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WESTBENGAL

BCA-502 UNIX and Shell Programming

TimeAllotted: 3Hours

Full Marks: 70

The questions are of equal value.

The figures in the margin indicate full marks. Candidates are required to give their answers in their own words as far as practicable.

All symbols are of usual significance

GROUP-A (Multiple Choice Type Questions)

1. Choose the correct alternatives of the following: 10x1=10

(i) The cal command is used to open

(A)Calculator **(B) Calendar** (C) Simulator (B)None of these

(ii) Create a file bca1.txt which is a concatenation of bca2.txt and bca3.txt

(A)cp bca2.txt bca3.txt bca1.txt   (B)mv bca[23].txt bca1.txt

(C)ls bca2.txt bca3.txtl bca1.txt

(D)cat bca2.txt bca3.txt > bca1.txt

(iii) Which one works as an interface between the kernel and the user?

 (A)X-windows (B) Hardware **(C) Shell** (D) Kernel

(iv) To remove a directory and sub-directory inside the directory in one command

 (A)rm–r dir (B)remove–r dir (C)rm–a lldir (D)remove dir all

(v) sort–n emp

 (A)sort by primary key (B)sort by foreign key (C) sort by name

 (D)sort by numeric order

(vi)pwd command is used to

 (A)view the current directory (B)change password of user (C)change the password of admin (D)view the path variable

(vii) The available disk space under Unix can be determined by

 (A)dir **(B)df** (C)ls (D)cp

(viii) chown command in Unix changes

(A) file permission (B)priority of a process **(C)owner ship of a file** (D)none of these

 (ix) The password **encryption** file stored in the file

(A)/etc/shadow **(B)/etc/passwd** (C)/etc/group **(D) both(A)&(B)**

(x)The $! Represents

(A)PID of last command (B) name of executed command (C) name of arguments specified in command line (D) Exit status of last command

GROUP-B

(Short Answer Type Questions)

Answer any three of the following: 3×5=15

2. What are the differences between Windows and Unix OS?

What is path variable?   **3+2**

3. What is Soft link and hard link? What is I–Node number? **3+2**

4. Give an example of internal and external command. Why "cd" command is an internal Command? **1+4**

5. How "mount" command works? Why touch command used? How do you know the users of the System? **3+1+1**

6. Explain UNIX file system briefly. **5**

GROUP-C (Long Answer Type Questions)

Answer any there of the following: 3×15=45

7. (a) Describe layered architecture of Unix os.

(b) How can you identify whether a file is copied or linked?

(c) What are the commands to create modify and delete user account for admin?

(d) Write a shell script which will redirect you to calculator and the following calculation will be done simultaneously.

(i)12+10-5

(ii) $x^{**}2$ $y^{**}3$ - $z^{**}3$ where x=5, y=3, z=4

(iii) 11011(2)+11001(2)=?   **5+2+3+5**

8. (a) What is command line argument? Explain $\$\#$, $\$!$, $\$*$ parameters in shell programming.

(b) Write a shell script which accepts a pattern and a filename from the user at runt time and display all lines containing the pattern.

(c) Write a shell script to replace all "roy" into "ray" in file bcal.txt.

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4+6+5

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9. (a) What are the file access permission? How can you change the file access permission? Explain with the example.

(b) What is file descriptor and how it is related with I–node table?

(c) Write a shell script to check whether a number is Armstrong number or not. The number will be given by the user at nun time. **5+(2+3)+5**

10.(a) What is the differences between process run with "&" and run with "nohup"?

 (b) Describe init and getty process for logging the system.

(c) What is the significance of run level 0, 1, and 6?

 (d) Which process cannot be killed using the kill command? What is the utility of PID and PPID In process life cycle?

3+4+ (1+4)

11. Write short notes on any three of the following: 3X5

 a)System logout in Unix

b) Is command

 c) Job scheduling in UNIX

d)egrep and grep

 e) vi-Editor.