

ACTIVITY CODE: 1903129031

B.Sc. 6<sup>th</sup> Semester (Programme) Examination, October 2020

Subject: Mathematics (Practical)

Course ID: 62120

Course Code: SP/MTH/604/SEC-4

Course Title: Numerical Analysis with Practical

Full Marks: 07

Time: 1 Hour

The figures in the margin indicate full marks

Notations and Symbols have their usual meaning

Marks Distribution:

Problem:	5 Marks
Viva Voce:	2 Marks

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1. Answer any one question: [1+4]
- i) Write down the working formula and describe the computational procedure/algorithm to find the sum of the finite series  $\sum_{n=1}^{10} \frac{n^2+1}{n}$ .
- ii) Write down the working formula and describe the computational procedure/algorithm to find the value of 7! (Factorial of 7).
- iii) Write down the working formula and describe the computational procedure/algorithm to find the largest and smallest of the following 10 numbers: 9, 99, 9.09, 999.09, 91.19, 90.09, 9.99, 9.9, 9.009 and 999.
- iv) Write down the working formula and describe the computational procedure/algorithm to find the roots of the quadratic equation:  $3.5x^2 + \sqrt{7}x - 32 = 0$ .
- v) Write down the working formula and describe the computational procedure/algorithm to find the HCF and LCM of 56 and 84.
- vi) Write down the working formula and describe the computational procedure/algorithm to find a real root of the equation:  $x \sin x + \cos x = 0$  by Newton-Raphson Method.