END TERM EXAMINATION
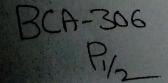
SIXTH SEMESTER (BCA)] JULY-2023

Paper Code: BCA-306   **Subject: Linux Environment**
Time: 3 Hours   **Maximum Marks :75**

Note: Attempt all questions as directed. Internal Choice is indicated.

Q1   Attempt **any ten** of the following questions   **(10x2.5=25)**
(a) Explain the architecture of Linux.
(b) What are the similarities between LINUX & UNIX?
(c) What is mounting and unmounting? Explain.
(d) Explain the Bootstrap loader in LINUX.
(e) How to execute multiple commands in a single command?
(f) Explain BASH Shell in LINUX.
(g) What is process table in LINUX kernel?
(h) Define the IPC?
(i) Define the Kernel Architecture?
(j) Explain EXT4 in LINUX.
(k) Define the system call ptrace?

UNIT-I

Q2   (a) Explain the file system architecture of LINUX.   **(6.5)**
(b) Differentiate between the —help and man command with example.   **(6)**

OR

Q3   (a) Explain the usage of following commands (**Any five**):   **(5x2=10)**

(a) Cut (b) tr (c) diff (d)uniq (e)wc (f) sort (g) tail (h) chmod (i) cat (j) grep (k)proc (l) gzip (m) ps (n) gunzip (o) comm. (p) sed (q) od (r) tre

(b) Write the command for the following operations: **(2.5)**
  i   Create a file named "textfile" with text "Hello World"
  ii   Copy the file "textfile" in a new file named "textfile copy"

UNIT-II

Q4   (a) Explain the concept of redirection operator in LINUX with example. **(6.5)**
(b) What are different modes of vi editor and also write the command/keys used for switching between these modes.   **(6)**

OR

Q5   (a) Explain different types of file permissions in LINUX and also the command used for checking and manipulating the permissions. **(6.5)**
(b) Differentiate between the tar, gzip and gunzip.   **(6)**

P.T.O.

UNIT-III

Q6 (a) Write a short note on su command and explain the differences between su and root user. **(6.5)**

(b) Write a shell script to print greatest of three numbers entered by the user. **(6)**

OR

Q7 (a) Write a shell script to generate the odd and even number series between the ranges given by user. **(6.5)**

(b) What is sed? Explain the different purpose of sed with example. **(6)**

UNIT-IV

Q8 (a) Explain the role of a process descriptor in LINUX. **(6)**

(b) Explain the usage of system calls in LINUX with example. **(6.5)**

OR

Q9 (a) Answer **any five** of the following: **(12.5)**

    (i) Explain nice and renice.

    (ii) Linux scheduling algorithm.

    (iii) Differentiate between awk and gawk.

    (iv) Roles and responsibility of LINUX kernel.

    (v) Different states of a process.

    (iv) Define any 3 types of shells.

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