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**State** Finished

**Completed on** Monday, 27 February 2023, 10:50 AM

**Time taken** 19 mins 41 secs

**Grade** 10.00 out of 10.00 (100%)

Question **1**

Correct

Mark 1.00 out of 1.00

An edge from process  $P_i$  to  $P_j$  in a wait for graph indicates that \_\_\_\_\_

Select one:

- ☒ a.  $P_i$  is waiting for  $P_j$  to release a resource that  $P_i$  needs ✓
- ☐ b.  $P_i$  is waiting for  $P_j$  to leave the system
- ☐ c.  $P_j$  is waiting for  $P_i$  to release a resource that  $P_j$  needs
- ☐ d.  $P_j$  is waiting for  $P_i$  to leave the system

Your answer is correct.

The correct answer is:  $P_i$  is waiting for  $P_j$  to release a resource that  $P_i$  needs

Question **2**

Correct

Mark 1.00 out of 1.00

The number of resources requested by a process \_\_\_\_\_

Select one:

- ☐ a. must always be less than the total number of resources available in the system
- ☐ b. must always be equal to the total number of resources available in the system
- ☒ c. must not exceed the total number of resources available in the system ✓
- ☐ d. must exceed the total number of resources available in the system

Your answer is correct.

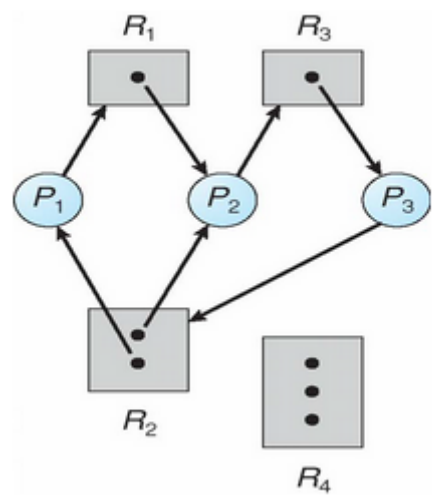
The correct answer is: must not exceed the total number of resources available in the system

Question **3**

Correct

Mark 1.00 out of 1.00

Which one/s of the following is/are false about the Process States of the given below Resource Allocation Graph with a deadlock.



- A. Processes  $P_1$  and  $P_3$  are deadlocked.
- B. Process  $P_2$  is waiting for the resource  $R_3$ , which is held by process  $P_1$ .
- C. Process  $P_3$  is waiting for either process  $P_1$  or process  $P_2$  to release resource  $R_2$ .
- D. Process  $P_1$  is waiting for process  $P_2$  to release resource  $R_1$ .

Select one:

- ☐ a. Only A
- ☐ b. All A, B, C and D
- ☐ c. Both C and D
- ☒ d. Both A and B ✓

Your answer is correct.

The correct answer is: Both A and B

Question **4**

Correct

Mark 1.00 out of 1.00

If the wait for graph contains a cycle \_\_\_\_\_

Select one:

- ☐ a. either deadlock exists or system is in a safe state
- ☐ b. then a deadlock does not exist
- ☒ c. then a deadlock exists ✓
- ☐ d. then the system is in a safe state

Your answer is correct.

The correct answer is: then a deadlock exists

Question **5**

Correct

Mark 1.00 out of 1.00

With deadlock detection, requested resources are granted to

Select one:

- ☐ a. Resources
- ☐ b. Programs
- ☐ c. Users
- ☒ d. Processes ✓

Your answer is correct.

The correct answer is: Processes

Question **6**  
Correct  
Mark 1.00 out of 1.00

$m'$  processes share ' $n$ ' resources of the same type. The maximum need of each process doesn't exceed ' $n$ ' and the sum of all their maximum needs is always less than  $m+n$ . In this setup, deadlock \_\_\_\_\_

Select one:

- ☐ a. none of the mentioned
- ☒ b. can never occur ✓
- ☐ c. may occur
- ☐ d. has to occur

Your answer is correct.

The correct answer is: can never occur

Question **7**  
Correct  
Mark 1.00 out of 1.00

For a Hold and wait condition to prevail \_\_\_\_\_

Select one:

- ☒ a. A process must be holding at least one resource and waiting to acquire additional resources that are being held by other processes ✓
- ☐ b. A process must hold at least one resource and not be waiting to acquire additional resources
- ☐ c. None of these
- ☐ d. A process must be not be holding a resource, but waiting for one to be freed, and then request to acquire it.

Your answer is correct.

The correct answer is: A process must be holding at least one resource and waiting to acquire additional resources that are being held by other processes

Question **8**  
Correct  
Mark 1.00 out of 1.00

If deadlocks occur frequently, the detection algorithm must be invoked \_\_\_\_\_

Select one:

- ☐ a. none of the mentioned
- ☐ b. rarely & frequently
- ☐ c. rarely
- ☒ d. frequently ✓

Your answer is correct.

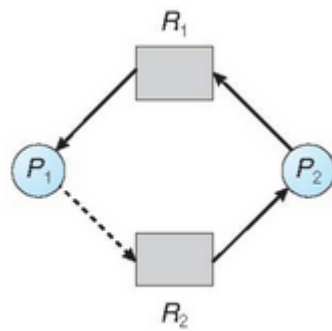
The correct answer is: frequently

Question **9**

Correct

Mark 1.00 out of 1.00

What is the correct statement regarding the following graph?



Select one:

- ☐ a. Resource-Allocation Graph
- ☐ b. Safe State In Resource-Allocation Graph
- ☒ c. Unsafe State In Resource-Allocation Graph ✓
- ☐ d. Resource Allocation Graph With A Deadlock

Your answer is correct.

The correct answer is: Unsafe State In Resource-Allocation Graph

Question **10**

Correct

Mark 1.00 out of 1.00

Which one/s of the following is/are false about Deadlock conditions given?

- A. No preemption: a resource can be released only voluntarily by the process holding it, after that process has completed its task
- B. Mutual exclusion: a process holding at least one resource is waiting to acquire additional resources held by other processes
- C. Hold and wait: only one process at a time can use a resource and wait to acquire additional resources that are currently being held by other processes.

Select one:

- ☐ a. None of the above
- ☐ b. Only B
- ☐ c. Only A
- ☒ d. Both B and C ✓

Your answer is correct.

The correct answer is: Both B and C