# Universidad Carlos III de Madrid
## Computer Science and Engineering Department
## Operating Systems Course

Answer the test in the next table. Each three worng answers will rest 1 right answer.

**NAME:**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
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**QUESTIONS**

1.- What is true regarding the Unix system cache files?
A) The blocks inode not kept in cache.
B) The directory blocks are not kept in cache.
C) Accelerates but scripture readings.
D) Increases performance and reduces system reliability.

2.- The memory management unit (MMU)...
A) Is a hardware device that maps physical to virtual memory
B) Provides hardware support to the OS memory management
C) Is a component present only in Unix like systems
D) None of the answers is correct

3.- A stub is:
A)A small piece of code that indicates how to allocate the appropriate memory resident library routine
B)A piece of code that indicated how to load the library if the routine is not yet present.
C)A Small Tracing Unit Bit
D)A memory address register

4.- Which kind of fragmentations might occur in paging and segmentation?
A) In segmentation we might have internal fragmentation while in paging external fragmentation
B) In segmentation we might have external fragmentation while in paging internal fragmentation
C) We can have both internal and external fragmentation in paging but only internal in segmentation
D) We can have both internal and external fragmentation in segmentation but only internal in paging

5.- In case of mutual exclusion, how many processes will be allowed to access information?
A)1.
B)0.
C)It is impossible to know.
D)All the processes that take part in the mutual exclusion.

6.- The use of a linked list for managing file blocks …
A)Generates a lot of disk fragmentation
B)Reduces the disk fragmentation
C)It is the most efficient approach
D)It is based on a b-tree structure

7.- On which situations  Operating System is activated ?
A)A service request from a process.
B)An interrupt (peripheral or clock).
C)Hardware exception.
D)All of the above

8.- What is one problem with asynchronous cancellation?
A)The thread may not check often enough to see if it has been cancelled.
B)It is slower than synchronous cancellation.
C)The thread may be cancelled at an inopportune time (like when updating its data)
D)There are no risks with asynchronous cancellation.

9.- Can the Shortest Job First Scheduling algorithm affected by starvation?
A)It can
B)No it can never happen
C)It can only happen if the system has a lot of I/O usage
D)None of these answers

10.- Select the correct answer, when a process is duplicated (fork):
A)It duplicates open files table
B)Shares intermediate table with i-nodes and positions
C)A and B are correct
D)A and B are incorrect

11.- A user owner of a file with uid=12 and gid=1 has set the following attributed: rwxr-x---.
Another user with uid=3 and gid=1 wants to execute it. It is possible?
A)Always
B)Never
C)Only if its uid is also 12
D)None user (including the owner) can execute the file

12.- What is SWAP used for in the lifecycle of a process?
A)To backup a process in secondary storage
B)To improve performance by sending some processes to swap area
C)To make the threads of a process easily configurable by means of an STD
D)To make the system boot faster

13.- Whic one is the correct order for computer structure?
A)hardware-services-kernel-system calls-system software
B)hardware-kernel-services-system calls-system software
C)hardware-kernel-system calls-services-system software

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D)hardware-kernel-system calls-system software-services

14.- The bit of user/kernel modes:
A)Is provided by the operating system
B)Provides the ability to distinguish when a process can run privileged instructions.
C)Is changed only at the startup of the system
D)None of the previous answers are correct

15.- Which of the following statements about POSIX is FALSE?
A)The POSIX standard is based in C, so you can not use it to throw exceptions.
B)It is a way to implement code.
C)It references resources using numeric descriptors.
D)It allows  portability across platforms.