Institute of Information Technology

University of Dhaka

Course: Operating System (CSE-401)

Time: 100 Minutes Lab Exam-1 **Marks**: 100

Consider a system with two-level queuing algorithm, where first and second queue use SJF and Round Robin scheduling algorithm respectively. If the process burst time is equal or more than the average burst time, that will be assign to first level. Otherwise the process will be assigned to second level queue.

Now execute the ***top*** command in your Linux machine. You may find link below table head.

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND

Use the
PID as Process ID,
RES as Burst Time,
TIME+ as Arrival Time, and
%CPU as priority.

The first level queue is been scheduled as SJF with non- preemptive. The second level queue is being scheduled using a preemptive, round- robin scheduling algorithm. The length of a time quantum is 50 units. If a process is preempted by a higher-priority process, the preempted process is placed at the end of the queue.

a) What is the turnaround time for each process? Calculate the average turnaround time.
b) What is the waiting time for each process? Calculate the average waiting time. Show both queue separately.

[Best of Luck]