

**DEHRADUN CAMPUS**

# PRACTICAL FILE / TERM WORK

**CBNST LAB PMA-502**

**B.Tech CSE V**

**2023-24**

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

GRAPHIC ERA HILL UNIVERSITY, DEHRADUN

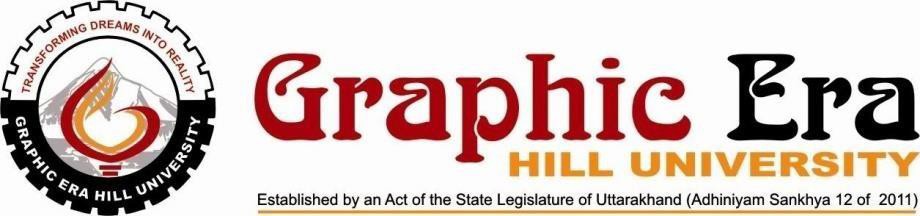
**SUBMITTED TO SUBMITTED BY**

Ms. Preeti Chaudhary NAME: Nilesh Bhanot

ASST. PROFESSOR Examination Roll No.: 2118851

DEPARTMENT OF COMPUTER SCIENCE & ENGG. Course / Sem: B.tech / 5

**COLLEGE ROLL NO. 42 EXAMINATION ROLL NO. 2118851**



### DEHRADUN CAMPUS

THIS IS TO CERTIFY THAT Mr. Nilesh Bhanot HAS SATISFACTORILY COMPLETED ALL THE EXPERIMENTS IN THE LABORATORY OF THIS COLLEGE. THE COURSE OF THE EXPERIMENTS / TERM WORK PMA-502 IN PARTIAL FULLFILLMENT OF THE REQUIREMENT IN 5 SEMESTER OF B.TECH (CSE) DEGREE COURSE PRESCRIBED BY GRAPHIC ERA HILL UNIVERSITY, DEHRADUN DURING THE YEAR 2023 – 2024.

CONCERNED FACULTY HEAD OF DEPARTMENT

NAME OF EXAMINER: SIGNATURE OF EXAMINER:

Annexure-A



## Department of Computer Science & Application Lab Details

**Name of the Lab: -** CBNST Lab

**Lab Code: -** PMA-502 **Subject Credit: -** 2 **Course: -** B.Tech **Branch: -** CSE **Semester: -** V **Section: - A**

## Number of students enrolled: -

**Name of the Faculty: -** Ms. Preeti Chaudhary

## Name of Lab Instructor: - Lab Number:-8

**Lab Time Table**

|  |  |  |
| --- | --- | --- |
| **Day** | **Lecture Number** | **Timing** |
|  |  |  |

Annexure- B



## Department of Computer Science & Application List of Practical’s

Subject Code: PMA-502 Subject Name: CBNST Lab

Course : B.Tech CSE Branch & Sem:-V

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| --- | --- |
| 1. | Write a program in “C” Language to deduce error (Absolute Error, Relative Error and Percentage Error) involved in polynomial equation. |
| 2. | Write a program in “C” Language to find out the root of the Algebraic and Transcendental equations using Bisection Method. |
| 3. | Write a program in “C” Language to find out the root of the Algebraic and Transcendental equations using Regula Falsi Method. |
| 4. | Write a program in “C” Language to find out the root of the Algebraic and Transcendental equations using Newton Raphson Method. |
| 5. | Write a program in “C” Language to find out the root of the Algebraic and Transcendental equations using Iteration Method. |
| 6. | Write a program in “C” Language to find out the root of the Algebraic and Transcendental equations using Secant Method. |
| 7. | Write a program in “C” Language to find the solution of Linear Equation using Gauss Elimination Method. |
| 8. | Write a program in “C” Language to find the solution of Linear Equation using Gauss Jordan Method. |
| 9. | Write a program in “C” Language to find the solution of Linear Equation using Gauss Seidel Method. |
| 10. | Write a program in “C” Language to interpolate numerically using Newton Forward Difference Method. |
| 11. | Write a program in “C” Language to interpolate numerically using Newton Backward Difference Method. |
| 12. | Write a program in “C” Language to interpolate numerically using Lagrange’s Method. |
| 13. | Write a program in “C” Language to integrate numerically using Trapezoidal Rule. |

|  |  |
| --- | --- |
| 14. | Write a program in “C” Language to integrate numerically using Simpson’s 1/3 Rule. |
| 15. | Write a program in “C” Language to integrate numerically using Simpson’s 3/8 Rule. |
| 16. | Write a program in “C” Language to find the numerical solution of ordinary differential equations by Euler’s Method. |
| 17. | Write a program in “C” Language to find the numerical solution of ordinary differential equations by Runge Kutta (Order 4) Method. |
| 18. | Write a program in “C” Language for Linear Curve Fitting. |
| 19. | Write a program in “C” Language for Parabolic Curve Fitting. |
| 20. | Write a program in “C” Language for finding out the Regression Lines. |

## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING STUDENT LAB REPORT SHEET

**CBNST LAB (PMA-502)**

Name of Student ……………………………………...…………. Mo. No………………….……….…………..

Address Permanent …….…………………………………………………………………………..…………….. Father’s Name ………………………………..……………… Mo No ……………………… Mother’s Name ……………………………………………… Mo No…………..…………..

Section ……..……….Branch……………………Semester…………….. Class Roll No……………..

