This question paper contains 2 printed pages. Roll No. .....

B.C.A. (Pt.-III)

Lin. amd She. Pro.

Sr. No.

306/336-C

B.C.A. (Part-III) Examination, 2023

(Faculty of Science)

(Three Year Scheme of 10+2+3 Pattern)

Linux and Shell Programming

Paper : 306/336-C

Time Allowed : 3 Hours **Maximum Marks : 100**

Answer of all the questions (Short answer as well as are to be given in the main answer-book only. Answers of short answer type questions must be given in sequential order. Similarly all the parts of one question of descriptive part should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book.

Write your roll number on question paper before you start writing answers of questions.

Question paper consists of **Three** parts.

All Three parts are **Compulsory**

PART-I : (Very short answer) consists of 10 questions of 2 marks each. Maximum limit for each question is up to 40 words.

PART-II : (Short answer) consists of 5 questions of 4 marks each, Maximum limit for each question is up to 80 words.

PART-III : (Long answer) consists of 5 questions of 12 marks each with one question form each unit with internal choices.

PART-I

1. Attempt all questions. 10×2=20

(a) Describe the Linux boot-up sequence.

(b) What is the role of command line interface in Linux?

(c) What do you mean by mounting and unmounting a file in Linux?

(d) What is the role of shells in Linux?

(e) Define different modes of Vi editor.

(f) How can we read and write into and from a file in Vi editor?

(g) What do you mean by Redirection? How we can use popes with multiple operations?

(h) What is the role of wild card characters in command process?

(i) What is Shell Script? How can we define a global variable in Linux Shell?

(j) Define the syntax of while loop in shell programming.

PART-II

2. Attempt all questions. 5×4=20

(a) Describe the Linux Architecture.

(b) What are the different file permissions for files in Linux? Explain with suitable example.

(c) How we can search a pattern in Linux Shell? Explain grep command with its options.

(d) How can perform horizontal and vertical filtration in Linux? Explain with suitable example.

(e) Write a shell script to print a series of odd numbers in range 50 to 100.

PART-III

12×5=60

3. Explain the features of Linux with its installation process.

Or

How the Unix and Linux are similar and different? Support your answer with suitable example.

4. How we can manage file system security in Linux file System? Explain with suitable example.

Or

What are the different types of files supported by Linux System? Explain them.

5. How we can manage different Vi editor operations? Explain any 5 operations using an example.

Or

Explain the following :

(a) Comm and diff commands.

(b) Head and Tail commands

(c) Sed and Awk

6. How the special characters plays an important role in data searching and filteration? Support your answer with suitable example.

Or

Explain different types of shells supported by Linux operating system. What is the role of each shell?

7. Explain different types of looping structures supported by Linux shell programming using suitable examples.

Or

(a) Write a shell script to calculate factorial of a given number. Input number using command line argument.

(b) Write a shell script to calculate power of a given number. Input number and base using command line argument.

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