2023_1-Quizz 3 Thursday Class

Deadlock and process synchronization

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✉️ **Will be reviewed**

3. To avoid wasting "rolling back" processes to overcome deadlocks, the system creates control points to save the process state. Which of the following statements is correct? *

   ○ As the density of control points increases, the speed of process execution also increases

   ○ All of the above

   ○ None of the above

   ○ Processes are preempted resources at control points

   ● Khi mật độ control points tăng lên, thời điểm tiến trình được khôi phục sẽ gần với thời điểm tiến trình bị ngừng

4. Which synchronization method does not suffer from busy waiting? *

☐ Variable lock

☐ Monitor

☐ All of the above

☐ None of the above

☐ Test and Set

☑ Semaphore

5. Deadlock occurs when which of the following conditions occurs? *

○ There is no preemption of critical resources

○ One of the above 4 conditions does not appear

○ There is occupation while requesting resources

○ Critical resources exist

◉ All four conditions above appear together

○ There is circular waiting

○ None of the above

6. What is the approach to dealing with deadlocks chosen by modern operating systems? *

○ Deadlock avoidance

○ Deadlock prevention

○ Deadlock detection and recovery

◉ Ostrich algorithm

✎ **Will be reviewed**

7. The resource allocation state of the system is represented through a graph. If, after applying the BFS algorithm, we detect a cycle on the graph, we can conclude: *

◉ It is not possible to conclude whether there is a deadlock or not

○ The system has no deadlock

○ The system has a deadlock

✎ **Will be reviewed**

8. Which of the following resources is critical? *

○ None of the above

◉ **"counter"** variable in Producer-Consumer problem

○ printer

○ All of the above

○ Keyboard

✎ **Will be reviewed**

9. What are the criteria for selecting the process to preempt resources? *

○ Process priority

○ The amount of process resources still needed

⦿ All of the mentioned criteria

○ The amount of resources the process has occupied

○ The time the process used the resource

○ No correct answer

✍ **Will be reviewed**

10. The system is in a safe state if * 🔖

○ No process takes up too many resources

○ The maximum amount of resources the process requests is less than the total maximum amount of resources the system holds

○ There is no correct answer

⦿ The system can distribute resources to processes in a certain order while still avoiding deadlocks

○ The system holds enough resources to satisfy any process request

○ All answers are correct

✍ **Will be reviewed**

11. The approach of adding resources and creating virtual resources that simulate the operation of real physical devices belongs to which approach to deal with deadlock? * 🔖

○ Deadlock detection and recovery

○ Deadlock ignorance

○ Deadlock avoidance

○ Deadlock prevention

12. To prevent deadlocks from occurring, the bank manager algorithm will be applied_____ *

○ automatically when the system finds an unsafe state

● Whenever a process makes a request for resource allocation

○ When all processes make requests for resources

○ As soon as a process has just been created

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