

**The University of Burdwan**  
**M.Sc. (DDE) 3<sup>rd</sup> semester examination, 2019**  
**Subject: Computer Science**  
**Paper: MCS-302 (Advanced Operating System)**  
**Full Marks: 22.5**

**Answer Question number 1 and any three questions from the rest.**

1. Explain the Banker's Algorithm for deadlock avoidance with an example. (7.5)

Or

Explain the Deadlock detection algorithm with an example. (7.5)

2. Differentiate between Parallel and Distributed system. (5)

3. Differentiate between multiprocessing and multithreading. (5)

4. Differentiate between Binary and Counting Semaphore. (5)

5. Differentiate between long term, short term, and medium term CPU scheduler.(5)

6. Using Shortest Remaining Time First CPU Scheduling algorithm calculate the average waiting time of the given problem. (5)

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