Local Address……………………………………………………Email……………. ……Grade A B C

**Marks** 5 3 1

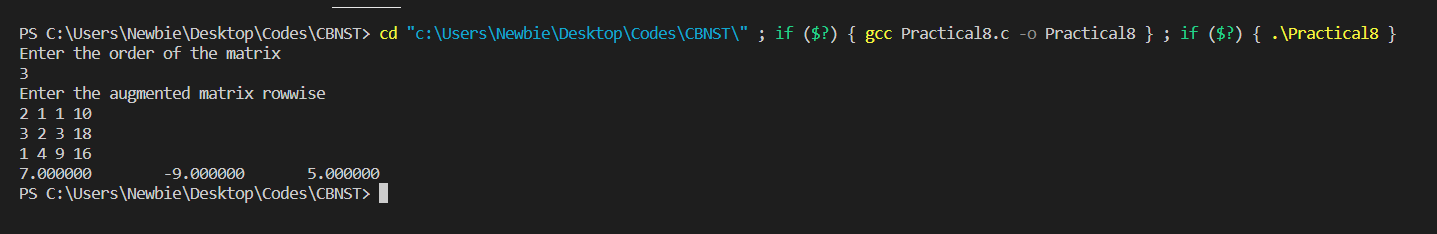
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| **S.** | **Name of the Experiment** | **D.O.P.** | **D.O.S** | **Grade** | **Grade** | **Total** | **Student’s** | **Teacher’s** |
| **No.** | **(Viva)** | **(Report** | **Marks** | **Signature** | **Signature** |
|  |  | **File)** | **(out of** |  |  |
|  |  |  | **10)** |  |  |
| **1** | Write a program in “C” Language to deduce error (Absolute Error, Relative Error and Percentage Error) involved in polynomial equation. |  |  |  |  |  |  |  |
| **2** | Write a program in “C” Language to find out the root of the Algebraic and Transcendental equations using Bisection Method. |  |  |  |  |  |  |  |
| **3** | Write a program in “C” Language to find out the root of the Algebraic and Transcendental equations using Regula Falsi Method. |  |  |  |  |  |  |  |
| **4** | Write a program in “C” Language to find out the root of the Algebraic and Transcendental equations using Newton Raphson Method. |  |  |  |  |  |  |  |
| **5** | Write a program in “C” Language to find out the root of the Algebraic and Transcendental equations using Iteration Method. |  |  |  |  |  |  |  |

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| **6** | Write a program in “C” Language to find out the root of the Algebraic and Transcendental equations using Secant Method. |  |  |  |  |  |  |  |
| **7** | Write a program in “C” Language to find the solution of Linear Equation using Gauss Elimination Method. |  |  |  |  |  |  |  |
| **8** | Write a program in “C” Language to find the solution of Linear Equation using Gauss Jordan Method. |  |  |  |  |  |  |  |
| **9** | Write a program in “C” Language to find the solution of Linear Equation using Gauss Seidel Method. |  |  |  |  |  |  |  |
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| **11** | Write a program in “C” Language to interpolate numerically using Newton Backward Difference Method. |  |  |  |  |  |  |  |
| **12** | Write a program in “C” Language to interpolate numerically using Lagrange’s Method. |  |  |  |  |  |  |  |
| **13** | Write a program in “C” Language to integrate numerically using Trapezoidal Rule. |  |  |  |  |  |  |  |
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| **15** | Write a program in “C” Language to integrate numerically using Simpson’s 3/8 Rule. |  |  |  |  |  |  |  |

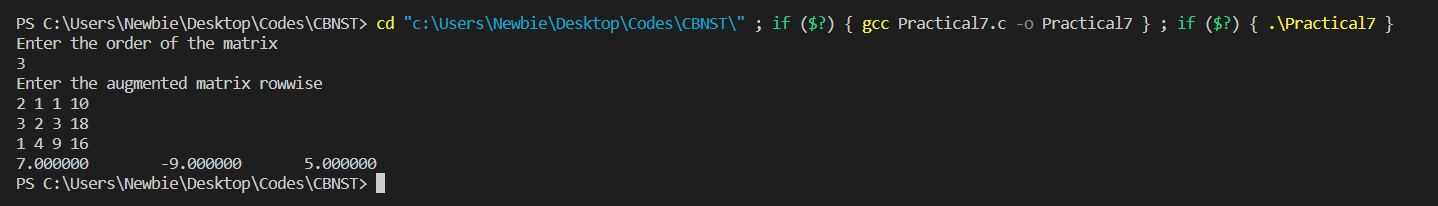
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| **16** | Write a program in “C” Language to find the numerical solution of ordinary differential  equations by Euler’s Method. |  |  |  |  |  |  |  |
| **17** | Write a program in “C” Language to find the numerical solution of ordinary differential equations by Runge Kutta (Order 4) Method. |  |  |  |  |  |  |  |
| **18** | Write a program in “C” Language for Linear Curve Fitting. |  |  |  |  |  |  |  |
| **19** | Write a program in “C” Language for Parabolic Curve Fitting. |  |  |  |  |  |  |  |
| **20** | Write a program in “C” Language for finding out the Regression Lines. |  |  |  |  |  |  |  |

Total No of Practical allotted: ……………………………………… Total No of Practical completed: …………………………………. Percentage Attendance of Practical: ……………………………

**Output**

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**Output**

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