

Total No. of Questions : 10]

SEAT No. :

P2606

[5153]-582

[Total No. of Pages : 2

T.E. (Computer Engineering)
OPERATING SYSTEMS DESIGN
(2012 Course) (Semester-I) (310242) (End Semester)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answers the Q.1 or Q.2 and Q.3 or Q.4 and Q.5 or Q.6 and Q.7 or Q.8 and Q.9 or Q.10*
- 2) *Figures to the right indicates full marks.*

- Q1)** a) How to convert a pathname into a inode number? [5]
b) What are scenarios to allocate a buffer for disk block using getblk() algorithm? [5]

OR

- Q2)** a) Explain following algorithms of Buffer cache. [6]
i) getblk()
ii) Brelease()
b) Explain in details six steps of Android boot process. [4]

- Q3)** a) Explain with neat diagram Linux memory management. [5]
b) Write short note on “Hybrid system with swapping and demand paging”. [5]

OR

- Q4)** a) Explain with neat diagram address translation in paging. [5]
b) Write in short-allocating and freeing swap space. [5]

- Q5)** a) Explain working of Sockets and related system calls. [6]
b) What is problem of Multiprocessor systems and explain its solution with
i) Master Slave processors and
ii) Semaphores. [10]

OR

P.T.O.

Q6) a) What do you mean by pipe? Explain anonymous and named/FIFO pipe. [10]

b) How process is traced with ptrace system call? [6]

Q7) a) How to make a USB bootable with any open source tool? [9]

b) What is make utility? Explain it with example. Consider your own makefile. [7]

OR

Q8) a) What are the EFI and UEFI? Explain with an application. [8]

b) Write short notes on [8]

i) Mork Manager.

ii) Shim manager.

Q9) a) Draw and explain the android os architecture. [8]

b) Write short notes on [10]

i) Real time scheduling

ii) Multiprocessor scheduling.

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.

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