W 12 8 9			
*	Producer Consumer Problem and its solution		
•	bonded Buffer Toblem		
	A classic multithreading synchronization brobles		
	there is a shared buffer (like a queue) of finise		
Ann e	Size between two threads:-		
	1) Producer => Produces data litems and buts them		
A 100 A	tinto ab uffer, and and and all the		
	(D) Consumer => Consumes data/items from the buffer.		
		O C C	
•	Constraints:	and taum estimbly otuBil.	
	Producer Connot add if the buffer is full		
	Consumer Cannot remove if the buffer is empty.		
Ö	Must avoid race condition and busy waiting:		
	Must avoid race condition and busy waitings		
× 1	water was a stance of minimum wall (0)		
	Solution Wing Semaphore 300 (3)		
	Mutex/Binary Semaphore: - ensures only one		
	thoread accesses the	ouffer at a time.	
9	Counting Semaphores !- track-buffer state:		
,	a) empty -> no. of empty slots, be a los		
	@ empty > no. of empty slots,		
ra s	MEL MORNING HILLAND CO. +1 . S	appeal con andivid .	
	Producer		
		While (touch &	
é		wait (full)	
3)	Wait (empty)	acquire (mudex)	
ų)	acquire(mulex)	remove item from buffer	
5	The state of the s		
6)	release (mutex)	Signal (empty)	
7	Signal (full)	Signal (empty) Consume item	
	There are the second of	of Joseph the true district is the	
	Your received with	colo porse constant of them the	