

DSSSB COMPUTER SCIENCE MCQ's



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2000 MCQs

Subjects

1. OS → 200 MCQs
2. CAO → 200
3. Compiler → 200
4. CN → 200
5. TOC → 200
6. C++ → 100
7. Algo → 100

8. Discrete → 100
9. DD → 50
10. DBMS → 100
11. SE → 100
12. AI → 50
13. TA → 100

50 MCQs
↓
1 hour



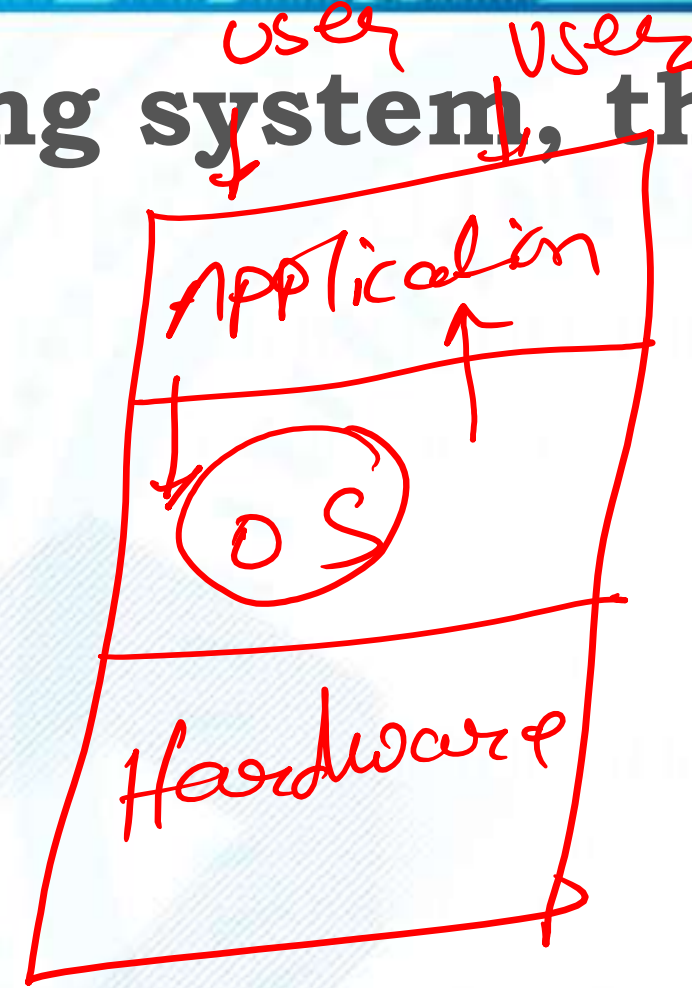
1. What is operating system?

- a) ✓ collection of programs that manages hardware resources
- b) ~~system~~ service provider to the application programs
- c) ~~link~~ to interface the hardware and application programs
- d) all of the mentioned



2. To access the services of operating system, the interface is provided by the -

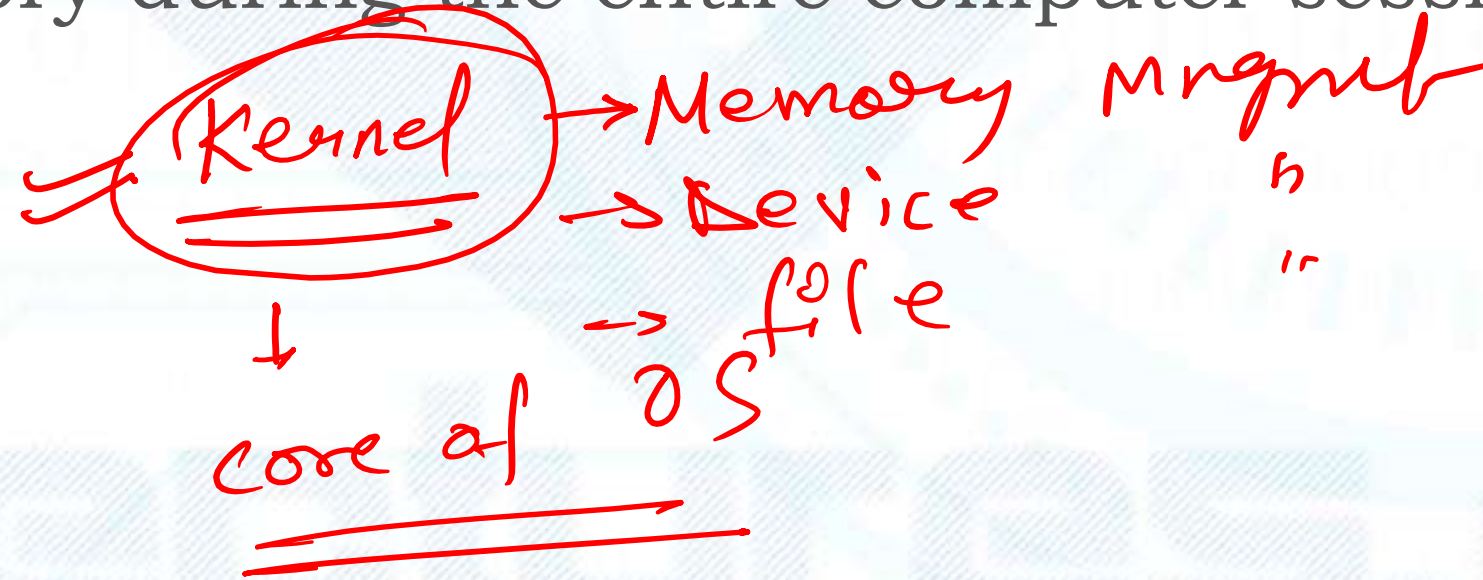
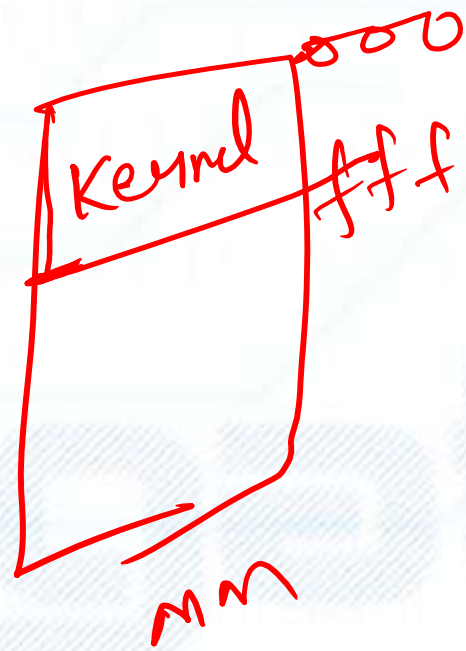
- a) System calls
- b) API
- c) Library
- d) Assembly instructions



```
main()
{
    printf("Hello");
}
write()
```


3. Which one of the following is not true?

- a) ~~kernel~~ is the program that constitutes the central core of the operating system
- b) ~~kernel~~ is the first part of operating system to load into memory during booting
- c) ~~kernel~~ is made of various modules which can not be loaded in running operating system
- d) ~~kernel~~ remains in the memory during the entire computer session





4. Which one of the following error will be handle by the operating system?

- a) power failure
- b) lack of paper in printer
- c) connection failure in the network
- d) all of the mentioned

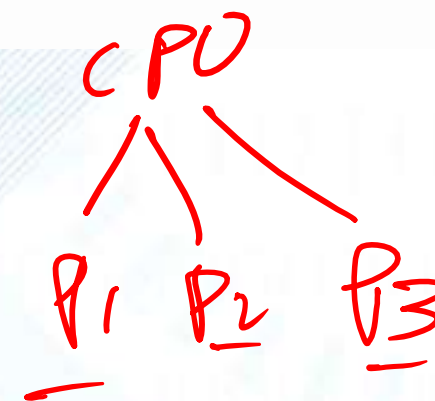
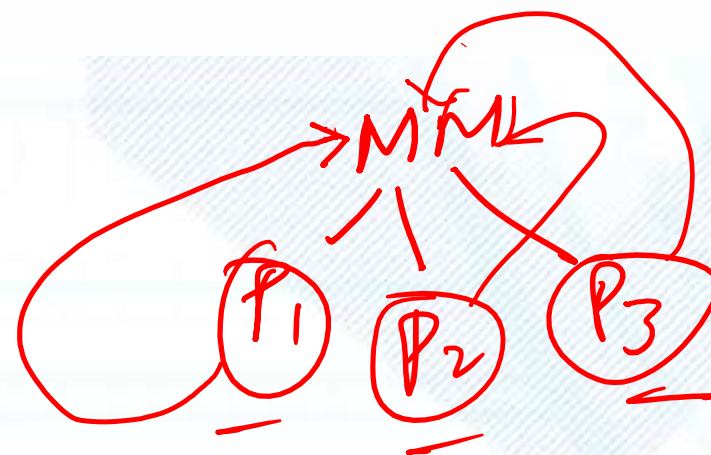
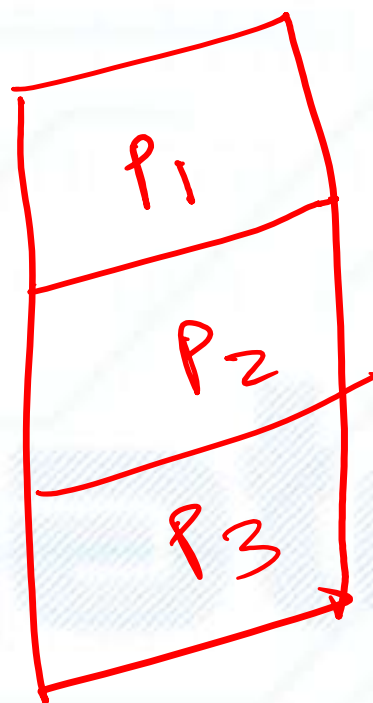


