OS 1

Total points 3/20

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✓ The principle of locality of reference justifies the use of 1/1

- A. reenterable
- B. non reusable
- C. virtual memory
- D. cache memory ✓
- E. None of the above

✗ Fragmentation of the file system 0/1

- A. occurs only if the file system is used improperly
- B. can always be prevented ✗
- C. can be temporarily removed by compaction
- D. is a characteristic of all file systems
- E. None of the above

Correct answer

- C. can be temporarily removed by compaction

✕ In virtual memory systems, Dynamic address translation 0/1

- ○ A. is the hardware necessary to implement paging
- ○ B. stores pages at a specific location on disk
- ◉ C. is useless when swapping is used ✕
- ○ D. is part of the operating system paging algorithm
- ○ E. None of the above

Correct answer

- ◉ A. is the hardware necessary to implement paging

✕ When several processes access the same data concurrently and the outcome of the execution depends on the particular order in which the access takes place, is called 0/1

- (●) a) dynamic condition ✕
- ( ) b) race condition
- ( ) c) essential condition
- ( ) d) critical condition

Correct answer

- (●) b) race condition

✕ The address of the next instruction to be executed by the current process is provided by the 0/1

- a) CPU registers
- b) Program counter
- c) Process stack ✕
- d) Pipe

Correct answer

- b) Program counter

✕ If a process is executing in its critical section, then no other processes can be executing in their critical section. This condition is called 0/1

- ○ a) mutual exclusion
- ◉ b) critical exclusion ✕
- ○ c) synchronous exclusion
- ○ d) asynchronous exclusion

Correct answer

- ◉ a) mutual exclusion

✕ The Storage-to-Storage instructions 0/1

- ○ A. have both their operands in the main store.
- ◉ B. which perform an operation on a register operand and an operand which is located in the main store, generally leaving the result in the register, expect in the case of store operation when it is also written into the specified storage location. ✕
- ○ C. which perform indicated operations on two fast registers of the machine and have the result in one of the registers
- ○ D. all of the above
- ○ E. None of the above

Correct answer

- ◉ A. have both their operands in the main store.

✕ Restricting the child process to a subset of the parent's resources prevents any process from : 0/1

- (●) a) overloading the system by using a lot of secondary storage ✕
- ( ) b) under-loading the system by very less CPU utilization
- ( ) c) overloading the system by creating a lot of sub-processes
- ( ) d) crashing the system by utilizing multiple resources

Correct answer

- (●) c) overloading the system by creating a lot of sub-processes

✕ Cascading termination refers to termination of all child processes before the parent terminates _____ 0/1

- a) Normally
- b) Abnormally ✕
- c) Normally or abnormally
- d) None of the mentioned

Correct answer

- a) Normally

✕ The two kinds of semaphores are : 0/1

- (●) a) mutex & counting ✕
- ( ) b) binary & counting
- ( ) c) counting & decimal
- ( ) d) decimal & binary

Correct answer

- (●) b) binary & counting

✗ Addressing structure 0/1

- A. defines the fundamental method of determining effective operand addresses
- B. are variations in the use of fundamental addressing structures, or some associated actions which are related to addressing.
- C. performs indicated operations on two fast registers of the machine and leave the result in one of the registers.
- D. all of the above ✗
- E. None of the above

Correct answer

- A. defines the fundamental method of determining effective operand addresses

✓ Supervisor state is 1/1

- A. never used
- B. entered by programs when they enter the processor
- C. required to perform any I/O
- D. only allowed to the operating system ✓
- E. None of the above

✕ In operating system, each process has its own 0/1

- (●) a) address space and global variables ✕
- ( ) b) open files
- ( ) c) pending alarms, signals and signal handlers
- ( ) d) all of the mentioned

Correct answer

- (●) d) all of the mentioned

✕ In UNIX, the return value for the fork system call is _____ for the child process and _____ for the parent process. 0/1

- a) A Negative integer, Zero
- b) Zero, A Negative integer ✕
- c) Zero, A nonzero integer
- d) A nonzero integer, Zero

Correct answer

- c) Zero, A nonzero integer

✕ With _____ only one process can execute at a time; meanwhile all other process are waiting for the processor. With _____ more than one process can be running simultaneously each on a different processor. 0/1

- (●) a) Multiprocessing, Multiprogramming ✕
- ( ) b) Multiprogramming, Uniprocessing
- ( ) c) Multiprogramming, Multiprocessing
- ( ) d) Uniprogramming, Multiprocessing

Correct answer

- (●) d) Uniprogramming, Multiprocessing

✕ At a particular time of computation the value of a counting semaphore is 7.Then 20 P operations and 15 V operations were completed on this semaphore.The resulting value of the semaphore is : 0/1

- a) 42
- b) 2 ✕
- c) 7
- d) 12

Correct answer

- d) 12

✕ A system program that combines the separately compiled modules of a program into a form suitable for execution 0/1

- A. assembler
- B. linking loader
- C. cross compiler ✕
- D. load and go
- E. None of the above

Correct answer

- B. linking loader

✗ Assembly code data base is associated with 0/1

- ○ A. assembly language version of the program which is created by the code generation phase and is input to the assembly phase.
- ○ B. a permanent table of decision rules in the form of patterns for matching with the uniform symbol table to discover syntactic structure.
- ◉ C. consists of a full or partial list or the token's as they appear in the program. Created by Lexical analysis and used for syntax analysis and interpretation. ✗
- ○ D. a permanent table which lists all key words and special symbols of the language in symbolic form.
- ○ E. None of the above

Correct answer

- ◉ A. assembly language version of the program which is created by the code generation phase and is input to the assembly phase.

✓ A binary semaphore is a semaphore with integer values 1/1

- ◉ a) 1 ✓
- ○ b) -1
- ○ c) 0.8
- ○ d) 0.5

✕ The systems which allows only one process execution at a time, are called 0/1

- a) uniprogramming systems
- b) uniprocessing systems
- c) unitasking systems ✕
- d) none of the mentioned

Correct answer

- b) uniprocessing systems