

POSTGRADUATE FIRST SEMESTER EXAMINATIONS, 2021

Subject: Mathematics
Course Code: Math-105C

Course ID: 12165
Course Title: Numerical Analysis Practical using C-Programming

Full Marks: 30

Time: 2 Hours

The figures in the margin indicate full marks

Notations and symbols have their usual meaning

Answer any **one** question.

Question No		Marks Allotted
1	(i) Write a C-program to find the power of a number (x^y).	5
	(ii) Write a C-program to solve a system of linear equations by using the Gauss Jacobi iteration method.	10
	(iii) Lab notebook	8
	(iv) Viva-Voce	7
2	(i) Write a C-program to find the GCD of two positive integers.	5
	(ii) Write a C-program to solve system of linear equation by using Gauss elimination method.	10
	(iii) Lab notebook	8
	(iv) Viva-Voce	7
3	(i) Write a C-program to find the maximum among some numbers.	5
	(ii) Write a C-program to solve a system of linear equations using the Gauss Seidel iteration method.	10
	(iii) Lab notebook	8
	(iv) Viva-Voce	7
4	(i) Write a C-program to test whether a positive integer is prime or not.	5
	(ii) Write a C-program to solve an IVP by using Runge-Kutta method of order 2.	10
	(iii) Lab notebook	8
	(iv) Viva-Voce	7
5	(i) Write a C-program to compute the sum of two matrices.	5
	(ii) Write a C-program to solve system of linear equation by using Gauss-Jordan elimination method.	10
	(iii) Lab notebook	8
	(iv) Viva-Voce	7
6	(i) Write a C-program to generate Fibonacci Series.	5
	(ii) Write a C-program to solve an IVP by using Runge-Kutta method of order 4.	10
	(iii) Lab notebook	8
		7

	(iv) Viva-Voce	
7	(i) Write a C-program to find the prime numbers between two positive integers.	5
	(ii) Write a C-program to find the determinant of a square matrix.	10
	(iii) Lab notebook	8
	(iv) Viva-Voce	7
8	(i) Write a C-program to perform matrix multiplication.	5
	(ii) Write a C-program to convert a matrix into its row reduced echelon form.	10
	(iii) Lab notebook	8
	(iv) Viva-Voce	7
9	(i) Write a C-program to find the average of 5 numbers.	5
	(ii) Write a C-program to convert a square matrix into diagonal matrix.	10
	(iii) Lab notebook	8
	(iv) Viva-Voce	7
10	(i) Write a C-program to find the area of a triangle.	5
	(ii) Write a C-program to find the Largest Eigenvalue by Power method	10
	(iii) Lab notebook	8
	(iv) Viva-Voce	7