

Started on Sunday, November 3, 2024, 9:18 AM**State** Finished**Completed on** Sunday, November 3, 2024, 9:22 AM**Time taken** 4 mins 13 secs**Points** 9.00/10.00**Grade** 90.00 out of 100.00**Question 1**

Incorrect

0.00 points out of 1.00

Ordering resources and requiring the resources to be acquired in order prevents the circular wait from occurring and therefore prevents deadlock from occurring.

Select one:

- ☒ True ✖
- ☐ False

Section 7.4.4

The correct answer is 'False'.

Question 2

Correct

1.00 points out of 1.00

The witness software product is a ____.

Select one:

- ☐ a. modeler to develop resource allocation graphs
- ☐ b. implementation of the banker's algorithm available for most operating systems
- ☐ c. driver that can be used to prevent mutual exclusion for nonsharable resources
- ☒ d. lock-order verifier that uses mutual-exclusion locks to protect critical sections ✔

Your answer is correct.

Section: 7.4.4

The correct answer is: lock-order verifier that uses mutual-exclusion locks to protect critical sections



Question 3

Correct

1.00 points out of 1.00

Deadlock prevention and deadlock avoidance are essentially the same approaches for handling deadlock.

Select one:

- ☐ True
- ☒ False ✓

Section 7.5

The correct answer is 'False'.

Question 4

Correct

1.00 points out of 1.00

One necessary condition for deadlock is _____, which states that a process must be holding one resource and waiting to acquire additional resources.

Select one:

- ☒ a. hold and wait ✓
- ☐ b. mutual exclusion
- ☐ c. no preemption
- ☐ d. circular wait

Your answer is correct.

Section: 7.2.1

The correct answer is: hold and wait



Question 5

Correct

1.00 points out of 1.00

One necessary condition for deadlock is _____, which states that there is a chain of waiting processes whereby P0 is waiting for a resource held by P1, P1 is waiting for a resource held by P2, and Pn is waiting for a resource held by P0.

Select one:

- ☐ a. hold and wait
- ☐ b. no preemption
- ☐ c. mutual exclusion
- ☒ d. circular wait ✓

Your answer is correct.

The correct answer is: circular wait

Question 6

Correct

1.00 points out of 1.00

A cycle in a resource-allocation graph is _____.

Select one:

- ☐ a. a sufficient condition for a deadlock in the case that each resource has more than once instance
- ☐ b. a necessary and sufficient condition for deadlock in the case that each resource has more than one instance
- ☐ c. is neither necessary nor sufficient for indicating deadlock in the case that each resource has exactly one instance
- ☒ d. a necessary and sufficient condition for a deadlock in the case that each resource has exactly one instance ✓

Your answer is correct.

Section: 7.2.2

The correct answer is: a necessary and sufficient condition for a deadlock in the case that each resource has exactly one instance



Question 7

Correct

1.00 points out of 1.00

Protocols to prevent hold-and-wait conditions typically also prevent starvation.

Select one:

- ☐ True
- ☒ False ✓

Section: 7.4.2

The correct answer is 'False'.

Question 8

Correct

1.00 points out of 1.00

The banker's algorithm is useful in a system with multiple instances of each resource type.

Select one:

- ☒ True ✓
- ☐ False

Section: 7.5.3

The correct answer is 'True'.

Question 9

Correct

1.00 points out of 1.00

A deadlocked state occurs whenever ____.

Select one:

- ☒ a. every process in a set is waiting for an event that can only be caused by another process in the set ✓
- ☐ b. a process is unable to release its request for a resource after use
- ☐ c. a process is waiting for I/O to a device that does not exist
- ☐ d. the system has no available free resources

Your answer is correct.

The correct answer is: every process in a set is waiting for an event that can only be caused by another process in the set



Question 10

Correct

1.00 points out of 1.00

A system in an unsafe state will ultimately deadlock.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

