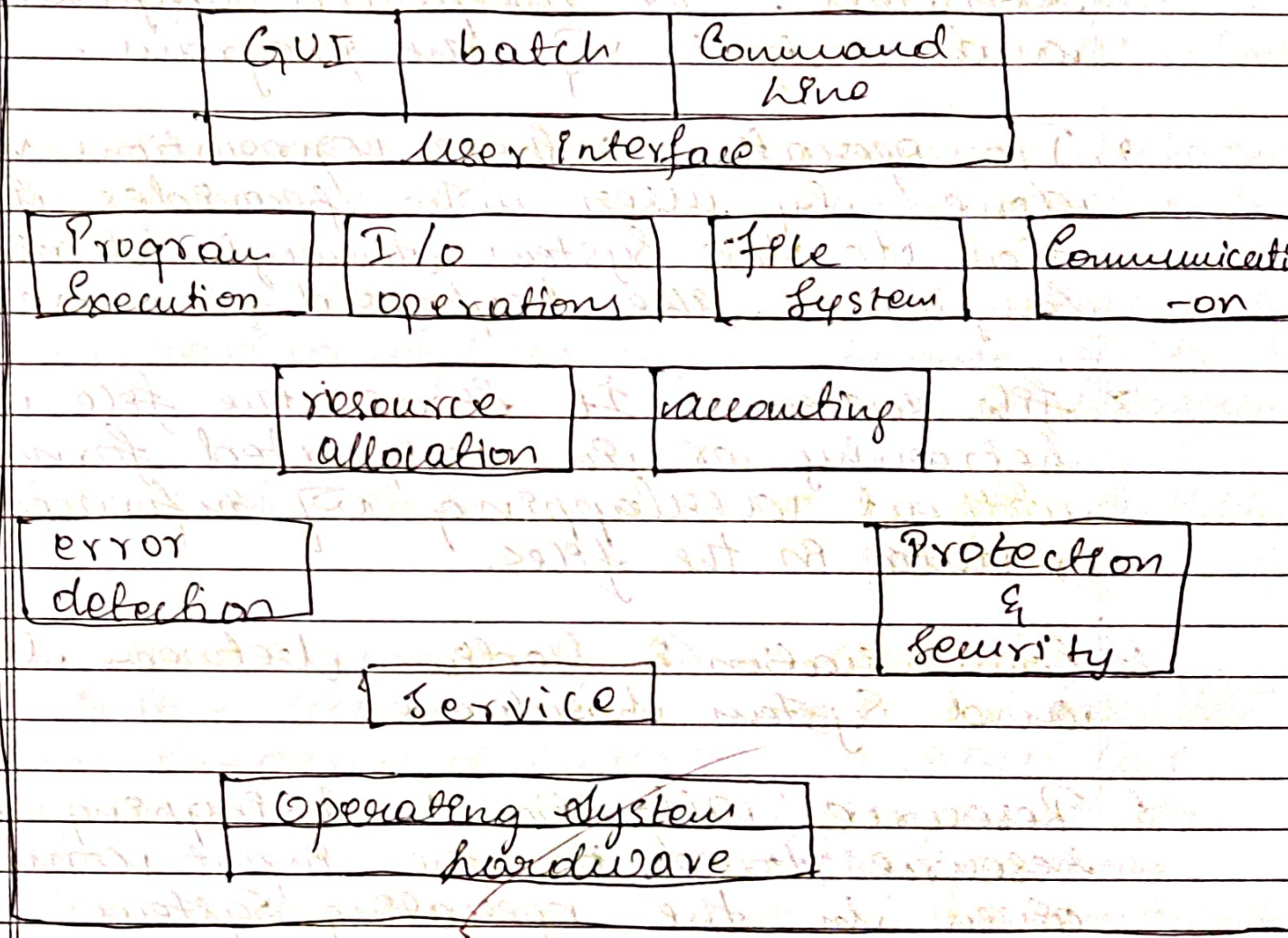
2C303 40

DD MM YYYY

Test-1

1 (a) Operating System: It is the interface between user and the system hardware



* Above listed things are the services of the operating System.
* It contains service like user interface, program Execution, I/O operation, file system, Communication, resource allocation, accounting, Error detection, Protection and Securi -ty.

DD MM YYYY

1. Program Execution : Holds the data of the program that has to be executed. It helps in compilation and output of the program.

