

**St. Francis Institute of Technology  
Borivli (West), Mumbai-400103**

**Information Technology Department**

**Academic Year: 2014-15**

**Semester: V**

**Class / Branch / Division: TE IT A**

**Subject: Operating Systems**

**Date of Issue: 14/8/14**

**Date of Submission: 5/9/14**

**ASSIGNMENT-I**

1. Explain various system calls with appropriate syntaxes'
2. Compare and contrast short term, long term and medium term scheduling
3. What is the critical section problem? Discuss Dekker's solution and show how it satisfies all three requirements of critical section problem
4. Why there is need for communication between two processes? Explain various modes of communication.
5. Explain necessary and sufficient conditions for deadlock. Also explain how a resource allocation graph determines a deadlock.
6. Write short notes on:
  - a. Monolithic Vs Microkernels
  - b. User threads and kernel threads
  - c. Monitor
  - d. Semaphores

Signature:

Name of the Faculty: Shree Jaswal  
(Subject Teacher)