

SCZOPS



TUT 1

1) a) Comp organization

b) Interrupts = a way for CPU to get the control back to OS

c) I/O Structure: DMA

 I/O device connected to DMA controller for high-speed I/O devices

- 2) a) $F \times T$ c) $T \times f$
 b) $F \vee$ ^{branch} d) $T \vee$

- 3) multi processing is executing multi jobs on multiple CPU which is faster and produce max output
multi programming is executing multi jobs on 1 CPU which takes more time

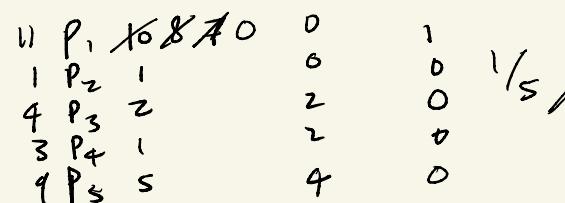
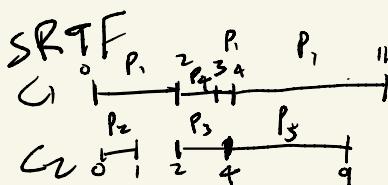
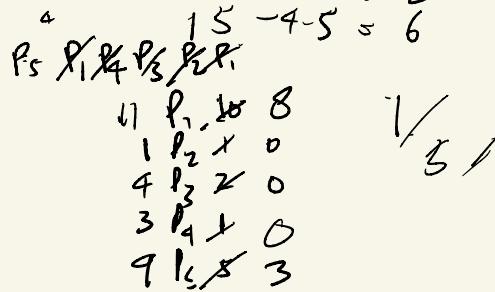
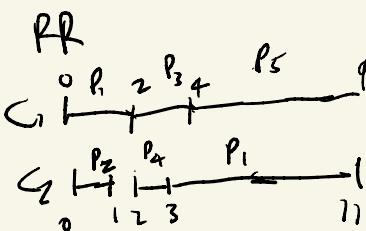
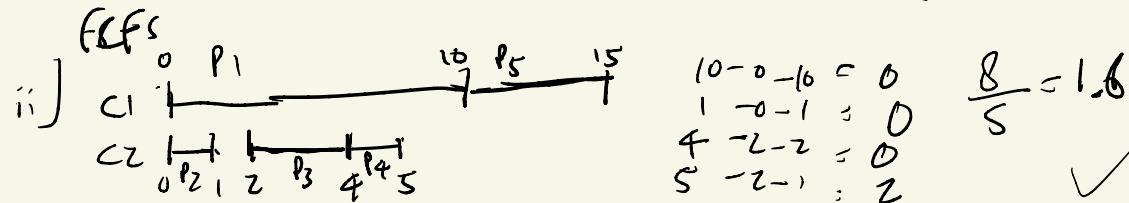
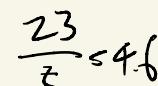
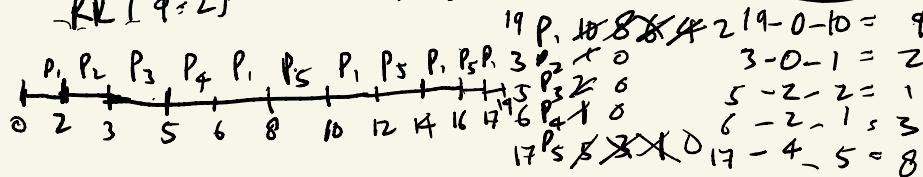
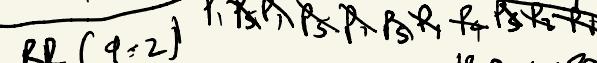
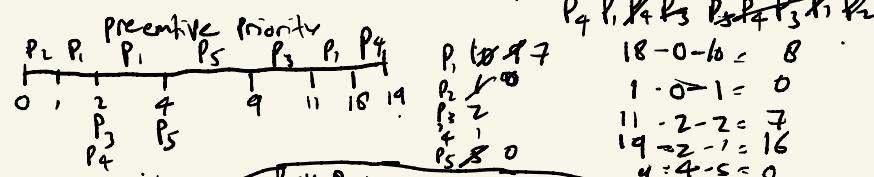
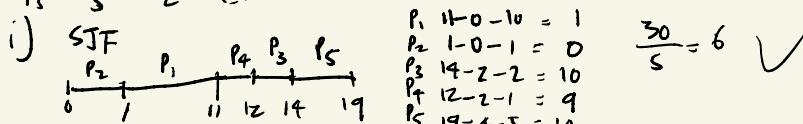
TUT 2

- 1) a) E, it is ready state c) F, Parent wait for child
 b) T d) $T \times F$
- 2) data regions is used to store global parameters + fixed
Stack regions is used to stores local variables + can grow
- 3) multi thread = Jobs split into Sub Tasks that executes in 1 processor and join afterward
Single thread = Jobs
- 4) A = P_1 interrupt P_1 running \rightarrow ready
B = P_0 executing P_0 ready \rightarrow running
C = P_0 ~~on~~, interrupt P_0 running \rightarrow ready
D = P_1 executing P_1 ready \rightarrow running

TUT 3

- ② a) $F \vee$ c) $T \times F$, response time is fine takes for system to response from process admitted
 b) $T \times F$ d) $T \times F$

	Burst	Priority	AT	SJF	Precinctive Priority
2)	P ₁	10	3	0.1	/
	P ₂	1	1	0.2	/
	P ₃	2	3	2.1	/
	P ₄	1	4	2.2	/
	P ₅	5	2	4.1	/



TVT 4

- 1) mutual exclusion
- 2) processes
- 3) Bound waiting

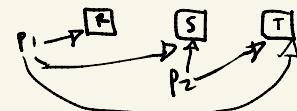
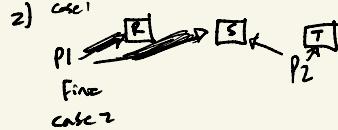
b) initial flag: f turn = 0
P0 flag = f \rightarrow T turn = 0
P1 flag = T \rightarrow f turn = 0
P0 execute Context switch \rightarrow P0
P0 flag = true

2) a) f b) f \times T c) T \times f

TUT 5

- 1) a) -4
b) ~~-5~~ - 1 - 5 = -6
- 2) c) ~~4~~ max only 2 processes 2
- 3) 1 wait(a)
2 signal(a) wait(o)
3 signal(o)
4 signal(o) wait(a)
5 signal(A)

- a) $N \times T \times F$
 b) T
 c) $T \times F$



- 3) a) Unsafe
b) Safe

4)

Tabel 6

	P0	P1	P2	P3	Mn
P0	211	010	010	✓	0//
P1	110	212	221	✓	
P2	111	201	332	✓	
P3	111	410	544	✓	
	P0	P2	P1	P3	

