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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
**(AUTONOMOUS)**  
**B.Tech II Year II Semester Supplementary Examinations December 2018**  
**OPERATING SYSTEMS**  
**(CSE)**

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 X 12 = 60 Marks)

**UNIT-I**

- 1 a. What are system calls? Give an example of how system calls are used. 6M  
 b. Explain about Operating System Services. 6M

**OR**

- 2 a. Define Operating System? And explain the various types of Operating Systems. 7M  
 b. State and explain various types of computer systems. 5M

**UNIT-II**

- 3 a. Explain about Inter Process Communication. 4M  
 b. Explain Multi-Threading models with examples. 8M

**OR**

- 4 Explain CPU Scheduling Algorithms with examples. 12M

**UNIT-III**

- 5 a. What are the methods for handling deadlock? Explain. 6M  
 b. What is Semaphore? Explain producer consumer problem using Semaphore. 6M

**OR**

- 6 a. What is Critical Section problem? Explain with example. 6M  
 b. State and explain the methods involved in Recovery from Deadlocks. 6M

**UNIT-IV**

- 7 a. Define the following:  
 i). Paging ii). Segmentation 4M  
 b. Discuss about Optimal page replacement algorithms with example. 8M

**OR**

- 8 a. What is contiguous memory allocation? Explain it. 6M  
 b. Discuss the following terms:  
 i). File system Implementation ii). Thrashing 6M

**UNIT-V**

- 9 What is secret key and public key cryptography? Explain. 12M

**OR**

- 10 a. Explain about domains of protection. 6M  
 b. Write short notes on Threats and Intruders. 6M

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