

Total No. of Questions : 8]

SEAT No. :

P4346

[4860]-1314

[Total No. of Pages :2

M.E. (Computer Engineering)
ADVANCED UNIX PROGRAMMING
(610102) (2013 Credit Pattern) (Semester -III)

Time : 3 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) Attempt ANY FIVE Questions out of 8 Questions.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right side indicate full marks.*
- 4) Use of Calculator is allowed.*
- 5) Assume suitable data if necessary.*

- Q1)** a) What is the purpose of grep command? Explain the various options available with the grep command with an example. **[4]**
- b) Write short notes on the following: **[4]**
- i) Process utilities.
 - ii) Disk utilities.
- c) Explain the two methods of altering file access permissions of a file. **[2]**
- Q2)** a) Explain the various features of IA-64 architectures in brief. **[5]**
- b) Explain the following system calls with syntax : **[3]**
- i) Setjmp ().
 - ii) Longjmp ().
 - iii) Exit ().
- c) Write a note on Reliable signal Handling”. **[2]**
- Q3)** a) Explain about the various possible signal default actions. **[3]**
- b) Write a note on Memory Mapped I/ O. **[5]**
- c) Explain the differences between _exit () & atexit () system calls? **[2]**

P.T.O.

- Q4)** a) What do you mean by ‘slow system call’? What action is expected to overcome the effect of system call? [4]
- b) What is record lock? What are the rules about the specification of the region to be locked or unlocked? [4]
- c) Explain Copy on Write (COW) concept in UNIX. [2]
- Q5)** a) What are the named pipes? Explain in detail. [4]
- b) Explain in detail SHM_LOCK and SHM_UNLOCK in Shared memory IPC. [4]
- c) Explain the importance of unlink () in case of FIFO. [2]
- Q6)** a) Compare and contrast the various IPC mechanisms: FIFO, Message Queue and semaphores. [6]
- b) What is the role of shared memory in group communication? Explain with a suitable example. [4]
- Q7)** a) What are different models of concurrent server design? Explain any one model in detail. [6]
- b) Write a note on RPC. [4]
- Q8)** a) Write short notes on the following. [6]
- i) Socket address structure for IPv4.
- ii) Socket descriptor.
- b) Explain in detail TCP and UDP sockets. [4]

