Class Test – I **Name: _____**

MCA 2nd Year 1st Semester **Class Roll: _____**

Session: 2018-19

Date: 28/09/2018 **Marks Obtained: _____**

Full Marks: 30

Time: 50 minutes

Write proper justifications for all your answers

1. Consider the following set of processes with the arrival times and the CPU burst times given in milliseconds

Process	Arrival Time	Burst Time
P_1	0	5
P_2	1	3
P_3	2	3
P_4	4	1

   Determine the turnaround time and waiting time for all the processes using Shortest Remaining Time First (SRTF) and Longest Remaining Time First (LRTF) scheduling policy. In both the cases ties are broken by giving priority to the process with lowest id.

2. A system has four processes and three allocable resource types. The current allocation and maximum requirements for each process are as follows:

Process	Allocation	Maximum	Available
P_1	0 1 2	0 1 2	1 2 0
P_2	1 0 0	1 5 0	
P_3	1 5 4	2 5 6	
P_4	0 3 2	3 5 2	

   Is the system in a safe state? If so, which process will finish last? Further, if a request from process P_2 arrives for (0, 2, 0) can the request be granted immediately?

3. For the following code segment determine how many times “Hello” will be printed.

```
int i=0;
do{
        if(fork()!=0);
                i++;
        else
                i+=2;
}while(i<=3);
printf(“Hello”);
```

4. What will be the effect of the Performance of Round Robin scheduling algorithm, when the time quanta is greater than the largest CPU burst.
5. How “spin lock” can be implemented by using TestAndSet instruction?

8+10+6+2+4=30