



**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, ODISHA,
GUNUPUR
(GIET UNIVERSITY)**

B. C. A (Fifth Semester) Examinations, November 2024

BCA20502 – Unix and Shell Programming

Time: 3 hrs

Maximum: 70 Marks

The figures in the right hand margin indicate marks.

PART – A: (Multiple Choice Questions)

(1 x 10 = 10 Marks)

Q. 1 Answer ALL questions

	CO #	PO #
a. Is Python case sensitive when dealing with identifiers?	CO1	PO1
i. Yes		
ii. No		
iii. Machine dependent		
iv. None of the mentioned		
b. Which option is used with LS command for knowing the inode number of the file?	CO1	PO1
i. -l		
ii. -a		
iii. -o		
iv. -i		
c. ----- options of sort command is used to sort the files and removes the duplicate content?	CO2	PO1
i. -u		
ii. -p		
iii. -s		
iv. -a		
d. Which command is used to display the content of file in reverse order?	CO2	PO1
i. cat		
ii. reverse		
iii. tac		
iv. touch		
e. How many digits of process id generate when you run a process?	CO3	PO1
i. 4		
ii. 5		
iii. 6		
iv. 7		
f. Which command is used to extract a column from a text file	CO4	PO1
i. paste		
ii. uniq		
iii. tee		
iv. cut		
g. Which command is used to set the environment variables for temporary?	CO4	PO1
i. env		
ii. export		
iii. echo		
iv. alias		
h. Where is the user password stored?	CO1	PO1
i. /etc/passwd		
ii. /root/password		
iii. /etc/password		
iv. /root/passwd		
i. In which of the following directory does the configuration files are present?	CO2	PO1
i. /bin/		
ii. /root/		
iii. /etc/		
iv. /dev/		
j. -----options of ps command to display all the process own by you.	CO3	PO1
i. -t		
ii. -r		
iii. -T		
iv. -x		

PART – B: (Short Answer Questions)**(2 x 10 = 20 Marks)**Q.2. Answer ALL questions

	CO #	PO #
a. Differentiate between Absolute path and Relative path.	CO1	PO2
b. Write the command to check the relationship between PID and PPID in OS.	CO1	PO2
c. Define chmod 777 command in UNIX OS.	CO2	PO1
d. Create an own file and apply sort -u option in it.	CO2	PO1
e. Write the use of “here” command with example.	CO3	PO2
f. Define fork() system call in Unix OS?	CO3	PO1
g. Write a program to print the current date by using shell script.	CO3	PO2
h. How can you set an environment variable permanently?	CO4	PO1
i. Write a shell program to print the sum of two number.	CO4	PO2
j. What is filter command in Unix OS?	CO4	PO1

PART – C: (Long Answer Questions)**(10 x 4 = 40 Marks)**Answer ALL questions

	Marks	CO #	PO #
3.a. Explain about System call and mention the different types of system call with example. Why System call need in OS and How it works?	10	CO1	PO1
(OR)			
b. Explain the different types of Kernel with advantages and disadvantages.	5	CO1	PO1
c. Explain about UNIX directory structure.	5	CO1	PO1
4.a. Explain about inode in Unix OS. What are the basic information of a file stored by inode?	5	CO2	PO1
b. How can you create archive files with example? Write the command for extracting files from archive file.	5	CO2	PO2
(OR)			
c. Write the command:			
(i) To copy owner ship of one file to another.	10	CO2	PO2
(ii) To change the ownership of multiple file.			
(iii) To give permission for an empty file.			
(iv) To change both owner and group of file.			
(v) To give executable permission for a file.			
5.a. Explain the interpretive cycle of shell with diagram.	5	CO3	PO2
b. Explain the different types of process states with a neat labeled diagram.	5	CO3	PO3
(OR)			
c. Explain wild card pattern with example.	5	CO3	PO1
d. Define Zombie process and how can you kill it.	5	CO3	PO2
6.a. Write a Shell program to perform all arithmetic operation(Sum, sub,mul,div) of any two number by using command line arguments.	5	CO4	PO2
b. Explain cut, paste and uniq command with example.	5	CO4	PO2
(OR)			
c. What are the different filter command available in UNIX? Explain with example.	5	CO4	PO1
d. Define Environment variable and how to set it temporarily and permanently. Write some common environment variables used in Unix.	5	CO4	PO2

--- End of Paper ---