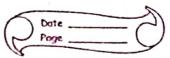
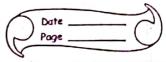
	Premium	Stude	nts 2	terigoment	Date Page	
0001.	Fire boto	h jobs	A +0	e arrive	at same fine.	They have
-0)	Estimated running times 10,2,6,8,4 minutes. Their priorities				Their protitive	
	are 3,2,5,4,1 ochpectively with 5 being highest priority				gheet priority	
	for each	of th	e follo	while algor	other determine	mean process
	tunamer	d time	-to	more proce	ce emopping on	rhead.
	Round rok	in (9:	3)	, Priority ch	e scheduling ,	FCFL SJF
		and the	7 J M.	The Late	1 11 1	451/4
_soln_	-		Tim	· Brust time	Priority	
147	A	100	<u> </u>	10	3	
1939	1 12	0	H	3 5 9	,2	
	C	0	1 - 400	B	0	<u>. e</u>
	D	0 6	1	31-8 24		
	E	1 0	The second	9/	1 1	
<u>(i)</u>	Round R	obin.	A1-4	11/4/1/1	1.05 × 1.00	124
	Natur =	forem				
	Conatt cl	hart:	/-	67 01	= 1 m high rhack	1.4(%)
	A	B 1 4	1 2 1	EAC	10 10 10 1	PJAJ
La Maria	0 3	5/	8 0	William All Inchiner	D E A/ 20 23 24 27	And A Starts
			- A 14	ARVE TO THE	A STATE AND A STATE OF	
7- 4	Johs /	AT	BT	[Exit Time]	TAT = ET-AT	WA = TAT- BT
		0 35	10	5,30 %		30-10 = 20
	B	D	2	38/35/4	2 = 0 - 0	5-2 = 3
	i	0	6.	2	8-0=8	Philade In the Control of the Contro
	D	0	8'	29	29-10-29	29-8-2)
	Ē	6:	34	24	24-0=24	24-4 = 20
		***************************************	- 1 A			i i
	Avg TA		30+8	45 +29+2	4 = 91/	= 19.2 ms
			-514	5 02 1	. The same of the	
	iting wa	iting to	16:	16b. 1 11 =	13.2mi	97.88 S. A. S.
		1 0		<b>4</b>		
	4.			11731 15	that problems	· N
		The state of the state of the	Salar Salar		Long to the boarding street or the	

 		2
Date .	Mitt	
Page .	1 1 1 1 1	( )

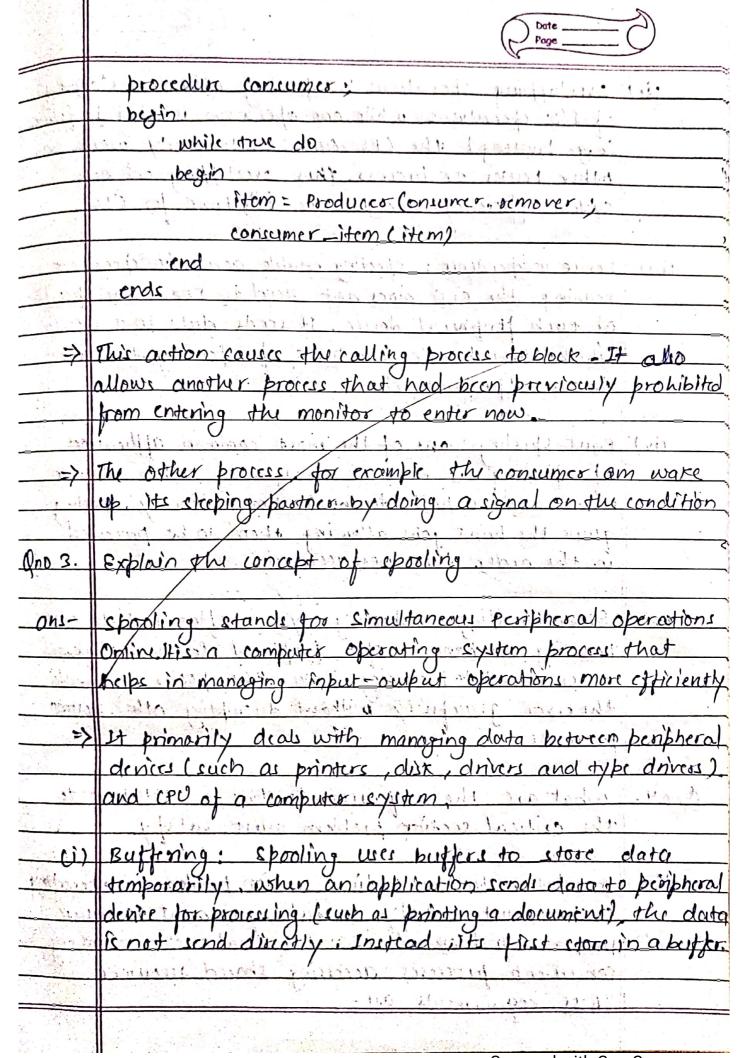
Cii)	Portanty scheduling
	Notices Non-premptive
Living	Conatti chart :) salli charing of a socia from
in the same	C P A B E I In
	0 6 14 24 26 30
11.3	and the popular of th
	Jobs BT AT ET TAT WT
	A 10 .0. 24 24 17
	B 2 0 26 26 27
	C 6 0 6 1 6 1 D
	D 6 0 14 74 06
	E 4 10 30 26
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Any TAT = 24+26+6+14+30 = 100 = 20012
	5 Windston / 2 - Windston
	Any Waiting time = 70 = 19ms / tinto the
	\$
(3)(2)	FCFS
1.02	Naturi : Non- preemptive
	Gin att chart:
Allering	A BILL DIE IN MOE
2.5	10 12 18 26 30
	7-4-2-1-2-1-2-1-2-1-2-1-2-1-2-1-2-1-2-1-2
(3. 9.	JODS AT BT ET TAT WT
15 - 13 -k	
100 5 1	
	20 20 20
	Ang TAT = 10+12+18+26+130 2 196 = 19.2ms
	" " " " " " " " " " " " " " " " " " "
	Ang waiting 11-12 01 10 +124 18 +26 = 66 = 12,2ms
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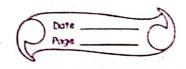


