

## Department of Computer Applications

### **Title of Assignment: Introduction To Operating System (BCA-DS-203)**

**Course:** BCA (Data Science)  
**Date of Issue:** 28 August, 2023  
**Course Unit included:** 2<sup>nd</sup>  
**Session:** 2023-24

**Semester:** 3<sup>rd</sup>  
**Date of Submission:** 04 Sep, 2023  
**Assignment Number:** 2<sup>nd</sup>  
**Max. Marks:** 30

#### **Learning Outcomes:**

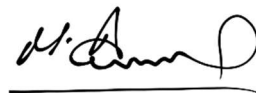
- LO1:** To understand the basic idea of CPU scheduling.  
**LO2:** To practice the numerical problem involved in various CPU scheduling algorithms.  
**LO3:** To understand the deadlock characterization and algorithm to solve it.

Q.N.	Question's Statement	Bloom's Taxonomy Level	Course Outcome																		
1	List out the various process states and briefly explain the same with a state diagram.	L2- Understanding	CO-I																		
2	A scheduling mechanism should consider various scheduling criteria to realize the scheduling objectives. List out all the criteria.	L6- Creating	CO-II																		
3	Describe the purpose of the banker's algorithm.	L6- Creating	CO-II																		
4	<div>Consider the set of 5 processes whose arrival time and burst time are given below-<table><tr><th>Process Id</th><th>Arrival time</th><th>Burst time</th></tr><tr><td>P1</td><td>3</td><td>1</td></tr><tr><td>P2</td><td>1</td><td>4</td></tr><tr><td>P3</td><td>4</td><td>2</td></tr><tr><td>P4</td><td>0</td><td>6</td></tr><tr><td>P5</td><td>2</td><td>3</td></tr></table><div>If the CPU scheduling policy is SJF pre-emptive, calculate the average waiting time and average turnaround time.</div></div>	Process Id	Arrival time	Burst time	P1	3	1	P2	1	4	P3	4	2	P4	0	6	P5	2	3	L3- Apply	CO-I
Process Id	Arrival time	Burst time																			
P1	3	1																			
P2	1	4																			
P3	4	2																			
P4	0	6																			
P5	2	3																			

#### **Course Outcome Evaluation Matrix:**

CO/Ques	Qns-1	Qns-2	Qns-3	Qns-4
CO-1	√	-----	-----	√
CO-2	-----	√	√	-----
CO-3	-----	-----	-----	-----
CO-4	-----	-----	-----	-----

**Assignment prepared by:** Mohammad Danish



**Signature of Faculty**