



**Parul University**  
**Faculty of Engineering and Technology**  
**Parul Institute of Engineering and Technology**  
**CSE- Cyber Security Department**

Subject Name	Operating System and Platform Security	A. Y	2025-26	
Subject Code	3012602PC01	Semester	2 <sup>nd</sup>	
Assignment-1				
Sr No	Question	COs	B.T	Competence
1	Define an Operating System. Write any two main functions of an OS.	1	1	Remember
2	List and briefly explain any two types of Operating Systems (e.g., Batch, Real-time, Distributed, Cloud-based).	2	2	Understand
3	What are system calls? Mention any two OS services provided to users or programs.	3	3	Apply
4	Explain the difference between Monolithic and Microkernel OS structure in simple terms.	3	3	Understand
5	What is a process? List the basic states of a process in an operating system.	4	4	Understand
6	Define threads. Write any two benefits of multithreading.	4	4	Understand
7	What is virtual memory? Why is it needed in modern operating systems?	3	3	Understand
8	What is memory protection? How does ASLR (Address Space Layout Randomization) help in improving security?	5	5	Understand