To Many						
UV	I SJE of a cold supry manufactory of grant agentician and					
1	Materie: Non-preemptive !					
The						
W. de	made that and B E C D A					
1	0 2 1 6 12 20 30					
TOUR STATE						
The second	Jobs AT BT BT TATT WT					
	A 0 10. 30 30 20.					
	B 0 2.2 1.2 1.0.					
TALLS TO	C 0 6 12 12 4					
	D: 1010 100 120 120 120					
W.	E 0 4 6 6 2.					
2	is a helped it was a rade. In a lander of					
	AUG TAT = 30+20+12+6+2 = 70 = 14m2					
	· · · · · · · · · · · · · · · · · · ·					
	Any WT = 20 + 0 + 6 + . 12 + 2 = 40 = 8 ms					
TATE OF	5					
Com.						
Ano 2.	what is moniter? Give the implementation of bounded					
- Strain	buffer producer-consumer problem using moniter					
	· (rior) item rands and amounts.					
-200-	Monter: Moniters were developed in the 1970s to make					
	it easier to avoid rose condition and implement mutual					
TO CALLED	exclusion and much a few a resulting					
300	A moniter is a collection of procedure , vanable and data					
	Structure grouped together in a single module or package.					
	; o s. leuma					
	Process can call the monitor procedures but cannot access					
	the internal plata expecteur.					
>	Monitor have an important property that makes them					
	useful for achienty mutual exclusion.					
	4 [ [ - 1 ] [					

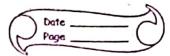


	The solution uses condition variable along with.
`	two operations on them, won't and signal when a
-	manstor bracedure discovers that it cannot controll
5 .	(c.g. the procedure find the buffer full). It does woit
o : 1	on some condition variable full.
	DIT ZUNK CONSTITUTO VALIDOR JUNE
7	monitor Procedur Consumer
	condition full empty:
	integer count;
	migri Cours
	provedure insert ( item: integer):
	begin
	it count=N then woit(full)
10	if count=N then woit(full) insert_item(item)
	count := cound + 1)
	If count = 1 then signal tempty)
	ends
MARKET	function remove : integer if
. 1	man begin a dand rame in forthand in aller
The state of the state of	If count = 0 then/wait(cmpty) ;
12.6.07	semore = semore - ifems
n i i a i	through counts: = county-13 non at many
	If count = N+1 then signal (full)
1 William Section 1	instructed in the property of the second sec
se Care	in a strong their of its settles that have my free to the
	count := 0;
427 14 14 Yar	rend monitory of many and the transmitter
	abstracts whole the website of
3-11-1	John take the shart participation so a make the
	ministration deviation providers and infring
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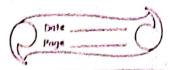




