



# LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

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L.B. REDDY NAGAR, MYLAVARAM, KRISHNA DIST., A.P.-521 230.

<http://lbrce.ac.in/it/index.php>, [hodit@lbrce.ac.in](mailto:hodit@lbrce.ac.in), Phone: 08659-222933, Fax: 08659-222931

## DEPARTMENT OF INFORMATION TECHNOLOGY

### INTERNAL AND EXTERNAL QUESTION PAPER

**SUBJECT:** 20IT54-OPERATING SYSTEMS AND LINUX INTERNALS LAB

**A.Y:2023-24**

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| <p><b>1. (a).</b> Write the syntax and usage of the following Linux Commands with examples.<br/><b>i.</b> man                      <b>ii.</b> who                      <b>iii.</b> ls</p> <p><b>(b).</b> Write a C-program to demonstrate the working of fork (), wait () and sleep () system calls in Linux operating systems.</p> |                                                                                                                                                                                                                        |                  |

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| <p><b>2.(a).</b> Write the syntax and usage of the following Linux Commands with examples.<br/><b>i.</b> ps                      <b>ii.</b> chmod                      <b>iii.</b> cat</p> <p><b>(b).</b> Develop a C Program to create a child process using fork system call in which parent process add odd numbers and the child process add even numbers.</p> |                                                                                                                                                                                                                        |                  |

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| <p><b>3.(a).</b> Write a shell script to perform arithmetic operations of two numbers.</p> <p><b>(b).</b> Write the syntax and usage of the following Linux Commands with examples.<br/><b>i.</b> mkdir                      <b>ii.</b> grep                      <b>iii.</b> kill</p> |                                                                                                                                                                                                                        |                  |

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- 4.(a).** Write the syntax and usage of the following Linux Commands with examples.  
**i.** ln                      **ii.** chown                      **iii.** cp  
**(b).** Write a shell script to find the factorial of a given number.



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**Set No: 5**

- 5.(a).** Write the syntax and usage of the following Linux Commands with examples  
**i.** cp                      **ii.** rm                      **iii.** mkdir  
**(b).** Develop C Program to create a child process using fork system call in which parent process adds odd numbers and the child process add even numbers.



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**Set No: 6**

- 6.(a).** Write the syntax and usage of the following Linux Commands with examples  
**i.** sed                      **ii.** kill all                      **iii.** vi editor  
**(b).** Develop C program to demonstrate the usage of fork() system call.



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**Set No: 7**

- 7.(a).** Write a shell script that accepts a file name, starting and ending line numbers as arguments and displays all the lines between the given line numbers.  
**(b).** Write a C-Program for message passing using uni-directional pipes.



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**Set No: 8**

- 8.(a).** Write a shell script that deletes all lines containing a specified word in one or more files supplied as arguments to it.  
**(b).** Write a C- Program to demonstrate Zombie process



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**Set No: 9**

- 9.(a).** Write a C-Program for message passing using uni-directional pipes.  
**(b).** Write a shell script to generate multiplication table.

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| <p><b>10.(a).</b> Write a shell script to the factorial of a given number.</p> <p><b>(b).</b> Write a C-Program for message passing using bi-directional pipes.</p> |                                                                                                                                                                                                                        |                   |

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| <p><b>11.(a).</b> Write a C-Program to simulate the Round Robin CPU scheduling Algorithm to find turnaround time and waiting time.</p> <p><b>(b).</b> Write a Shell Script to calculate even sum and odd sum up to the given range.</p> |                                                                                                                                                                                                                       |                   |

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| <p><b>12.(a).</b> Write a C-Program to simulate the FIFO CPU scheduling Algorithm to find turnaround time and waiting time.</p> <p><b>(b).</b> Write a Shell Script to find sum of digits of a given number.</p> |                                                                                                                                                                                                                       |                   |

**Signature of the Internal Examiner**

**Signature of the External Examiner**