2. I/o operation : These operations are done by user who provides information to the System through hardware components like Keyboard, mouse etc.

3. File system : It Stores the file in hierarchy or in designated form without overlapping of information or data in the files.

4. Communication : Medium between User and System hardware.

5. Resource allocation : Assigning of resource based on the input command given by the operating System.

6. Error detection : Pointing out the error in each line of Program.

7. Protection and Security : It provides high protection to your files and Security to your data or Information present in operating System.

D D M M Y Y Y Y

b. (ii) Multiprogramming

* multiprogramming compiles multiple programs.

* multiprogramming presides in Memory M.

* It uses batch os operating system

* Process is slower.

Multitasking

* multitasking can only compile one program at a time

* whereas multitasking presides in CPU.

* It is time sharing because of its multiple tasking

* It does switching process

(i) Multiprocessor system

* Multi processor is low cost compared to cluster system.

* Less ambiguity

* Time sharing system

* Multi processor system performs multiple processing units

clustered systems.

* cluster systems is high cost compared to multiprocessor.

* More ambiguity

* Time critical system.

* clusted system where the overlapping tasks idle so that only one processing takes

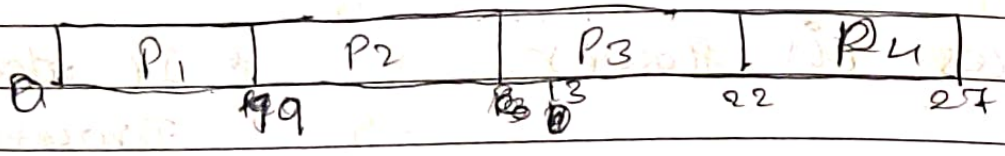
D D M M Y Y Y Y

4 @ Average waiting time = ?
Average turn around = ?

1.

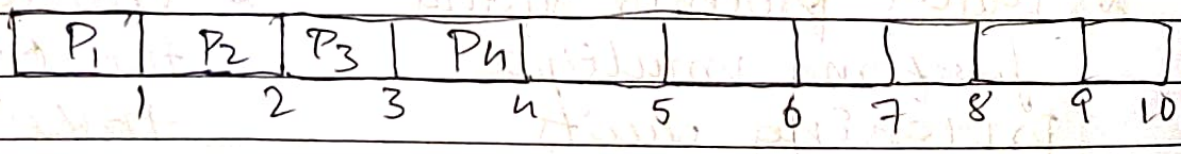
Process	Arrival Time	Burst Time	Pr
P1	0	9	3
P2	1	4	2
P3	2	9	1
P4	3	5	4

FCFS.



	Waiting Time	Turn around	Completion Time
P1	0	9	9
P2	8	12	13
P3	11	20	22
P4	24	24	27
Avg	9.5	14.25	

SRTF



D D M M Y Y Y Y

	Completion Time	Turn around	Waiting Time
P_1	11	11	9
P_2	5	4	0
P_3	27	25	16
P_4	7	7	2
	6.75	13.50	6.25

RR (q = 2ms)

	Completion Time	Turnaround	Waiting Time
P_1	17	26	17
P_2	7	11	7
P_3	16	25	15
P_4	25	20	16
	5	21.0.5	13.75

D D M M Y Y Y Y

(5) Process

* Process are part of threads
* Process send informa -tion or signal to the Kernal.
* There are many ways the signal can be passed through Process and Kernal

Threads.

* Threads are the medium to make connection between process and Kernal.
* There are multi threading model which connects proce and Kernal.

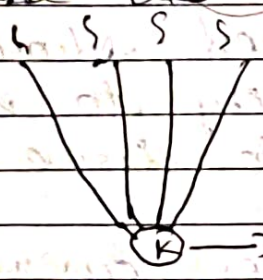
Quiz.

1. (d) ✓
2. (a) ✓
3. (b) ✓
4. (b) ✓
5. (a) ✗

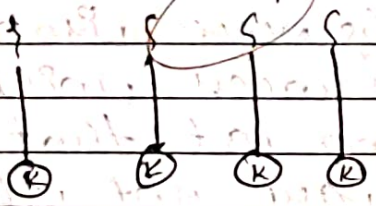
D D M M Y Y Y Y

3 (b) Multi threading models.

* One to one (from Process to Kernel)



a. From each process to Kernal



b. From Process to Kernal and one from process to Kernal.