S.No. 8039 **24DLCSA1C02**

(For the candidates admitted from 2024-25 onwards)

M.C.A. DEGREE EXAMINATION, AUGUST 2025.

First Semester

LINUX AND SHELL PROGRAMMING

Time : Three hours Maximum : 75 marks

PART A — ($10 \times 2 = 20$ marks)

Answer ALL the questions.

1. Mention the difference between *more* and *less* commands.
2. Write a command to list all files, including hidden files.
3. Recall the use of *getopts* command in Scripts.
4. State the function of *trap* command.
5. What is the use of function library in scripting?
6. What is function recursion?
7. Give an example of regular expression pattern.
8. State the purpose of formatting output in *gawk*.
9. Why is automation important in scripting?
10. What is the use of Python in shell scripting tasks?

PART B — ($3 \times 5 = 15$ marks)

Answer any THREE questions.

11. Identify the uses of pipes in Bash. Give two examples.
12. Describe the use of *shift* in argument handling with an example.
13. Explain how to pass arguments to function and use them inside the function.
14. Differentiate between pattern space and hold space in *sed*.
15. Illustrate how shell script can connect to a database.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL the questions.

16. (a) Develop script to implement basic calculator using *case* statement for operations.

Or

(b) Write a script that uses nested *if* conditions to check multiple conditions,

17. (a) Explain how to handle multiple input parameters and access them using $*, $@ and $#.

Or

(b) Create a script that uses while to prompt the user for password until the correct one is entered.

18. (a) Compare and contrast the use of *sed* and *gawk* in text manipulation.

Or

(b) Describe how to use functions directly from the command line.

19. (a) Explain the basic structure of *gawk* program. How does it read and process text?

Or

(b) What is regular expression? Explain any one utility which uses regular expression with proper example.

20. (a) Explain the differences between *dash bash* and *zsh*. Include scripting examples and use cases.

Or

(b) Describe how to create a script utility that automates system backups and monitors disk space.

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