5. The main function of the command interpreter is

- ☒ a) to get and execute the next user-specified command
- ☐ b) to provide the interface between the API and application program
- ☐ c) to handle the files in operating system
- ☒ d) none of the mentioned

6. By operating system, the resource management can be done via

- a) time division multiplexing
- b) space division multiplexing
- c) both time and space division multiplexing
- d) none of the mentioned





$$T_q = 2nS$$

7. Time quantum is defined in

- a) shortest job scheduling algorithm
- ☒ b) round robin scheduling algorithm
- c) priority scheduling algorithm
- d) multilevel queue scheduling algorithm



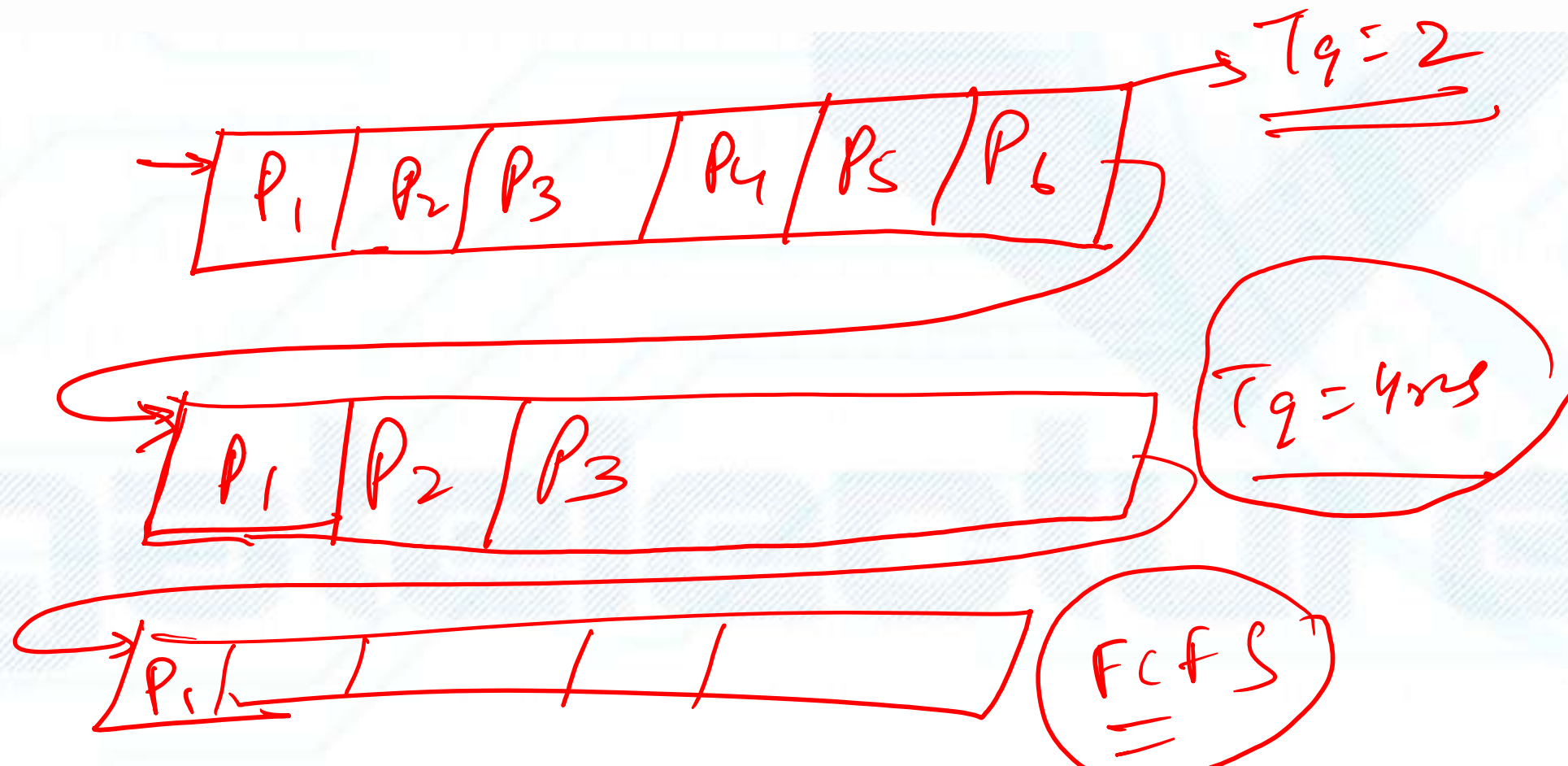
8. Which one of the following is not a real time operating system?

RTOS

- a) VxWorks
- b) Windows CE
- c) RTLinux
- d) Palm OS

9. In multilevel feedback scheduling algorithm

- a) a process can move to a different classified ready queue
- b) classification of ready queue is permanent
- c) processes are not classified into groups
- d) none of the mentioned



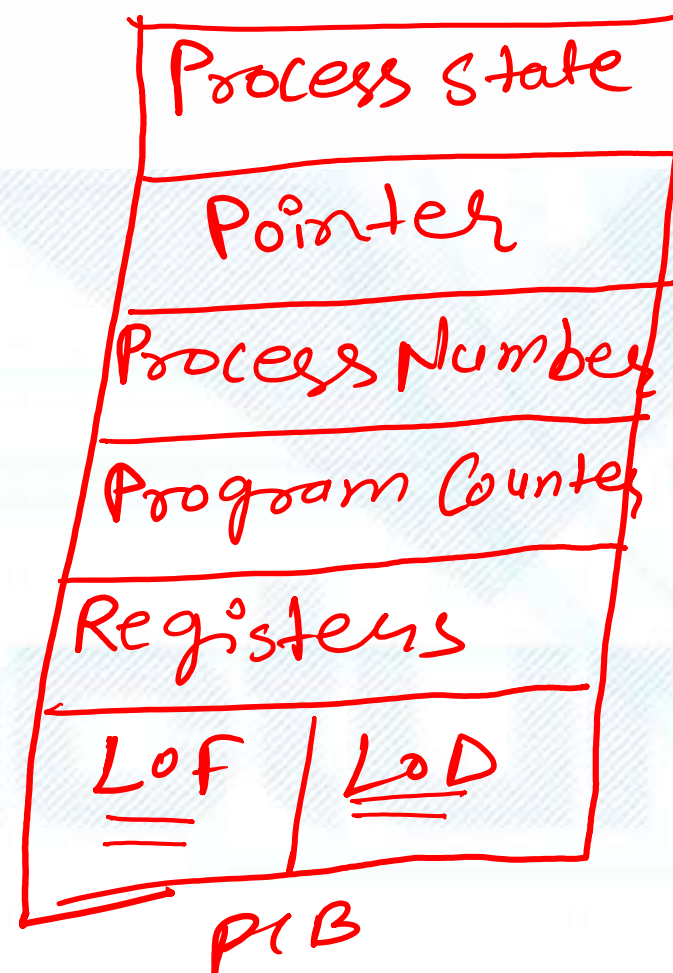


10. The systems which allows only one process execution at a time, are called

- a) uniprogramming systems
- ~~b) uniprocessing systems~~
- c) unitasking systems
- d) none of the mentioned

