

Total No. of Questions :10]

SEAT No. :

P2891

[Total No. of Pages :2

[4958] - 1084**T. E. (Computer Engineering)****OPERATING SYSTEMS DESIGN****310242:(Semester - I) (2012 Course)(End Sem.)***Time : 2.30 Hours]**[Max. Marks :70**Instructions to the candidates:*

- 1) Answer the Q.1 OR Q2, Q3 OR Q4, Q5 OR Q6, Q7 OR Q8 Q9 OR10.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.

Q1) a) Explain following algorithms of Buffer cache [6]

i) getblk

ii) brelease

b) Explain Unix file system structure. [4]

OR

Q2) a) Is operating system itself a process? Justify your answer. [5]**b) Explain in details six steps of Android boot process. [5]****Q3) a) Explain with example data structures used for demand paging. [5]****b) Explain with neat diagram address translation in paging. [5]**

OR

Q4) a) Explain with neat diagram Linux memory management. [4]**b) Write in short - allocating and freeing swap space. [6]****P.T.O.**

- Q5)** a) Explain shared memory with its system calls. [8]
 b) What is Inter - process communication? Why it is important in operating system? [8]

OR

- Q6)** a) What do you mean by pipe? Explain anonymous and named / FIFO pipe. [8]
 b) What is semaphore? Provide solution to producer - consumer problem using semaphore. [8]

- Q7)** a) What is make utility? Explain it with example. Consider your own makefile. [8]
 b) Compare grep and awk utilities. State one example of each. [8]

OR

- Q8)** a) What are the EFI and UEFI? Explain with an application. [8]
 b) Write AWK script to generate a report on student database. [8]

- Q9)** a) What is multiprocessor system? List the types of multiprocessor system. [6]
 b) What is UNIX Free - BSD scheduler? List different priority levels of the same. [6]
 c) Explain different types of approaches for real time scheduling. [6]

OR

- Q10)** a) Enlist different characteristics of real time system and explain it. [9]
 b) Write short notes on [9]
 i) Palm OS
 ii) Master / Slave Architecture
 iii) Frame of Reference

