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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**

(AUTONOMOUS)

**B.Tech II Year II Semester Supplementary Examinations February-2022****OPERATING SYSTEMS**

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 List the different functions of an operating system and discuss the various services provided by an operating system. **L4 12M**

**OR**

- 2 a Illustrate briefly system calls with examples. **L2 6M**  
b Explain different operations performed by operations operating systems. **L6 6M**

**UNIT-II**

- 3 a Explain about scheduling criteria. **L6 6M**  
b Evaluate FCFS CPU scheduling algorithm for given problem. **L5 6M**

Process	P1	P2	P3	P4
Process Time	24	3	5	6

**OR**

- 4 a What is a process? With a neat sketch, explain process state diagram. **L3 6M**  
b Write about threads? **L3 6M**

**UNIT-III**

- 5 What is semaphore? Describe producer consumer problem using semaphore. **L2 12M**

**OR**

- 6 What is deadlock? Explain deadlock avoidance algorithm with suitable example. **L3 12M**

**UNIT-IV**

- 7 Discuss FIFO and optimal page replacement algorithms, with examples. **L6 12M**

**OR**

- 8 Explain the following disk scheduling algorithms with proper diagram. **L2 12M**  
(i) FCFS (ii) SSTF (iii) SCAN

**UNIT-V**

- 9 a Illustrate the concepts of file with examples. **L2 6M**  
b Explain about file access methods with examples. **L2 6M**

**OR**

- 10 Write short notes on the following: **L3 12M**  
(i) Directory implementation  
(ii) File system structure

\*\*\* END \*\*\*