11. In operating system, each process has its own

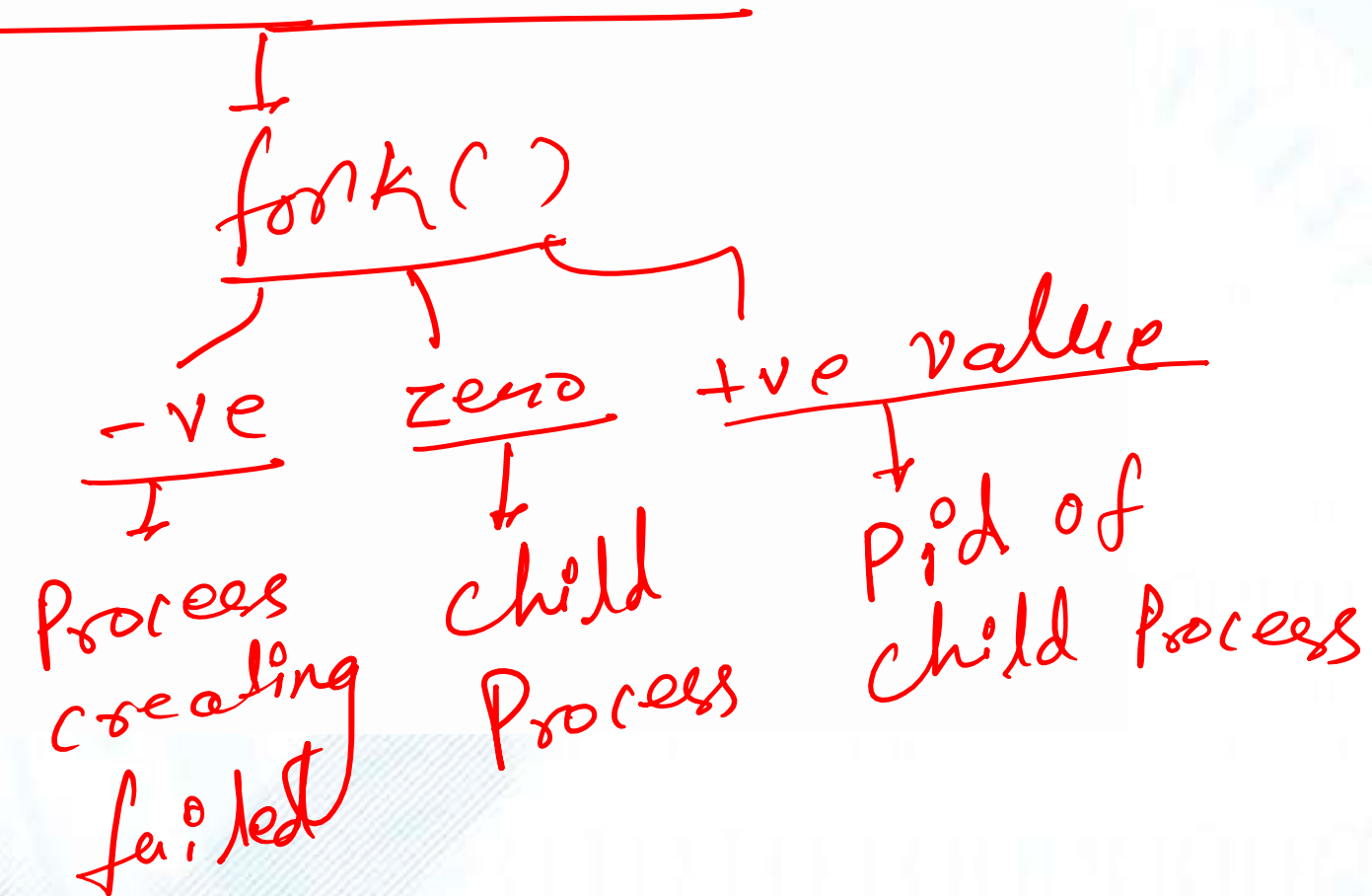
- ~~a)~~ address space and global variables
- ~~b)~~ open files
- ~~c)~~ pending alarms, signals and signal handlers
- d) all of the mentioned





12. In Unix, Which system call creates the new process?

- ☒ a) fork
- ☐ b) create
- ☐ c) new
- ☐ d) none of the mentioned



```
main()
{
    fork();
    printf("Hello");
}
```

$n=1$
 2^1
 2

$n=3$
 $2^3 - 1 = 7$

$2^3 = 8$

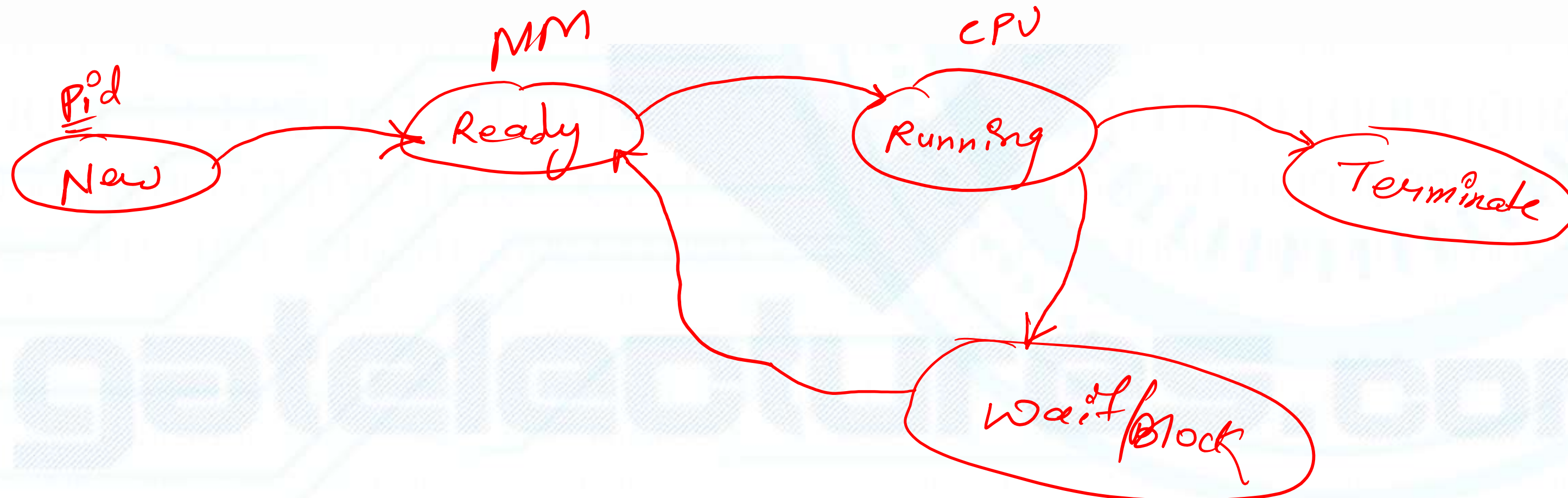


13. Process are classified into different groups in

- a) shortest job scheduling algorithm
- b) round robin scheduling algorithm
- c) priority scheduling algorithm
- ~~d) multilevel queue scheduling algorithm~~

14. What is the ready state of a process?

- ☒ a) when process is scheduled to run after some execution
- ☒ b) when process is unable to run until some task has been completed
- ☒ c) when process is using the CPU → Running
- ☒ d) none of the mentioned



