2012

MCA

3rd Semester Examination

OPERATING SYSTEM LAB

PAPER—MCA-307 (Group - A)

(PRACTICAL)

Full Marks : 50

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Answer any *one* question from each set on lottery basis. 1×20

Set — A

1. Write a shell program to check whether a string is palindrome or not. Check it with "MADAM".

2. Write a shell program to short a list of numbers.

3. Write a shell program that will display all the numbers within 1000.

4. Write a shell program to find the LCm and GCD of two numbers.

5. Write a shell program to convert a binary number to its equivalent decimal number.

6. Write a shell program to short a list of numbers.

7. Ramesh's Basic salary is input through the key board. His DA is 40% of basic. Write a program to calculate his gross salary.

8. The distance between two cities (in Km) is input through the key board. Write a program to convert and print this distance in meters, feet, inches and centimeters.

9. If a five digit number is input through the keyboard, write a program to calculate the sum of its digit.

10. Write shell script which will receive the logname during execution, obtain the details about the user and display this information in easily understandable format.

11. Write a shell script which receives any year from the key board and determines whether the year is a leap year or not.

12. Write a shell script that receives an argument 'one', 'two' or 'three'. If the argument supplied is 'one' display it in bold, if it is 'two' display it in reverse video and if it is 'three' make it black on the screen. If a wrong argument is supplied report it as an output message.

13. Write a shell script which will input a string as command line argument and determine whether the string is a palindrome or not.

14. Write a shell script which gets executed the moment the user logs in. It should display the message "Good Morning" or "Good Afternoon" or "Good Evening" depending upon the time at which the user logs in.

15. Write a shell script to find the maximum of a given array.

16. Write a shell script to arrange a list of elements in ascending order using Bubble sort.

Set — B

17. Write a shell script to display the last four lines of a file specified on the command line.

18. Write a shell script to convert the contents of a file to uppercase letters. Now copy this file to a new directory and then display the list of files present in the new directory.

19. Write a shell script to make a directory 'VU'. Now only a file 'mca.sh' to that directory and then display the details (file permission, name, date, time etc.) of the file.

20. Write a shell script to sort a list of numbers in descending order with the help of a proper UNIX command.

21. Write a shell script to display the last four lines of a file specified on the command line.

22. Write a shell script to check that a file exists or not. If the file exists then further check it, if it is a file or a directory.

23. Write a C program to display process id of child and parent processes, where the child is created using the fork system call.

24. Write a C program to create an orphan process.

25. Write a C program using a system call so that parent is going to wait until child finish.

26. Write a program in C using fork system call to show how can be a file shared between processes.

27. Write a C program that will show the use of exec() and fork() system call together.

28. Write a program to get an interrupt from machine and display the value of that signal.

29. Implement SIGALARM signal in C that causes an alarm.

30. Write a program to create a child process. Send SIGCLD signal after 5 sec.

31. Write a program for reading output from an external program using the popen function.

32. Using pipe system call write a program to communicate messages among two programs.

Viva - 15

Practical Note Book — 5