gradeup

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Doubt session on

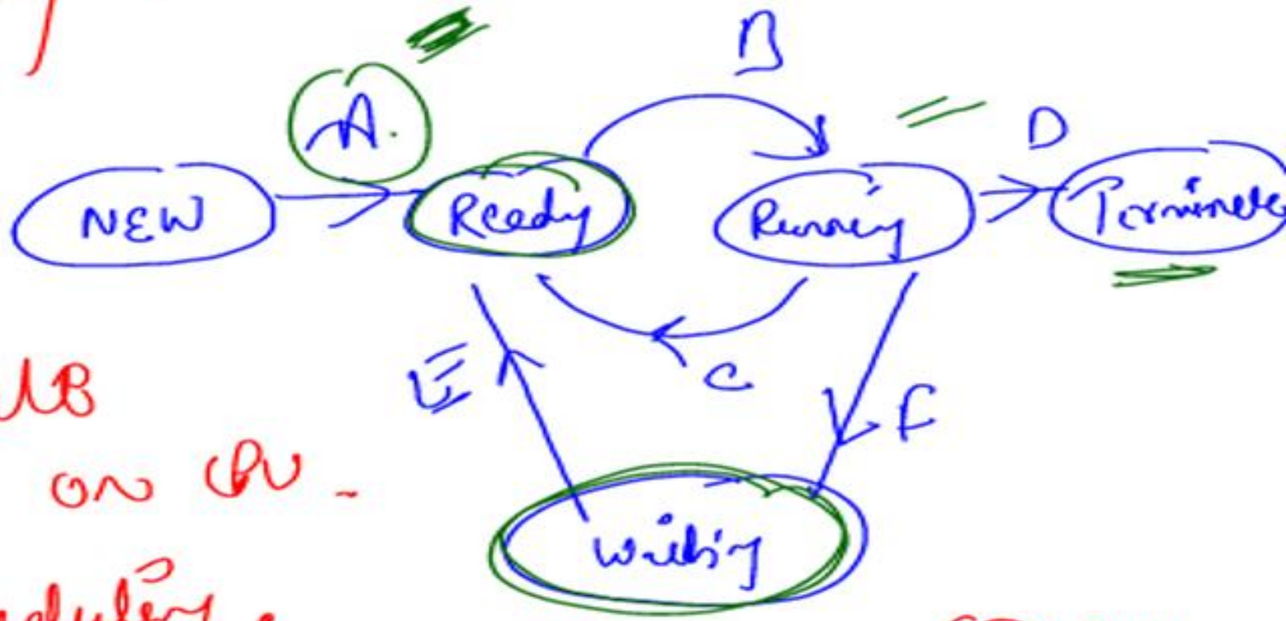
Which of the following is TRUE?

(1) If a process makes transition D then it will result in another process making transition A immediately.

(2) A process P2 in blocked state can make transition 'E' while another process P1 is running on CPU.

(3) OS used Preemptive Scheduling.

(4) OS uses non- " .



(1) 1, 2 (4) 2, 4

(2) 1, 3

(3) 2, 3

Q: The max no of processes that can be in Ready state for a comp. system with n CPUs is ⟶

(1) n

(2) n^2

(3) $2n$

✓(4) Independent of n

Execution time. Arrival time.

Q

	Execution time	Arrival time
P1	20	0
P2	25	15
P3	10	30
P4	15	45

(SRTN)

Shortest Remaining time first

Type with preemption.

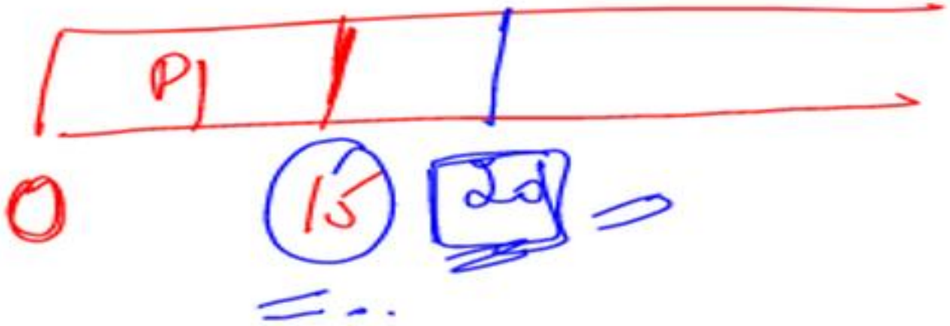
Waiting time of P2?

(1) 5

(2) 15

(3) 40

(4) 55



June 2018

Q: Page Reference string 1, 2, 3, 2, 4, 2, 5, 2, 3, 4

LRU :- No of Page faults is ——→

give 3 page frames.