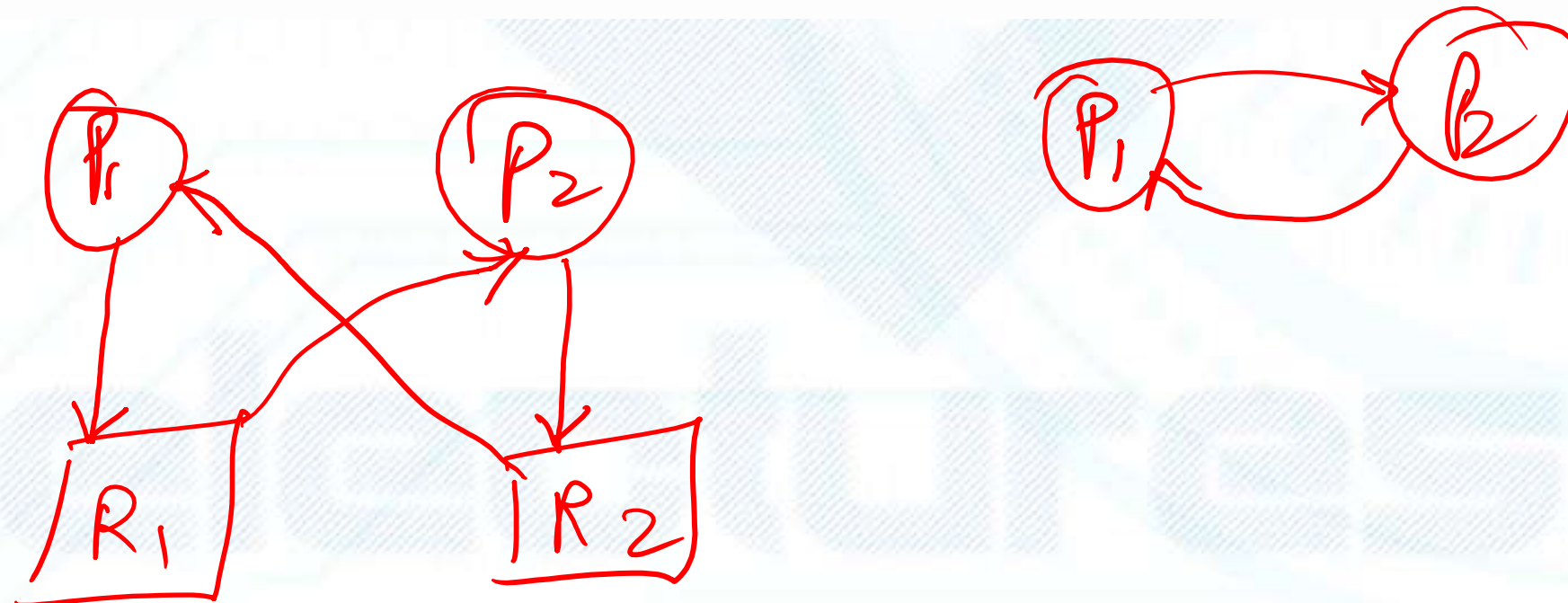


15. What is interprocess communication?

- ☒ a) communication within the process
- ☐ b) communication between two processes
- ☒ c) communication between two threads of same process
- ☒ d) none of the mentioned

16. A set of processes is deadlock if

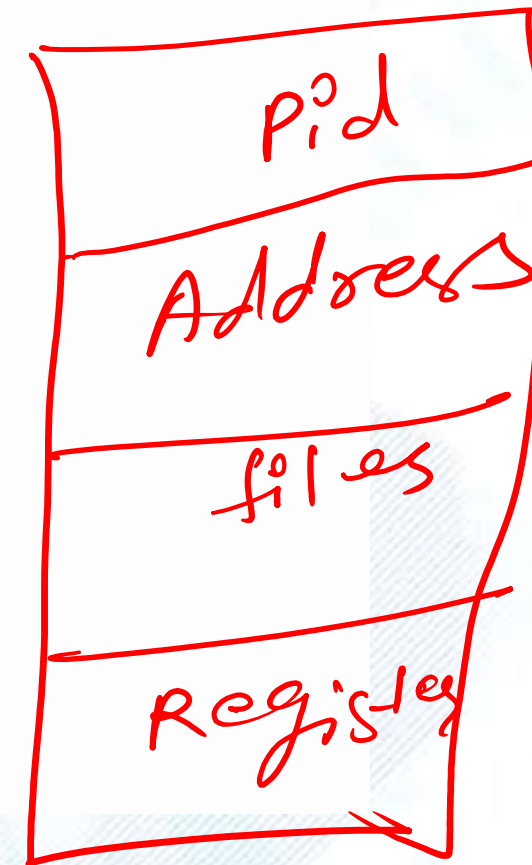
- ☒ a) each process is blocked and will remain so forever
- ☐ b) each process is terminated
- ☐ c) all processes are trying to kill each other
- ☐ d) none of the mentioned





17. A process stack does not contain

- ☒ a) Function parameters
- ☒ b) Local variables
- ☒ c) Return addresses
- ☒ d) PID of child process

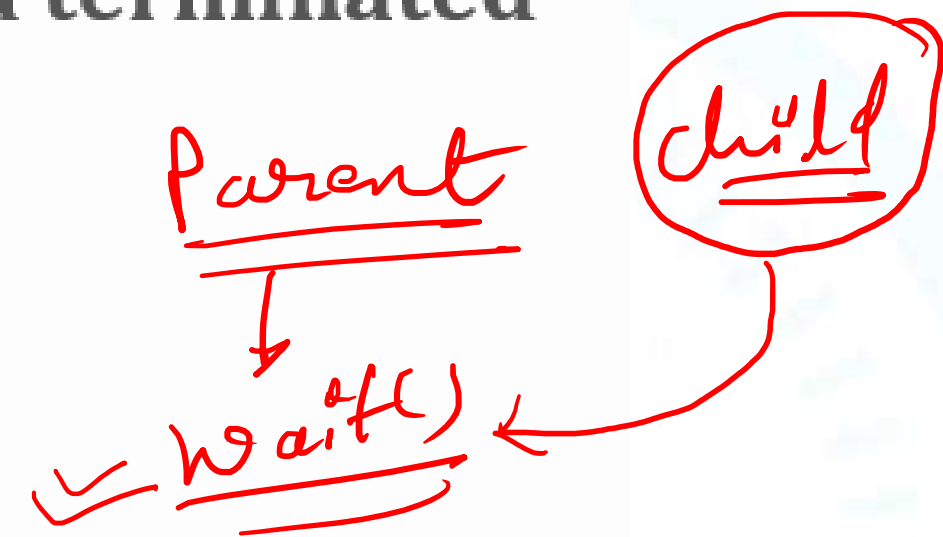




18. Which system call returns the process identifier of a terminated child?

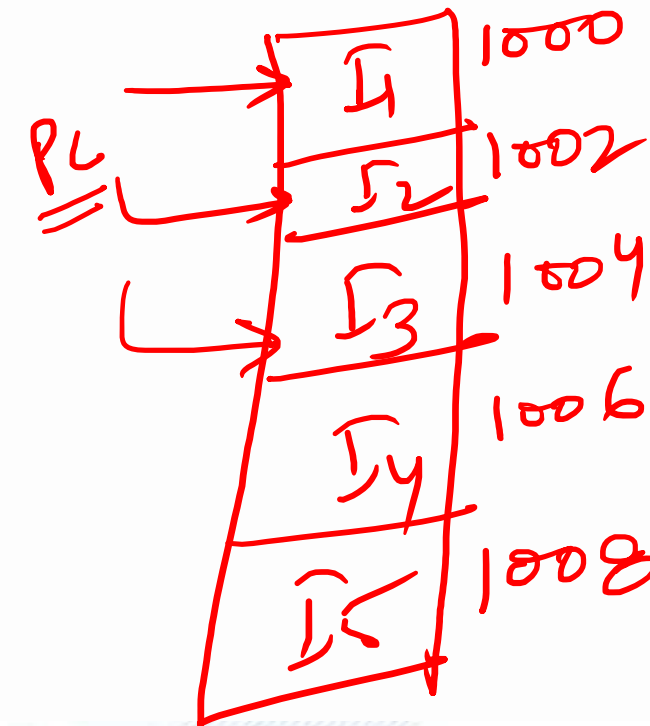
- ☒ a) wait
- b) exit
- c) fork
- d) get

```
#include <stdio.h>
main()
{
    → fork();
    pc → printf("Hello");
}
```



19. The address of the next instruction to be executed by the current process is provided by the

- a) CPU registers
- ☒ b) Program counter
- c) Process stack
- d) Pipe





20. A Process Control Block(PCB) does not contain which of the following:

- ☒ a) Code
- ☒ b) Stack
- ☒ c) Bootstrap program
- ☒ d) Data



21. The number of processes completed per unit time is known as

- a) Output
- ☒ b) Throughput
- c) Efficiency
- d) Capacity



22. The state of a process is defined by:

- ☒ a) the final activity of the process
- ☒ b) the activity just executed by the process
- ☒ c) the activity to next be executed by the process
- ☒ d) the current activity of the process

