CSE/IT

Operating System

Deadlock

DPP-01

[MCQ]

1. Which of the following is false about deadlock prevention and deadlock avoidance.

(a) Deadlock prevention is more strict than deadlock avoidance.

(b) In deadlock prevention, the request for resources is always granted if resulting state is safe.

(c) Deadlock avoidance requires knowledge of resource requirements a priori.

(d) none

[MCQ]

2. Deadlock is a _____.

(a) Condition in which each process is blocked and waiting for others to releae resources.

(b) Condition where process is ready for the execution one by one.

(c) Condition in which process is blocked except the child process is not blocked.

(d) None of the above.

[MCQ]

3. _____ is used to determine the deadlock occurrence.

(a) inversion graph

(b) starvation graph

(c) resource allocation graph

(d) none

[MCQ]

4. A process is said to be in _____ , if it is waiting for an episode that will never occur.

(a) deadlock

(b) starvation

(c) unsafe state

(d) safe state

[MCQ]

5. Which of the following is false in the given statements

(i) Every unsafe states will lead to deadlock.

(ii) Deadlock state is also an unsafe state.

(iii) A safe state is not a deadlock free state.

(iv) An unsafe state may lead to a deadlock.

(a) (i) & (ii) (b) (ii) & (iii)

(c) (iii) & (iv) (d) only (i)

[MCQ]

6. A state called as _____ if the system allocates resources to each processes and still avoids a deadlock.

(a) locked (b) protected

(c) safe (d) unsafe

[MCQ]

7. Which of the following is not used for handling deadlock?

(a) deletion

(b) recovery

(c) prevention

(d) none

Answer Key

1. **(b)**
2. **(a)**
3. **(c)**
4. **(a)**
5. **(d)**
6. **(c)**
7. **(a)**

Hints and Solutions

1. (b)

Deadlock prevention can be done by getting rid of any of the below four conditions

(1) Mutual exclusion
(2) Hold and wait
(3) No preemption
(4) Circular wait

Deadlock prevention is more restrictive when compared to deadlock avoidance therefore statement b is correct.

2. (a)

The condition where each process is blocked and waiting for others to release resources.

3. (c)

Recourse allocation graph helps in taking count on the resources wheatear it is allocated to a process or not and also what processes are waiting for the resource of which type.

4. (a)

Deadlock is infinite waiting in which process is waiting for an episode that will never occur.

5. (d)

An unsafe state "may" lead to a deadlock all/every unsafe states will lead to deadlocks, option d is false statement.

6. (c)

A safe state is, if a system can allocate the resources to each process in some order and still avoid deadlock.

7. (a)

The 4 methods/ways used to handle deadlock are

(1) Deadlock ignorance
(2) Deadlock prevention
(3) Deadlock detection and recovery
(4) Deadlock avoidance