Section IV

8. Solve the following system using Gauss-Jordan method :

$$2x + y + z = 7$$

$$x + 3y + 2z = 8$$

$$2x + y + 2z = 6.$$ **6**

Or

9. Explain Crout's method for solving linear equations. **6**

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B. Sc. EXAMINATION, 2026

(Fourth Semester)

(Re-appear Only)

MATHEMATICS

Paper BM-243

Programming in C and Numerical Methods

Time : 3 *Hours*] [*Maximum Marks :* 30

Before answering the question-paper, candidates must ensure that they have been supplied with correct and complete question-paper. No complaint, in this regard will be entertained after the examination.

Note : Attempt *Five* questions in all. Q. No. **1** is compulsory. All questions carry equal marks.

1. (a) Define Algorithm.

(b) What is a conditional statement ?

(c) Name any *two* standard string functions.

(d) Write the basic idea behind Newton's method.

(e) What is Cholesky decomposition method ?

(f) How is a pointer declared in C ?

6×1=6

Section I

2. What are Input/Output functions in C ? Explain with examples. **6**

Or

3. Differentiate between Flow Chart and Algorithm. **6**

Section II

4. Explain different type of loops in C with suitable examples. **6**

Or

5. Explain pre-processors in C. **6**

Section III

6. Explain use of array in structure and structure in array. **6**

Or

7. Compare Newton-Raphson method and Regula-Falsi method. **6**