MCA/IIIS/307/13(Pr.)

MCA 3rd Semester Examination, 2013

MCA

(Practical)

PAPER—MCA-307

The figures in the right-hand margin indicate marks

GROUP – A

(*Operating System Lab*)

[*Marks* : 50]

Time : 2 hours

Answer **two** questions **(Select on Lottery basis)** :

20×2

1. Write a shell script to check whether a year is Leap year or not.

2. Write a shell script to find the sum and product of digits of an integer.

3. Write a shell script to check whether a number is palindrome or not.

4. Write a shell script to find the value of factorial *n*.

5. Write a shell script to check whether a number is Prime or not.

6. Write a shell script to display first *n* fibonacci numbers.

7. Write a shell script to check whether a number is Amstrong or not.

8. Write a shell script to convert a decimal number into its equivalent binary number.

9. Write a shell script to check a string is Palindrome or not.

10. 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.

11. Write a shell script to convert a binary no. into its equivalent decimal number.

12. Write a shell script to find the GCD and LCM of two numbers.

13. Write a shell program that accepts one or more file names as arguments and converts them all to upper case.

14. Write a shell program to create three files containing a list of names and display the names in all the three files one after another.

15. Write a shell script that display the last three lines of every file specified on the command-line preceded by the filename.

16. Write a shell program that accept a file names as arguments and display the last modification time if the file exist and a suitable message if it does not.

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

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

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

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

21. 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.

22. 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.

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

24. Write a shell script, which will receive either the file name or the file name with its full path during execution. This script should obtain information about this file as given by ls-l and display it in proper format.

25. Write a shell script that accepts file names from keyboard and concatenates all those files (provided they exist in the current directory) and counts the number of words, line and character in the concatenated file.

26. Write a shell script to add the series $S = 1 + 4 + 9 + 16 + \ldots\ldots\ldots\ldots + n2$.

Practical Note Book – 05

Viva – 05

GROUP – B

(*DBMS*)

[*Marks* : 50]

Time : 2 hours

Answer any **one** question **(Lottery basis)** : 30 × 1

1. Emp (E-name, street, city)
Works (E-name, C-name, salary)
Comp (C-name, city)
Manager (E-name, Manager name)

(*a*) Find the name of all employees who works for IBM.

(*b*) Find the name and city of residence of all employee who works for Tcs.

(*c*) Find the name, street and cities of residence of all employees who work for HDFC and earn more than ₹50,000.

(*d*) Find all employees in the database who live in the same cities and on the same streets as do their managers.

2. Flights (F-no, from, to, distance, departs, arrive fare)
Aircraft (A-id, A-name, cruising range)
Employees (E-id, E-name, salary)
Certified (E-id, A-id)

(*a*) Identify the flights that can be plotted by every pilot whose salary is more than ₹ 70,000.

(*b*) List the names and salary of the employees whose salary is more than the average salary.

(*c*) For all aircraft with the cruising range over 2000 miles, find the name of the aircraft and the average salary of pilots.

(*d*) Find the names of pilots who can operate planes with a range greater than 3000 miles but are not certified on any Boeing Aircraft.

3. Patient (P-id, P-name, age P-address)

Doctor (D-id, D-name, D-addr)

Admitted (P-id, date-of-admission)

Attend (D-id, P-id)

(*a*) List the names of the patients who have the same address as the D-id = 7005.

(*b*) List the name of the doctors who treat the patients with date of admission between 01-May-2013 and 01-August-2013.

(*c*) List the patient name for the specified date-of-admission.

(*d*) Find the doctor name for the specified patient-id.

4. Emp (e-no, e-name, e-address)

Project (p-no, p-name)

Work (e-no, p-no)

(*a*) Print the name of a employee who are working on a project entitled 'SAP'.

(*b*) Display the name of the employees who are not working in any project.

(*c*) Display the name of the employee who sets the second lower salary.

(*d*) Print the name, address and corresponding project name for the specified project no. that can be supplied by the user.

5. Hotel (h-no, h-name, h-address)

Room (r-no, h-no, r-type, charge)

Booking (h-no, guest-no, date-from, date-to, r-no).

Guest (g-no, g-name, g-address)

(*a*) List all hotels including room-type and charge.

(*b*) List the details of all guests including hotel name.

(*c*) List the details of all rooms at the Hotel Hindustan.

(*d*) List all double rooms with a charge greater than ₹ 2,000.

6. Employees (e-no, e-name, address, basic salary, job-status)

(*a*) Display name of those employees whose employee no. is even.

(*b*) Find the name of the employees whose name's first and second letter is 'Ka'.

(*c*) Update DA and Gross for all those employees whose basic is greater than ₹ 5,000.

(*d*) Find the names of employee arranging employee no. in ascending order.

Viva – 15

Practical NoteBook – 5