GLS UNIVERSITY
FCAIT
BCA SEM - III
Subject : Fundamentals Of Operating system
Subject Code : 0301304

Q. 1 Fill In the Blanks

1. Swapping the blocked process out of main memory into secondary memory is done by _____ scheduler.
2. If any program is ready for the execution then it is in _____ state.
3. There are some processes whose execution overlaps in time, such processes are known as _____.
4. If more than one processes share their data and memory and send messages and signal to each other for their activites then these processes are known as _____
5. If a process creates its sub processes then this relationship is called _____
6. A process executed till its end , then it will switch to _____state.
7. _____ event sends a process to the CPU for execution after selection.
8. Blocked processes swapped out from main memory to secondary storage , these processes are known as _____ processes.
9. If time quantum is too large in RR scheduling , it becomes _____.
10. The total time spent by a process in the ready queue is called _____.
11. Attributes of processes are stored in the data structure known as _____.
12. Address value of next instruction is placed in _____ register.
13. Long term schedular is also called _____.
14. Short term schedular is also known as _____.
15. Medium term schedular is generally used for _____ processes.

Q. 2 True or False

1. If the time quantum is too large in RR scheduling then context switching time is very large.
2. Priority scheduling is non-pre-emptive scheduling.
3. Processes with same priority are executed on first come first served basis.
4. Context switching is used to save states of preempted processes.
5. Shortest remaining time (SRT) is the preemptive version of the SJN algorithm.
6. Blocked processes resides in secondary storage.
7. When any process is created ,it is in ready state.
8. Suspended processes are stored in main memory.
9. A parent process may also suspend its child process if there is an error in its execution
10. The collection of user program, data section, stack, and the associated attributes is called the process image.

Q .3 Answer the following Questions -

1 What is process? How is it diffrent from program? Explain in detail.

2. Explain process life cycle with events that leds to state transition.

3. In the below numerical, there are six processes named as P1, P2, P3, P4, P5 and P6. Their arrival time and burst time are given below in the table.

Process	Arival Time	Burst Time
P1	0	7
P2	5	5
P3	2	1
P4	4	2
P5	3	6
P6	2	5

Find average turn around time and average waiting time for below algorithms-

1. First come first serve
2. Shorted job next
3. Round robin with time slice of 2 second.
4. Shortest remaining time next

4. Explain relationship between processes.

5. Explain Life cycle of a process.

6. Define process states and state transitions.

7 Explain Suspended process and their state transitions.

8 What is PCB ? Explain in detail.

9 What is scheduler ? Explain types of scheduler.

10

Process	Arrival Time	Execution Time	Priority
p1	0	18	5
p2	1	3	3
p3	2	4	1
p4	3	5	2
P5	4	3	4

Draw the gantt chart for the execution of the processes showing their start time and end time using below algorithms. Also find average turn around time, average normalized turn around time and average waiting time for below algorithms-

1. First come first serve
2. Shorted job next
3. Shortest Remaining time next
4. Round robin with time slice of 2 second.
5. Priority Scheduling

Note: Q1 , Q2 are coumplsory for all. You have to attempt Q-3 in following sequence -

Roll No	Question Numbers from both section
A1 to A10, B1 to B10 & C1 to C10	1,3,10
A11 to A20, B11 to B20 & C11 to C20	2,3,10
A21 to A30, B21 to B30 & C21 to C30	3,2,10
A31 to A40, B31 to B40 & C31 to C40	4,3,10
A41 to A50, B41 to B50 & C41 to C50	5,3,10
A51 to A60, B51 to B60 & C51 to C60	6,10,3
A61 to A70, B61 to B70 & C61 to C70	7,10,3
A71 to A80, B71 to B80 & C71 to C80	8,10,3
A81 to A90, B81 to B90 & C81 to C90	9,10,3
A91 Onwards , B91 Onwards & C91 Onwards	10,2,3