Branch: CSE & IT

Operating System Process Management

DPP 02

Batch: Hinglish

[MCQ]

- 1. Consider the following statements:
 - (i) Program when utilizing computer's resources is known as process.
 - (ii) A program performing, I/O operation is considered as a process.

Which of the following is correct?

- (a) Only (i) is correct.
- (b) Only (ii) is correct.
- (c) Both (i) and (ii) are correct.
- (d) Both (i) and (ii) are incorrect.

[MSQ]

- 2. Which of the following is/are correct?
 - (a) A process is an instance of a program.
 - (b) A program loaded into main memory but it is not running currently is known as process.
 - (c) Program is created from a process.
 - (d) Process is created from a program.

[MCQ]

- **3.** Match the following:
 - (i) Context switching
- 1. Dispatcher
- (ii) Message passing
- 2. Long term Scheduler
- (iii) Degree of multiprogramming
- 3. Process creation
- (iv) Fork()
- 4. Inter process communication

Select the correct code from the following:

- (a) (i)-4, (ii)-1, (iii)-2, (iv)-3
- (b) (i)-4, (ii)-1, (iii)-3, (iv)-2
- (c) (i)-1, (ii)-4, (iii)-3, (iv)-2
- (d) (i)-1, (ii)-4, (iii)-2, (iv)-3

[MCQ]

- **4.** The memory area where all instructions of a program is stored is known as_____.
 - (a) Heap
- (b) Program Block
- (c) Code section
- (d) Instruction space.

[MCQ]

- **5.** Runtime stack contains _____ of function calls.
 - (a) Code
 - (b) Activation record
 - (c) Dynamic data
 - (d) Instructions

[NAT]

- **6.** How many of the following operations can be performed on a process?
 - (i) Creation
 - (ii) Dispatch
 - (iii) Execute
 - (iv) Block
 - (v) Terminate

[MSQ]

- 7. Which of the following is/are correct?
 - (a) A suspended process resides in memory.
 - (b) A blocked process resides in memory.
 - (c) A suspended process resides on disk.
 - (d) A blocked process resides on disk.

[MCQ]

- **8.** Information stored inside a process control block is known as _____ of process.
 - (a) Schedule
 - (b) Details
 - (c) Context.
 - (d) Data

Answer Key

1. (c)

(a, b, d) 2.

3. (**d**)

4. (c)

5.

(b) (5) (b, c) (c) 7.

8.



Hint & Solutions

1. (c)

A program under execution is known as a process. So when a program is utilizing computer's resources it means the program is under execution and it will be known as a process.

Similarly, I/O is a computer's resource and if a program performing I/O it means the program is under execution and hence it is considered as a process. Therefore, both (i) and (ii) are correct.

(a, b, d)

Program is like a class, and process is like an object. So, "A" is correct.

A program loaded into main memory but it is not running currently is known as a process. When program is loaded from disk to main memory by operating system, it becomes process. So, "B" is correct.

Program is not created from any process. Process is created from a program. So, "C" is incorrect and "D" is correct.

3. (d)

Context Switching: Whenever a process is dispatched to the running state by the dispatcher, we need to perform context switching (loading PCB).

Degree of Multiprogramming: Long term scheduler is responsible for creating new processes to main memory so it controls the degree of multiprogramming.

Message passing: Inter-process communication (IPC) uses message passing method to communicate with each other.

Fork (): System call is used to create a new child process.

4. (c)

The memory area where all instructions of a program is stored is known as code section or text section.

5. **(b)**

Runtime stack contains activation records of function calls. Activation record further contains memory for formal parameters, local variables, return address.

6. (5)

All are operations performed on a process.

- (i) Creation- Creation of the process or allocating resources to the process.
- (ii) Dispatch- Dispatch/scheduling the process. Selecting which process will run on CPU.
- (iii) Execute- Execute/ running the process. When process is executing or implementing it's instruction in the CPU.
- (iv) Block- When process needs to perform I/O, then it is blocked and it is in wait state.
- (v) Terminate- When process has completed its instruction's execution. Resource deallocation is also known as termination operation. When process has completed its execution in CPU.

7. (b, c)

A blocked process resides in memory- A process when blocked remains in memory and perform operation like I/O, etc.

Whereas, when a process is suspended it resides on disk. And this is the difference between block and suspend operation.

8. (c)

Information stored inside a process control block is known as context of process.



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