rii)	Overlapping operations: speoling allows overlapping
The second secon	of 1/0 denations while one operation is being performe
	(e.g. printing) the CPU can climutationally work on
	Ather tacks or process. This overlapping enhances
	system of icioney and ordures lide time for CPU.
	( company than ( company)
(iii)	Perice independence: spooling enable dence independence
	meaning the CPU does not need to know the specific
	of each peripheral device. It sends data to a splooler
3 18	which then handle the track of spending the data
Madday	to the appropriate device.
	Esper arter months or retirement to paint most
tiv)	Brint spooling: one of the most common application
a Park to A	of spooling is in print management when multiple
and the and	user want to post downent simultaneously, spooling
	away the print ions allowing them to be processed
	In the order they were recieved
(v)	Error handling: spooling existem often include error
- Tolai	handling mechanism. It a bentheral slevice encountred
Athinist to	an error while processing data, the spooler on handle
1	the error granfully without distribiting other system
breakfrest	proceeded on process with and white the design of the
	the secretarion of printer, dux divina new files
Andy.	what are the organisments that a solution to
(V)	the critical section problem must satisfy
316	ci) authoring: Specing our higher to start
2017-	A solution to the coitical section problem in operating
	system must satisfy several orquinment to ensure
241:x11	proper synchronization and mutual exclusion among
	concurrent processes accessing shared resources.
	These requirements are -



• • • • • • • • • • • • • • • • • • • •	
(i)	mutual exclusion: Only one process can execute in ite
	confical section at any given time. This ensure that conflict
	-ing operations do not occurs concurrently apreventing
	data corruption or inconsistent occult.
<u> </u>	party and some bound grand some and
(ii)	progress: It no process Is executing in its contical section
	and some process wish to enter their entical section then
-	only those processes that an not executing in their or mainder,
THE THE PARTY OF T	section can participate in deciding which will enter
	Ite control section next.
(111)	Rounded wouting: These exist a bounded on the now of
1000	times other process are allowed to enter their esitical section
	after a process has made a request to enter- its contical
	sention and Before that request is granted.
(ivi)	No Assumption about speed or No. of processors:
	The solution should not make assumptions about the relative
	speed of processor or the no. of processor available in the
	systems. It should work correctly organdless of these factors.
100	na ha list will a han valence a fact a fact
w)	Independence of processes: The column should werk correctly
Latin.	even if processes execute in arbitary order and timing,
FOR CALL	without depending on specific timing or sequence of execution,
£ y.	
- S	tal sales lead to the sales and sale
	designated water - monorar
d.	to the best of the
	Alayone Miles I williaming and a grown of the second of th
	Alexander Contractor



Pons.	praw four gnatt chost illustrating the execution of these processes using FCFS, SJF , priority and round robin (quantum=s) scheduling					
Billian L	these braces with Ects SJF priority and round					
1 11	there processes carry school line as market and					
1.0	1 - June destroy of the start tier					
soln-	Process Priority Brus 7 inc Aminal time					
when In	100 Pla 100 100 3 mil 30 10 10 100 100					
and .	P2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
distante	1 P3 2 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
175	11. P.Y - 1- 10. 1 10. 10. 10. 10. 10. 10. 10. 10. 1					
	P5 5. 2					
i augus						
100	FICE FSS & about to wive parts: prihing to bound (iii)					
location to	Nature - Non premptive of a final miles					
	Conact chart + warmen in the production of interior					
	P1 P2 P3 / P4 P5 / A Last, marting					
	0 3 4 7 11 12					
	2000 in to the in many deside in the day low					
<u>vi)</u> .	Found Robins					
Liver H	Nature - Preemptive					
1011011.	Gratt chort -					
Hipmon	Ready queve - PT PEL PT PX					
the state of the s	of the line of the property of the state of					
Sentures.	(mast chart - 1)   P2   P3   P4   P5   P1   P3   P4   P5   P1   P3   P4					
	P1 P2 P3 P4 P5 P1 P2 P4 P5 P1 P2 P4					
155						
<u>\$17</u>	Note that - Non-preembtive P2 P4 P2 P5 P1					
	Nature - Non-preemptive   P2   P4   P2   P5   P1					
un	priority schodeliny:					
(IV)	Mature: Non-premptive (small no. = High Priority)					
	P2   P5   P1   P2   P4					
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