

Seat No.	
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**T.E. (Computer Science and Engineering) - II (Semester - VI)**  
**Examination, November - 2017**  
**OPERATING SYSTEM - II**  
**Sub. Code : 66859**

Day and Date : Thursday, 02 - 11 - 2017

Total Marks : 100

Time : 2.30 p.m. to 5.30 p.m.

- Instructions :
- 1) Figures to the right indicate full marks.
  - 2) Solve any two questions from Q.1 to Q.3.
  - 3) Solve any two questions from Q.4 to Q.6.

- Q1)** a) Explain the architecture of UNIX System Kernel. [8]  
b) Explain scenarios for retrieval of a buffer from the buffer cache. [10]  
c) What is Inode? List Fields from disk inode. [7]
- Q2)** a) Calculate the Maximum size of a file in the UNIX system, if disk block size is 512 byte and a block is identified by 32 bit integer. [8]  
b) What is remembered inode? How is it useful in inode assignment to a file? [8]  
c) Explain Following System calls: [9]  
i) Open.  
ii) Read.  
iii) Pipe.
- Q3)** a) Explain the use of User File Descriptor Table, File Table and Inode Table in UNIX File system. [8]  
b) Explain bwrite algorithm. [7]  
c) What is Super Block? List fields from the Super Block. [5]  
d) Explain the structure of a directory file in UNIX. [5]

- Q4)** a) Explain the context of a process. [8]  
b) Explain the process state transition in UNIX. [8]  
c) Explain the algorithm for handling the interrupt. [9]
- Q5)** a) What is a signal? Explain checking and handling of the signal. [8]  
b) Explain the real and effective user ID of a process. [9]  
c) Explain the process scheduling parameters in UNIX. [8]
- Q6)** a) Explain allocation of Swap space. [8]  
b) Explain page stealer process. [8]  
c) Explain switch table in device driver interface. [9]

