

## Gandhi Institute of Engineering and Technology University, Odisha, Gunupur (GIET University)

B.C.A. (Fifth Semester - Regular) Examinations, November – 2025

### BCA23501 – Unix and Shell Programming



Time: 2 hrs

Maximum: 60 Marks

(The figures in the right hand margin indicate marks)

**PART – A****(2 x 5 = 10 Marks)**

	CO #	Blooms Level
Q.1. Answer <i>ALL</i> questions		
a. Distinguish between Hard link and Soft Link used in OS?	CO1	K1
b. What are the different modes supported by chmod command for file permission?	CO2	K2
c. Write the purpose of “tee” command with example?	CO3	K2
d. Note the output of the given commands: i) grep-h ii) uniq-c	CO4	K2
e. Write down the syntax of “While loop” used in shell script?	CO5	K3

**PART – B****(10 x5=50 Marks)**

	Marks	CO #	Blooms Level
<u>Answer <i>ALL</i> questions</u>			
2. a. Describe in detail about UNIX directory structure.	5	CO1	K1
b. I) Write the output: a)echo -e “gi et \b university \bca” b) sort-nr c) wc-L II) Differentiate between Internal and External command?	3+2	CO1	K3
(OR)			
c. Explain the different types of Kernels with advantage and disadvantage.	5	CO1	K1
d. Mention the different file types available in UNIX with example.	5	CO1	K2
3.a. Write down the command:			
(i) To copy owner ship of one file to another.	10	CO2	K3
(ii) To give permission for an empty file.			
(iii) Give executable permission for a file.			
(iv) Creating an archive files.			
(v) Display the content of files and append in the existing file			
(OR)			
c. Discuss about comm, diff, cmp command with an example.	5	CO2	K3
d. Distinguish between gzip and gunzip. Write the command to check the relationship between parent and child process.	5	CO2	K3
4.a. Write the difference between C shell and BASH shell with features.	5	CO3	K1
b. Write a C program for creating a process and retrieve the PID and PPID.	5	CO3	K1
(OR)			
c. Write the purpose of wild card pattern used in Unix. Give example.	5	CO3	K2
d. Note down the different steps for shell creation.	5	CO3	K1
5.a. Why Environment variables are needed? Write the significance of 5 environment variables.	5	CO4	K2

b.	Explain the following commands with suitable examples. a)uniq b) grep c) tr	5	CO4	K1
	(OR)			
c.	Briefly discuss about BRE, IRE and ERE with suitable example.	10	CO4	K3
6.a.	Write a Shell script program to perform all arithmetic operations of any two numbers by using <b>expression</b> .	5	CO5	K2
b.	Give an example of nested if ... else, and if... else used in shell script.	5	CO5	K3
	(OR)			
c.	Write a shell script program to find the greatest among three numbers.	5	CO5	K3
d.	Write a Shell script program to find the simple interest by taking principle, time and rate of interest from user.	5	CO5	K3

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