

Total No. of Questions : 8]

SEAT No. :

P4214

[4760] - 1197

[Total No. of Pages :2

M.E.

COMPUTER ENGINEERING

Advanced Unix Programming

(2013 Pattern) (Credit) (Semester - III) (610102)

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) Assume suitable data, if necessary.*

Q1) a) What are different types of Shell? Explain shell responsibilities in brief.[4]

b) Explain the various features of IA-64 architectures in brief. [4]

c) Explain input and output redirection with a suitable example. [2]

Q2) a) Explain 'Signal Set' data type with five functions used to manipulate signals. [5]

b) Explain the working of unreliable and reliable signals in Unix. [3]

c) How does wait () and waitpid () work? [2]

Q3) a) Write a note on Memory Mapped I/O. [5]

b) What is the basic difference between select () & pselect () functions used in I/O multiplexing? [5]

Q4) a) Explain the rules that govern the inheritance and release of locks in record locking. [4]

b) Write a note on Record Locking. [4]

c) How does pipe and FIFO IPC mechanism differ? [2]

P.T.O.

- Q5)** a) Explain the client-server communication using FIFO in Unix with a suitable diagram. [6]
b) Write a short note on IPC using Message queue. [4]
- Q6)** a) Explain the importance of unlink () in case of FIFO. [3]
b) Explain in detail SHM_LOCK and SHM_UNLOCK commands. [3]
c) What is a socket? Explain different types of socket? [4]
- Q7)** a) Write a note on RPC. [3]
b) What files are generated by rpcgen? List the server specific files. [3]
c) What are different models of concurrent server design? Explain any one model in detail. [4]
- Q8)** a) Write short notes on the following. [7]
i) Socket descriptor.
ii) Socket address structure for IP4.
b) What type of operations are supported on routing sockets? [3]