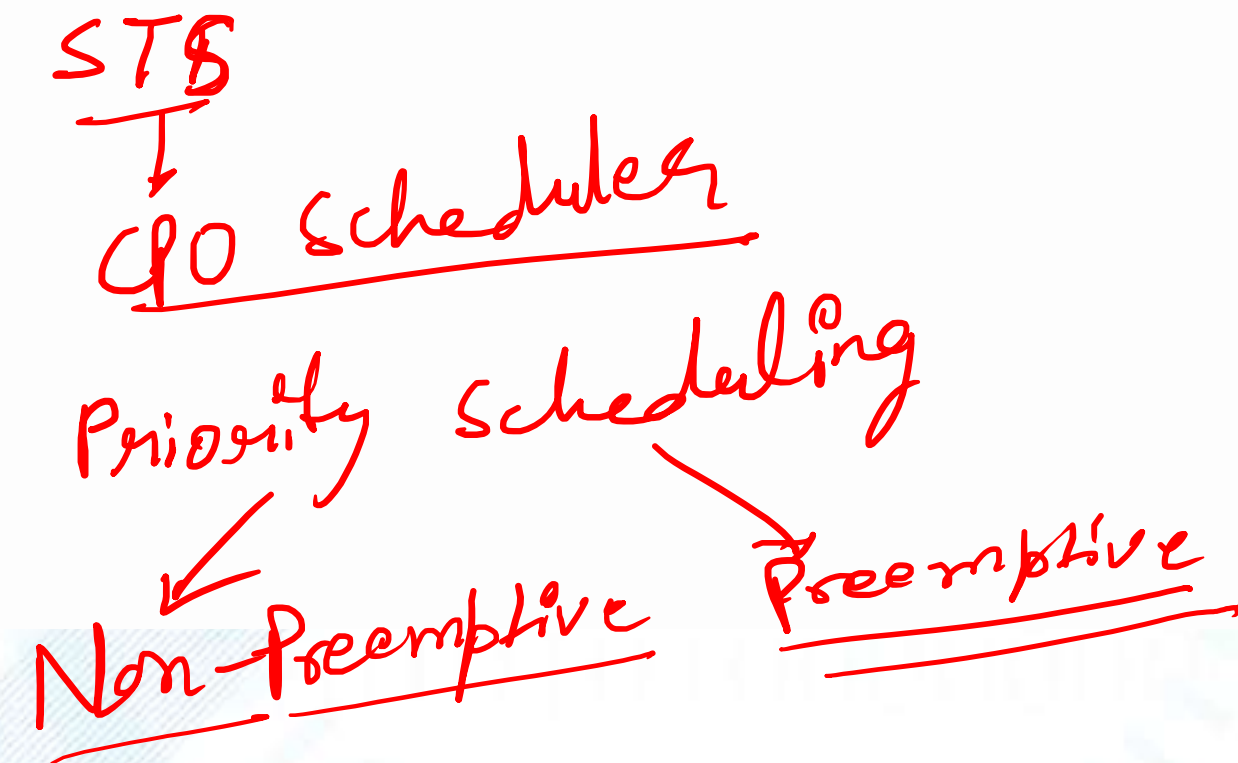
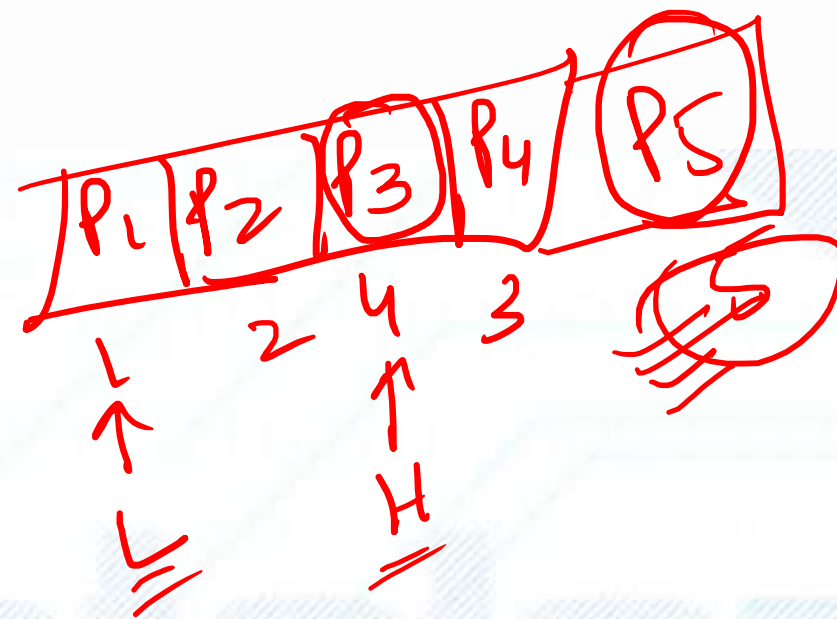


23. Which of the following is not the state of a process?

- ☒ a) New
- ☐ b) Old
- ☒ c) Waiting
- ☒ d) Running

24. In priority scheduling algorithm, when a process arrives at the ready queue, its priority is compared with the priority of

- a) all process
- b) currently running process
- c) parent process
- d) init process





25. In priority scheduling algorithm

- a) CPU is allocated to the process with highest priority
- b) CPU is allocated to the process with lowest priority
- c) Equal priority processes cannot be scheduled
- d) None of the mentioned



26. The degree of multi-programming is:

- a) the number of processes executed per unit time
- b) the number of processes in the ready queue
- c) the number of processes in the I/O queue
- d) the number of processes in memory



27. A single thread of control allows the process to perform:

- ☒ a) only one task at a time
- ☐ b) multiple tasks at a time
- ☐ c) only two tasks at a time
- ☐ c) all of the mentioned



28. The objective of multi-programming is to:

- ☒ a) Have some process running at all times
- ☐ b) Have multiple programs waiting in a queue ready to run
- ☒ c) To minimize CPU utilization
- ☒ d) None of the mentioned



29. Which of the following do not belong to queues for processes?

- ☒ a) Job Queue → Disk
- ☐ b) PCB queue
- ☒ c) Device Queue
- ☒ d) Ready Queue

30. When the process issues an I/O request:

- ☒ a) It is placed in an I/O queue
- ☒ b) It is placed in a waiting queue
- ☒ c) It is placed in the ready queue
- ☒ d) It is placed in the Job queue



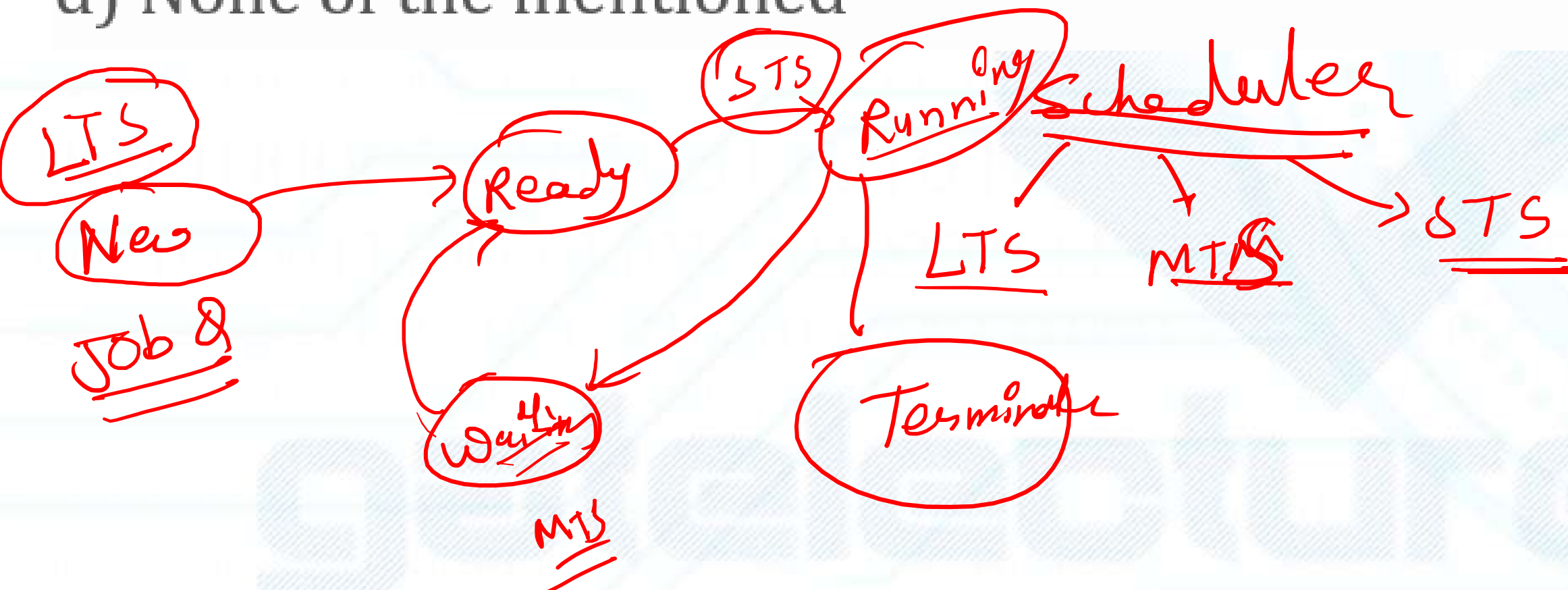


31. When a process terminates:

- a) It is removed from all queues
- b) It is removed from all, but the job queue
- c) Its process control block is de-allocated
- d) Its process control block is never de-allocated