(1) 5 (2) 7 (3) 9 (4) 10

1 2 3 2 4 2 5 2 3 4

7 =

Nov 17

Q: Which modules gives control of CPU to the process selected by short term scheduler?

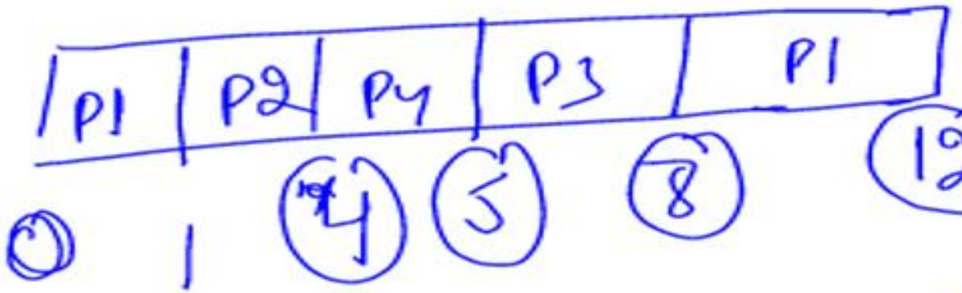
(1) Dispatcher (2) Interrupt (3) Scheduler

(4) Threading

Q. Consider the processes with AT & Burst time.

	AT	CPU Burst time
→ P1	0	5 4
→ P2	1	3 X
P3	2	1 X
P4	4	2

Avg TAT using SRTN algorithm?



AT

P1 = 12 − 0 = 3

P2 = 4 − 1 = 3

P3 = 8 − 2 = 6

P4 = 5 − 4 = 1

$\frac{12+3+6+1}{4}$

$= 22/4 = 5.5$

non up

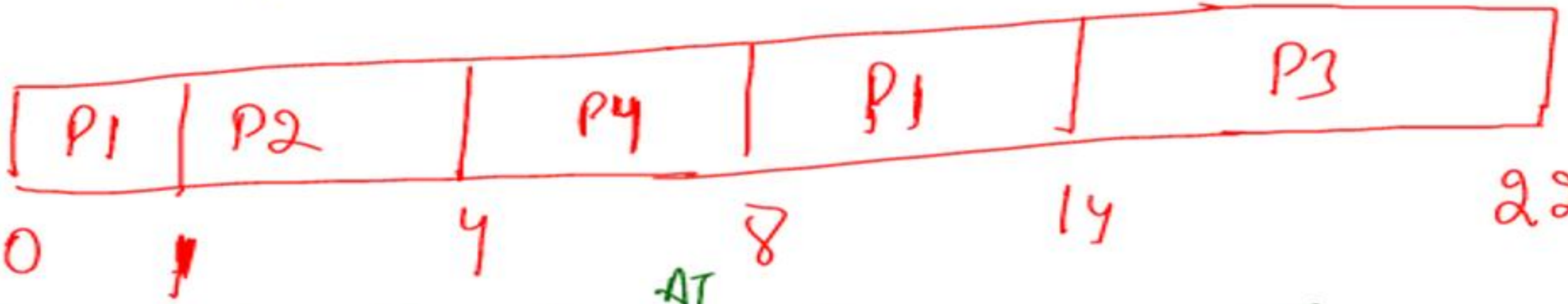
1	5.50
2	5.75
3	6.00
4	6.25

Process Management Part 3 :-

ans 10.5, 5

Q.2.

	AT	Burst time
P1	0	7
P2	1	3
P3	2	8
P4	3	4



Waiting time

$P_1 = 8 - 0 - 1 = 7$

$P_2 = 1 - 1 - 0 = 0$

$P_3 = 14 - 2 - 0 = 12$

$P_4 = 4 - 3 - 0 = 1$

Turnaround Time $\Rightarrow$

$P_1 = 14 - 0 = 14$ (AT)

$P_2 = 4 - 1 = 3$

$P_3 = 22 - 2 = 20$

$P_4 = 8 - 3 = 5$

$\frac{14+3+20+5}{4} = \frac{42}{4} = 10.5$

Avg $= \frac{7+0+12+1}{4} = \frac{20}{4} = 5$

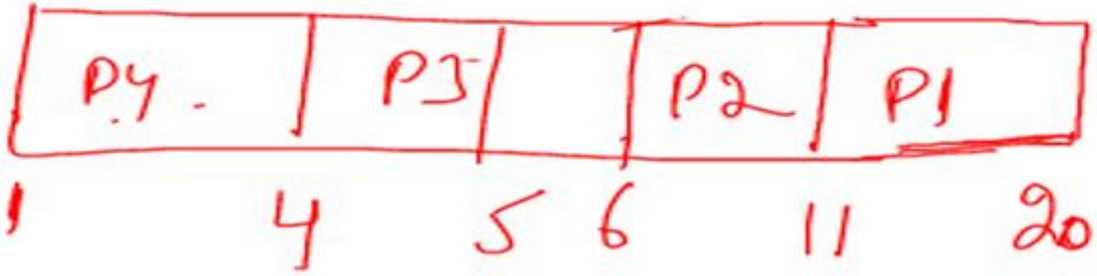
Q5

	Burst time	Arrival time
P1	9	7
P2	5	6
P3	1	3
P4	3	1

Consider Arrival time as Priority :

