Seat No.	

T.E. (CSE) (Semester - VI) (Revised) Examination, November - 2018
OPERATING SYSTEM - II (New)
Sub. Code : 66859

Day and Date : Tuesday, 13 - 11 - 2018 **Total Marks : 100**

Time : 02.30 p.m. to 05.30 p.m.

Instructions :
1) **Question No.4 and Question No. 8 are compulsory. Solve any four questions from remaining questions.**
2) **Figures to the right indicate full marks.**
3) **Clearly mention your assumed data wherever necessary.**

Q1) a) List and explain advantages and disadvantages of buffer cache. **[8]**

b) Explain the process of conversion of pathname to i-node with algorithm namei. **[8]**

Q2) a) List various fields of disk inodes. Draw and explain sample disk inode with respect to these fields. **[8]**

b) Write and explain the algorithm for OPEN system call to open a file. **[8]**

Q3) a) What are pipes? Explain the algorithm "pipe" for creation of unnamed pipes. **[8]**

b) With a neat schematic of hash queue headers and free list updates, explain the following scenario for the buffer retrieval : **[8]**

"The kernel cannot find the block on the hash queue and in attempting to allocate a buffer from the free list, finds a buffer on the free list that has been marked "delayed write". The kernel must write the "delayed write" buffer to disk and allocate another buffer."

Q4) Write short note (Any Three) [3 × 6 = 18]

a) Operating System Services

b) Super Block

c) chown and chmod

d) File system maintenance

Q5) a) Which are major regions in virtual address space of a process? Explain in detail with a neat diagram. [8]

b) Write and explain the algorithm "issig" for recognizing signals. [8]

Q6) a) What is the use of fork system call? Explain the sequence of operations that kernel executes for fork. [8]

b) Explain algorithm "malloc" for allocating space from maps. [8]

Q7) a) What are terminal drivers? Explain the functions of a line discipline. [8]

b) What is context of a process? Explain with diagram components of the context of a process. [8]

Q8) Write short note (Any Three) [3 × 6 = 18]

a) u area and its fields

b) Demand paging

c) ioctl system call

d) System boot and the init process

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