Seat No.	

SF-224

Total No. of Pages : 2

S.E. (CSE) (Part - II) (Semester - IV) (Revised) Examination, November - 2017
OPERATING SYSTEM - I (Theory)
Sub. Code : 63534

Day and Date : Monday, 6-11-2017

Time : 9.30 a.m. to 11.30 a.m.

Total Marks : 50

Instructions :
1) **Q. No.1 from and Q. No.4 are compulsory.**
2) **Solve anyone from Q. No.2 and 3 and anyone from Q. No.5 and 6.**
3) **Assume suitable data wherever necessary.**

SECTION - I

Q1) a) Discuss an abstract view of an Operating System. **[7]**

b) What are the functions of an Operating System? **[6]**

Q2) a) Discuss different synchronization and buffering techniques involved in IPC. **[6]**

b) Explain process creation in detail. **[6]**

Q3) a) Explain the use of hardware instructions to solve the critical section problem. **[6]**

b) Give the solution to the FIRST writers - readers problem. **[6]**

SECTION - II

Q4) a) Give an example where there is a cycle in the resource allocation graph but no deadlock. **[6]**

b) Why does deadlock recovery comes with a compromise / loss? **[7]**

P.T.O.

Q5) a) Why is safety algorithm used? What is a safe sequence? Can we have multiple safe sequences? Justify your answer. **[6]**

b) With the help of a diagram explain demand loading of a page. **[6]**

Q6) Write Short Notes on - (Any three) **[3 × 4]**

a) Deadlock Avoidance.

b) LRU Page Replacement.

c) File Operations.

d) Characteristics of I/O devices (Application I/O interface).