MCA Sem.:1

Subject Code: 05MC0104

Subject: Operating Systems

Assignment-1

- Q 1 What is an operating system? Describe evolution of OS.
- Q 2 What is a process? Explain five states process models with diagram.
- Q 3 Diffentiate: User level thread vs kernel level thread.
- Q 4 Explain producer consumer problem.
- Q 5 List and describe all necessary conditions for deadlock.
- Q 6 Explain HRRN algorithm in brief with example.
- Q 7 Explain dining philosopher problem and solution with semaphore.
- Q 8 List out scheduling algorithms. Perform FCFS algorithm for following process.

| Process | Arrival time | Service time |
|---------|--------------|--------------|
| A | 0 | 3 |
| В | 2 | 6 |
| С | 4 | 4 |
| D | 6 | 5 |
| Е | 8 | 2 |