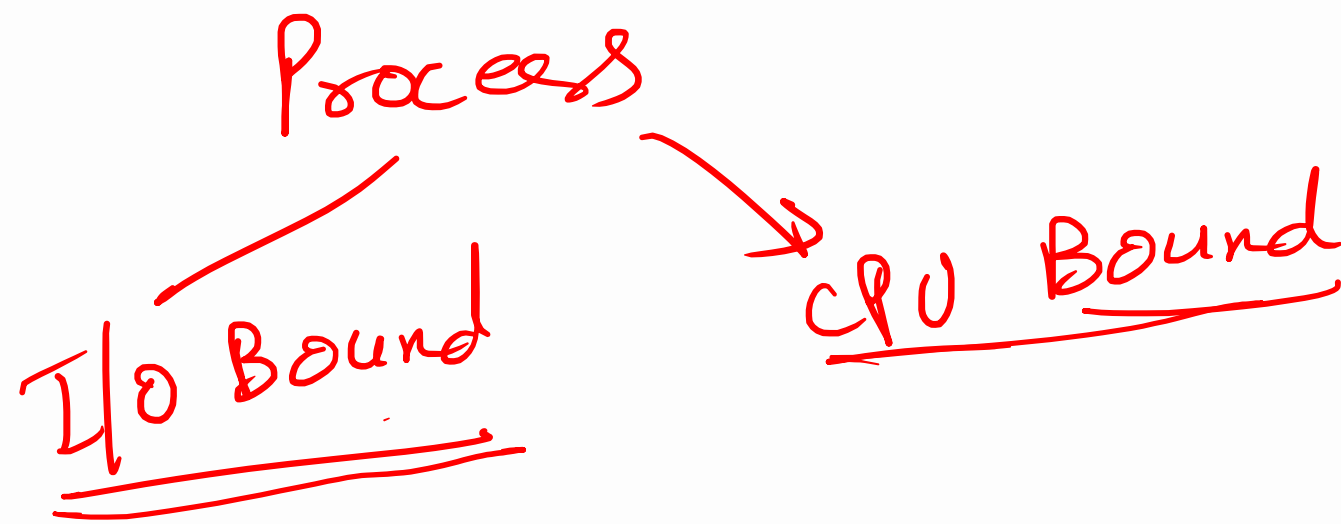
32. What is a long-term scheduler?

- ~~a) It selects which process has to be brought into the ready queue~~
- b) It selects which process has to be executed next and allocates CPU
- c) It selects which process to remove from memory by swapping
- d) None of the mentioned



33. If all processes I/O bound, the ready queue will almost always be Empty and the Short-Term Scheduler will have a little to do.

- a) full, little
- b) full, lot
- ☒ c) empty, little
- d) empty, lot





34. What is a medium-term scheduler?

- a) It selects which process has to be brought into the ready queue
- b) It selects which process has to be executed next and allocates CPU → LTS
- c) It selects which process to remove from memory by swapping → MTS
- d) None of the mentioned



35. What is a short-term scheduler?

- a) It selects which process has to be brought into the ready queue
- ☒ b) It selects which process has to be executed next and allocates CPU
- c) It selects which process to remove from memory by swapping
- d) None of the mentioned



36. The primary distinction between the short-term scheduler and the long-term scheduler is:

- ☒ a) The length of their queues
- ☒ b) The type of processes they schedule
- ☒ c) The frequency of their execution
- ☐ d) None of the mentioned

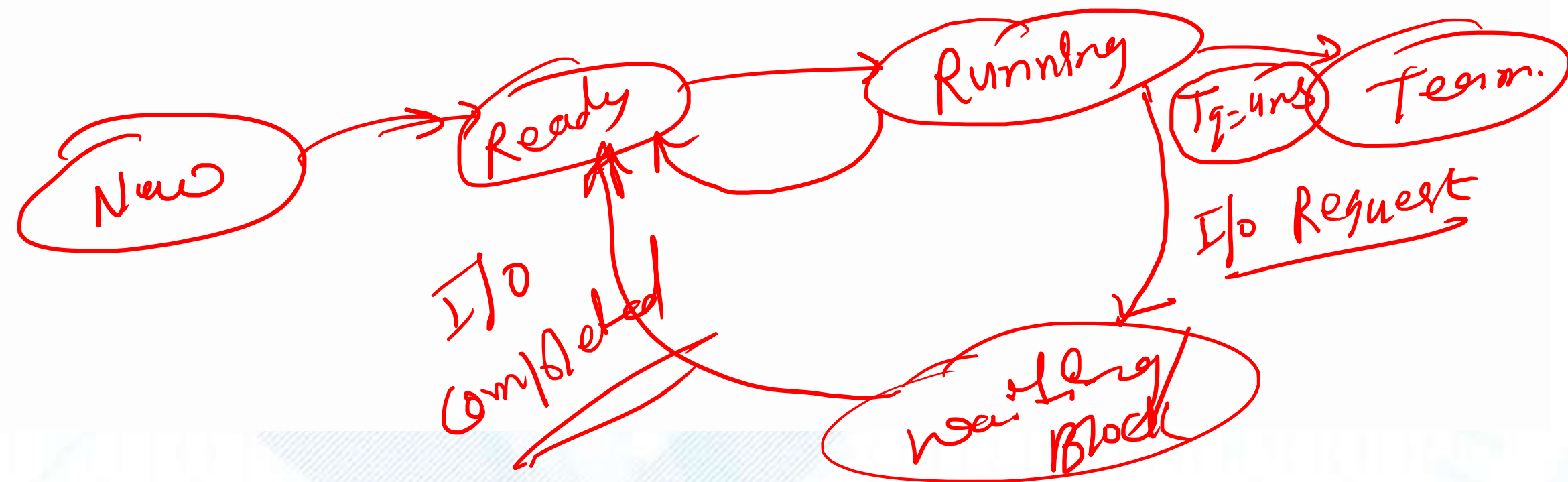


37. Which scheduling algorithm allocates the CPU first to the process that requests the CPU first?

- ☒ a) first-come, first-served scheduling
- ☐ b) shortest job scheduling
- ☐ c) priority scheduling
- ☐ d) none of the mentioned

38. In a time-sharing operating system, when the time slot given to a process is completed, the process goes from the running state to the:

- a) Blocked state
- ☒ b) Ready state
- c) Suspended state
- d) Terminated state





39. In a multi-programming environment:

- a) the processor executes more than one process at a time
- b) the programs are developed by more than one person
- ☒ c) more than one process resides in the memory
- d) a single user can execute many programs at the same time



40. Suppose that a process is in “Blocked” state waiting for some I/O service. When the service is completed, it goes to the:

- a) Running state
- ☒ b) Ready state
- c) Suspended state
- d) Terminated state

41. The context of a process in the PCB of a process does not Contain:

- ~~a) the value of the CPU registers~~
- ~~b) the process state~~
- ~~c) memory-management information~~
- d) context switch time

