Results

20%	2	10:00
Score	Out of 10 points	Time for this attempt

1 0 / 2 points

What is the primary challenge addressed by the Producer-Consumer problem?

× Sharing data between processes

Correct Answer: **Preventing race conditions**

- Ensuring data integrity
- Preventing race conditions
- Maximizing CPU usage

0 / 2 points

2 2 / 2 points

Which mechanism is often used to synchronize access to a shared buffer in the Producer-Consumer problem?

- ✓ Condition variables
- Thread preemption
- Priority scheduling
- Busy waiting

2 / 2 points

3 0 / 2 points

What is the major problem with the initial solution for the ProducerConsumer problem presented in the PPT?

- It suffers from busy waiting, wasting CPU cycles.
- It fails to block the producer or consumer when necessary.
- It lacks a clear algorithm for producing and consuming data.
- It doesn't use mutexes to protect shared data access.
- ✗ (no answer)

Correct Answer: **It suffers from busy waiting, wasting CPU cycles.**

0 / 2 points

4 0 / 2 points

How can the problem of busy waiting in the Producer-Consumer problem be effectively resolved?

- By using condition variables or semaphores
- By using spinlocks to optimize waiting times
- By increasing the thread's priority to avoid waiting
- By printing debug messages for better monitoring

× (no answer)

Correct Answer: **By using condition variables or semaphores**

0 / 2 points

5 0 / 2 points

What library call is commonly used to decrease a semaphore's value, potentially causing a thread to be blocked?

- sem_wait()
- sem_lock()
- sem_post()
- sem_signal()

× (no answer)

Correct Answer: **sem_wait()**

0 / 2 points

Fudge Points
Manually adjust the score by adding positive or negative points to this box

0

Final Score **2 / 10**