Branch : CSE & IT Batch : English

Operating System

Process Management

DPP 02

[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)**
2. **(a, b, d)**
3. **(d)**
4. **(c)**
5. **(b)**
6. **(5)**
7. **(b, c)**
8. **(c)**

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.

2. (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.