

Register Number.....

MCA DEGREE EXAMINATIONS: APRIL/MAY 2012

Fourth Semester

MASTER OF COMPUTER APPLICATIONS

MCA515: Unix and Network Programming

Time: Three Hours

Maximum Marks: 100

Answer All Questions:-

PART A (10 x 2 = 10 Marks)

1. What is file descriptor?
2. List down the various entries in /etc/passwd file.
3. What is fork?
4. What is the role of signals in UNIX OS?
5. What is semaphore?
6. Which is fastest form of IPC? Why?
7. Why we use MX record in DNS resource Record?
8. Define Socket.
9. Give any two ICMP messages which are used by ping.
10. What is the use of netstat program in UNIX?

PART B (5 x 16 = 80 Marks)

- 11.a) (i) Explain the architecture of UNIX in detail. (8)
- (ii) How will you change the file access permission using chmod function? (8)
- Explain with suitable example.
- (OR)**
- b) (i) Give the syntax and options of create() and open() system calls with suitable example. (8)
- (ii) Explain the various data structures maintained by the UNIX system with regard to file sharing. (8)

- 12.a) (i) Explain the eight ways to terminate a process in UNIX. (8)
(ii) Explain the memory layout of a C program. (8)

(OR)

- b) Write short note on the following
(i) Terminal login (8)
(ii) Unreliable signal (4)
(iii) Kill and Raise Functions (4)

- 13.a) Explain the operation of message queues with an example application.

(OR)

- b) Explain the operation of pipe with an example application.

- 14.a) With the neat block diagram, explain the socket functions for the elementary TCP client server model.

(OR)

- b) i) Write a program to implement UDP echo client server. (10)
ii) Write a short note on DNS. (6)

- 15.a) Discuss in detail about the operation of the ping tool in UNIX.

(OR)

- b) Discuss in detail about the debugging techniques used in UNIX.