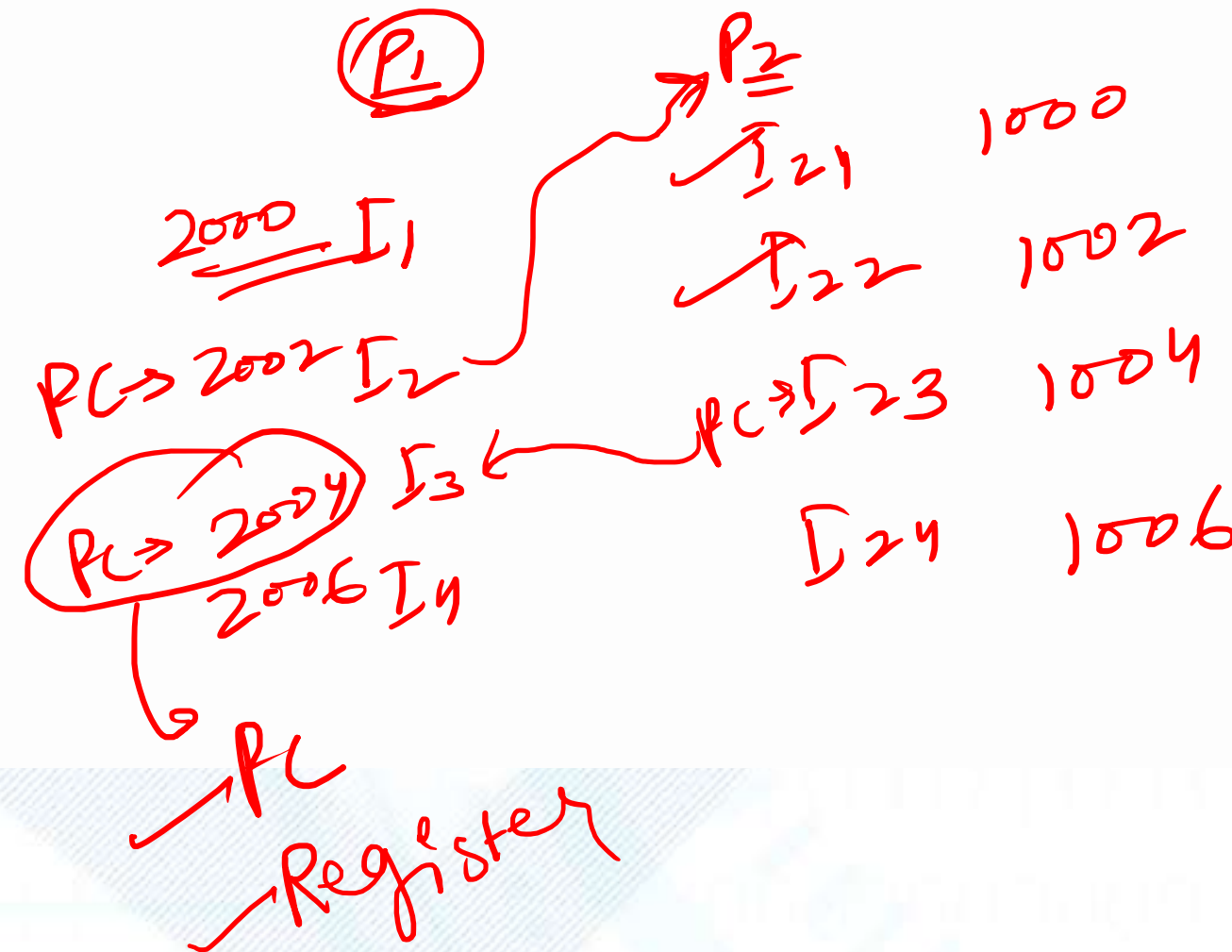
Ans



42. Which of the following need not necessarily be saved on a context switch between processes?

- ☒ a) General purpose registers
- ☒ b) Translation look-aside buffer
- ☒ c) Program counter
- d) All of the mentioned

TLB → Cache





43. Which of the following does not interrupt a running process?

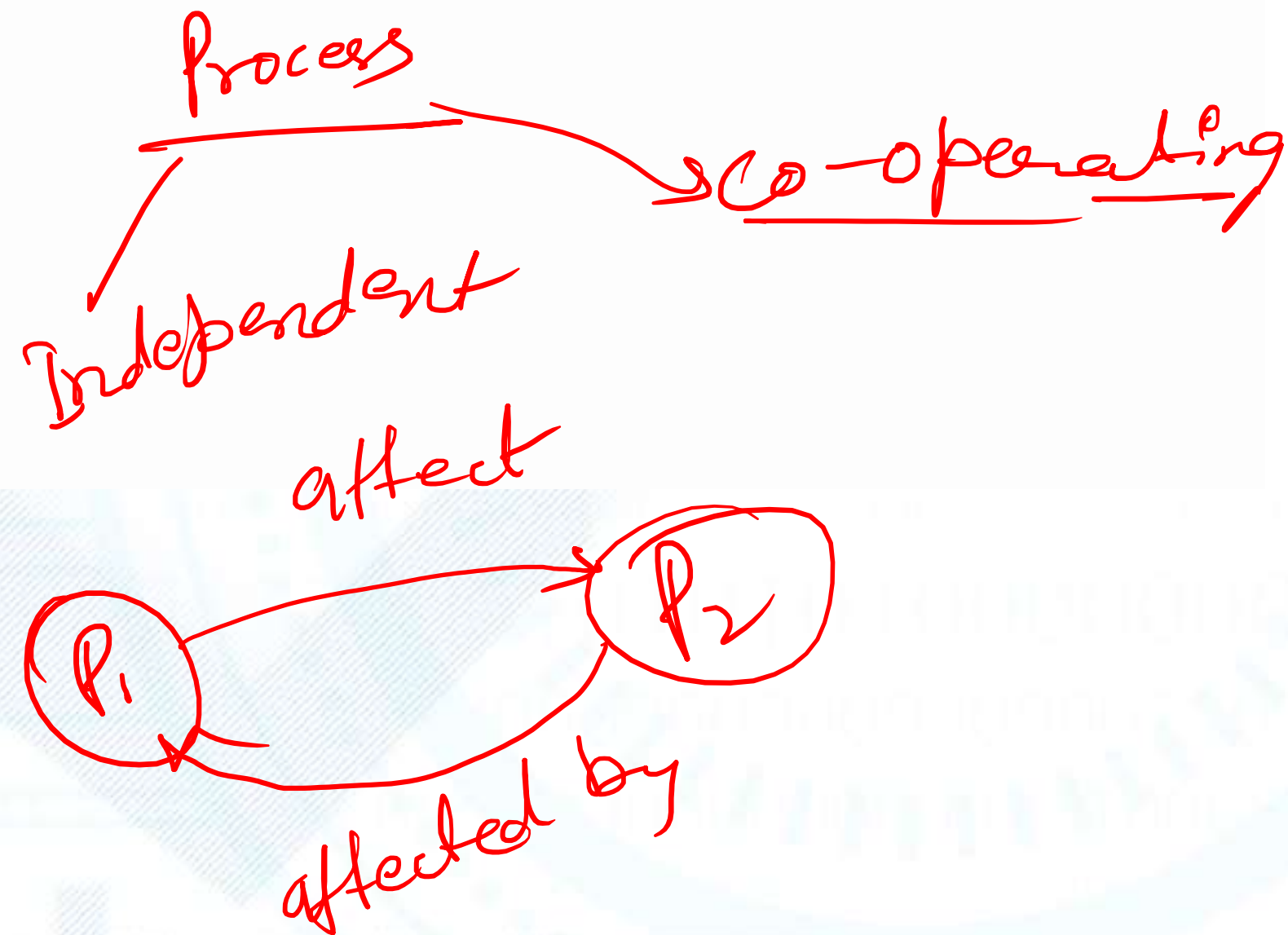
- ☒ a) A device
- ☒ b) Timer
- ☒ c) Scheduler process
- ☒ d) Power failure

RR, $T_q = 2ms$
→ P₁



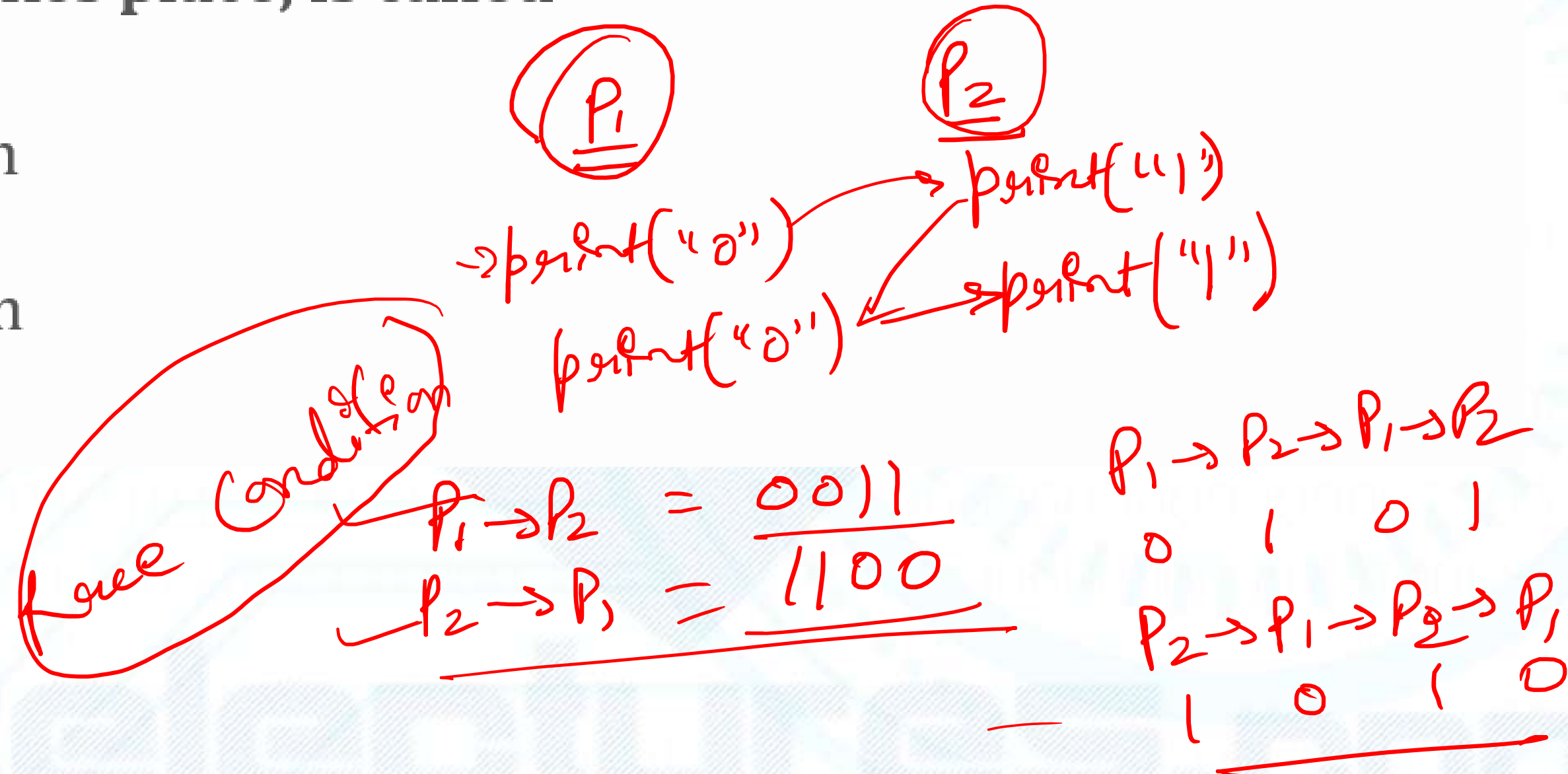
44. Which process can be affected by other processes executing in the system?