Smaller no. means higher Priority.

	Burst Time	AT
P4	3	1
P3	1	3
P2	5	6
P1	9	7



Avg waiting time $\Rightarrow$

$P1 = 11 - 7 = 4$ (AT)

$P2 = 6 - 6 = 0$

$P3 = 4 - 3 = 1$

$P4 = 1 - 1 = 0$

1.25

Avg TAT $\Rightarrow$

$P1 = 20 - 7 = 13$ (AT)

$P2 = 11 - 6 = 5$

$P3 = 5 - 3 = 2$

$P4 = 4 - 1 = 3$

5.75

Avoid Deadlock

<P3, P2, P3, P4, P1>

Q: P0 – P4 A, B, C – A – 7 B – 4 C – 6

	Allocation A B C	Request (need) A B C
P0	0 1 0	0 0 0
P1	2 0 0	2 0 2
P2	3 0 3	0 0 0
P3	2 1 1	1 0 0
P4	0 2 2	0 0 2

Available

A B C

0 0 0

3 0 3

3 1 3

2 1 1

5 2 4

Consider Request as need

(1) Semaphore

(2) Deadlock Avoidance.

(3) Circular wait

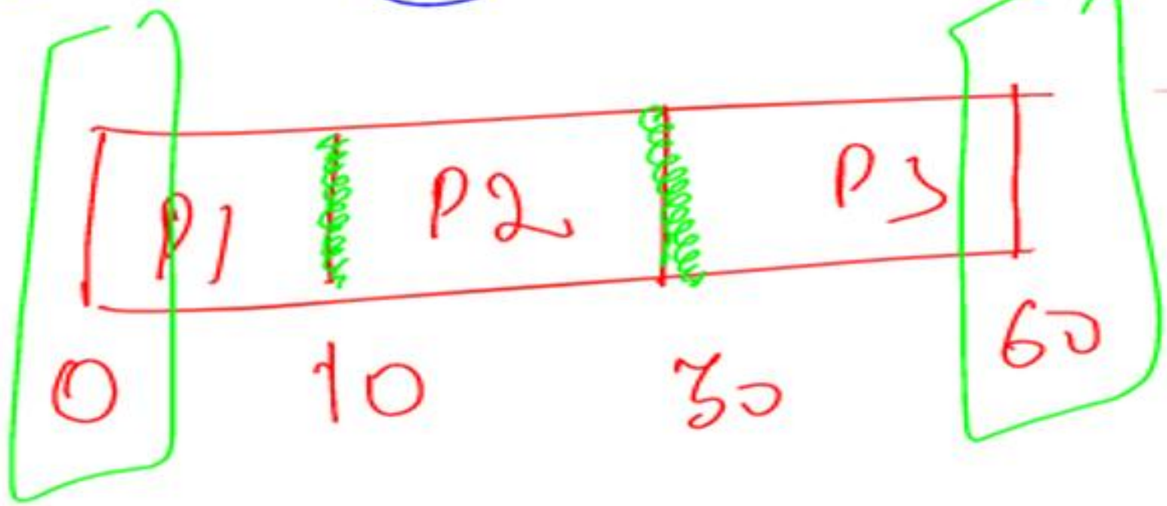
(4) Not in Deadlock

	CPU burst time.	AT
P1	10	0
P2	20	2
P3	30	6

Find the no of context switches using SRTN?

Q.

(1) 1 (2) 2 (3) 3 (4) 4.



(2) ==>

Start & end are not equal

Q. A system contains 3 programs and each requires (3) tape units for its operations. The min. no of tape units which the system must have such that deadlock never arise is ?

(1) 6 (2) 7 (3) 8 (4) 9

Max value at which deadlock will occur.

Shortcut :- $P_1 = 3-1 = 2$

$P_2 = 3-1 = 2$

$P_3 = 3-1 = 2$

(Add) $= 2+2+2 = (6)$

$6+1 = (7)$ — (Min)

11:00 AM — Basic Concept + Basic Cl

Compiler design

=> D