

CS303/IT303

Roll No. :

SPL 2021

UNIX, SHELL PROGRAMMING AND ADMINISTRATION

निर्धारित समय : 1½ घंटे]

[अधिकतम अंक : 70

Time allowed : 1½ Hours]

[Maximum Marks : 70

नोट : (i) प्रथम प्रश्न अनिवार्य है, शेष में से किन्हीं दो के उत्तर दीजिये ।

Note : Question No. 1 is compulsory, answer any **TWO** questions from the remaining.

(ii) प्रत्येक प्रश्न के सभी भागों को क्रमवार एक साथ हल कीजिये ।

Solve all parts of a question consecutively together.

(iii) प्रत्येक प्रश्न को नये पृष्ठ से प्रारम्भ कीजिये ।

Start each question on fresh page.

(iv) दोनों भाषाओं में अन्तर होने की स्थिति में अंग्रेजी अनुवाद ही मान्य है ।

Only English version is valid in case of difference in both the languages.

1. (i) कमाण्ड की संरचना एवं प्रयोग लिखिए ।

Write the command structure and usages.

(ii) आईनोड को संक्षिप्त में समझाइये ।

Describe Inode briefly.

(iii) comm और diff कमाण्ड में अन्तर बताइये ।

What is the difference between comm and diff command ?

(iv) मेटाकरेक्टर को समझाइये ।

What do you understand by Metacharacter ?

(v) Vi एडिटर में फाइल को सेव व बाहर निकलने की कमाण्ड लिखिये ।

Write the command to save and quit from Vi editor.

(4×5)

2. (i) निम्नलिखित Vi एडिटर ऑपरेशन को समझाइये ।

Explain following Vi editor operations :

- (a) Navigation
(b) Search and Replace

- (ii) निम्नलिखित डाइरेक्ट्री सम्बन्धी कमाण्ड को स्पष्ट करें :

Explain following directory related commands.

- (a) mkdir
(b) pwd
(c) rmdir

(12½+12½)

3. (i) यूनिक्स सेल कमाण्ड आरग्यूमेंट एवं पैरामीटर्स को उदाहरण सहित समझाइये ।

Explain command arguments and parameter of Unix Shell with suitable example.

- (ii) यूनिक्स ऑपरेटिंग सिस्टम एवं अन्य ऑपरेटिंग सिस्टम के मध्य अन्तर लिखिए ।

Write down difference between Unix Operating System and other Operating Systems.

(12½+12½)

4. (i) (a) किसी डॉक्यूमेंट में शब्दों की संख्या की गिनती के लिए आवश्यक कमाण्ड लिखिए ।

Write command for counting words in a document.

- (b) Cal, date और time कमाण्ड को समझाइये ।

Explain Cal, date and time commands.

- (ii) निम्नलिखित Vi ऑपरेशन को समझाइये :

Explain following operation of Vi editor :

- (a) एक से दूसरी फाइल में टेक्स्ट को भेजना

Moving text from one file to another file

- (b) पुनरावृत्ति घटक

Repeating factor

(12½+12½)

5. (i) chmod कमाण्ड का उपयोग करके फाइल की अनुमति को कैसे बदला जा सकता है, उदाहरण सहित समझाइए ।

How can we change file permission by using chmod command, explain with example.

- (ii) निम्नलिखित को यूनिक्स शेल के लिए समझाइये :
Explain following for Unix Shell :
- (a) शेल इंटरैक्टिव चक्र
Shell interactive cycle
- (b) ऐस्केप एवं कोटिंग
Escapes and quoting (12½+12½)
6. (i) यूनिक्स आर्किटेक्चर को चित्र सहित समझाइये ।
Explain Unix architecture with suitable diagram.
- (ii) Vi एडिटर के विभिन्न मोड्स को समझाइये ।
Describe various modes of Vi editors. (12½+12½)
7. (i) यूनिक्स फाइल सिस्टम को चित्र सहित समझाइये ।
Explain Unix file system with suitable diagram.
- (ii) निम्नलिखित कमाण्ड्स को समझाइये :
Explain following commands :
- (a) cat
- (b) ls
- (c) echo (12½+12½)
8. निम्नलिखित पर संक्षिप्त टिप्पणियाँ लिखिए :
Write short notes on the following :
- (i) कमाण्ड लाइन संरचना
Command line structure
- (ii) Vi एडिटर में pattern search
Pattern search in Vi editor
- (iii) यूनिक्स शेल पैटर्न मैचिंग
Unix shell pattern matching (9+8+8)
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1. (a) Write a shell script to find the number of files in a directory.

(b) Write a shell script to find the number of files in a directory which are executable.

(c) Write a shell script to find the number of files in a directory which are readable.

(d) Write a shell script to find the number of files in a directory which are writable.

(e) Write a shell script to find the number of files in a directory which are search-able.

(f) Write a shell script to find the number of files in a directory which are sticky.

(12+12)

2. (a) Write a shell script to find the number of files in a directory which are executable.

(b) Write a shell script to find the number of files in a directory which are readable.

(c) Write a shell script to find the number of files in a directory which are writable.

(d) Write a shell script to find the number of files in a directory which are search-able.

(e) Write a shell script to find the number of files in a directory which are sticky.

(f) Write a shell script to find the number of files in a directory which are executable, readable, writable, search-able, and sticky.

(12+12)

3. (a) Write a shell script to find the number of files in a directory which are executable.

(b) Write a shell script to find the number of files in a directory which are readable.

(c) Write a shell script to find the number of files in a directory which are writable.

(d) Write a shell script to find the number of files in a directory which are search-able.

(e) Write a shell script to find the number of files in a directory which are sticky.

(f) Write a shell script to find the number of files in a directory which are executable, readable, writable, search-able, and sticky.

(12+12)

4. (a) Write a shell script to find the number of files in a directory which are executable.

(b) Write a shell script to find the number of files in a directory which are readable.

(c) Write a shell script to find the number of files in a directory which are writable.

(d) Write a shell script to find the number of files in a directory which are search-able.

(e) Write a shell script to find the number of files in a directory which are sticky.

(f) Write a shell script to find the number of files in a directory which are executable, readable, writable, search-able, and sticky.

(12+12)