
  - b) ROM
  - c) DRAM
  - d) Disk
  - e) Hard drive