- a) cooperating process
- b) child process
- c) parent process
- d) init process



45. When several processes access the same data concurrently and the outcome of the execution depends on the particular order in which the access takes place, is called

- a) dynamic condition
- ☒ b) race condition
- c) essential condition
- d) critical condition





46. If a process is executing in its critical section, then no other processes can be executing in their critical section. This condition is called

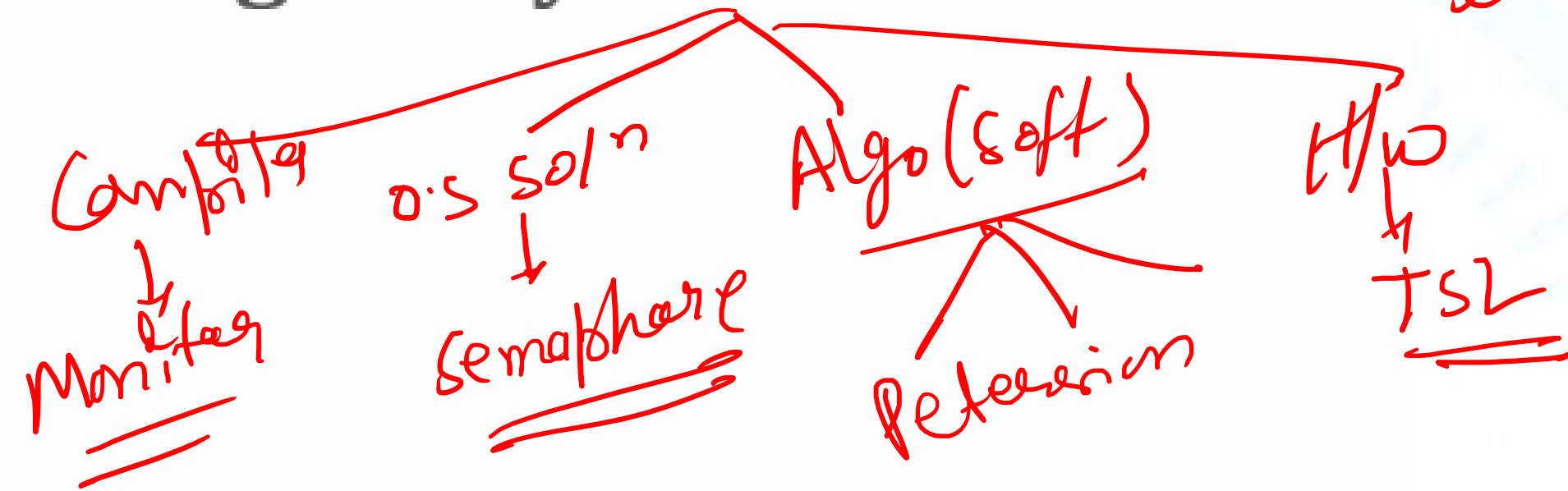
- ☒ a) mutual exclusion
- b) critical exclusion
- c) synchronous exclusion
- d) asynchronous exclusion

Mutual Exclusion
Progress Req.
Bounded Waiting
Program





47. Which one of the following is a synchronization tool? l.

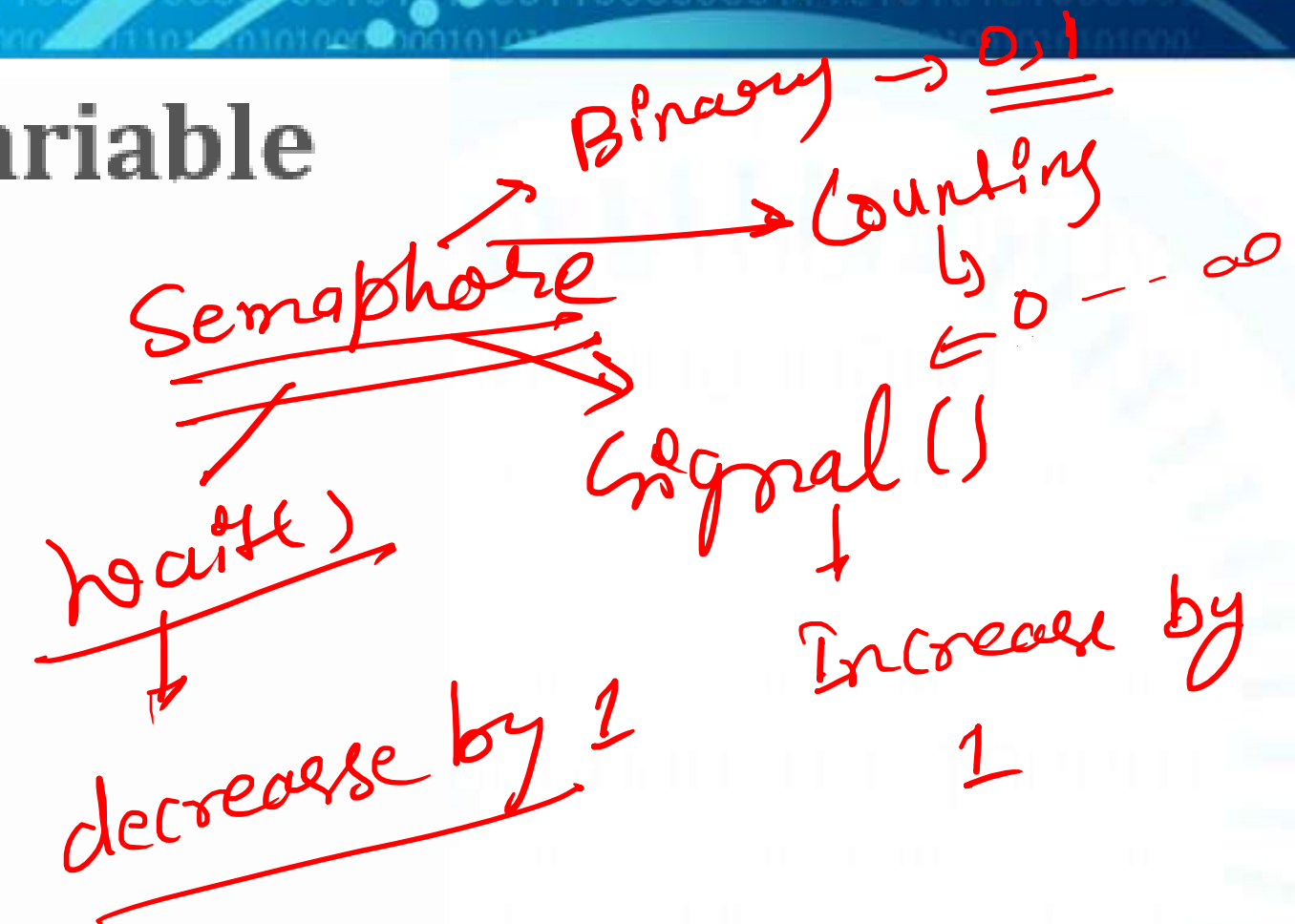


- a) thread
- b) pipe
- c) semaphore → o.s
- d) socket



48. A semaphore is a shared integer variable

- ☒ a) that cannot drop below zero
- ☐ b) that cannot be more than zero
- ☐ c) that cannot drop below one
- ☐ d) that cannot be more than one



Ex:

Semaphore $S = 8$

12 $\text{signal}()$ $\rightarrow 8 + 12 - 8$

8 $\text{wait}()$

final value = 12



49. Mutual exclusion can be provided by the

- a) mutex locks
- b) binary semaphores
- c) both mutex locks and binary semaphores
- d) none of the mentioned



50. Process synchronization can be done on

HW SW Algo Compilers

- ✓ a) hardware level → TSL
- ✓ b) software level →
- Ⓢ c) both hardware and software level
- d) none of the mentioned