BCSL–058(Set-III)

BACHELOR OF COMPUTER APPLICATIONS (REVISED) (BCA)

Term-End Practical Examination

June, 2025

BCSL–058(Set-III) : COMPUTER ORIENTED NUMERICAL TECHNIQUES LAB

Time : 1 Hour   *Maximum Marks : 50*

Note *: (i)* *There are* ***two*** *questions in this paper and both are compulsory.*

(ii) Each question carries 20 marks.

(iii) 10 marks are reserved for viva-voce.

(iv) The programs may be implemented in any one of the programming languages out of C, C++, MS-Excel or any other spreadsheet software.

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1. Write a program to implement Trapezoidal rule to approximate the value of the definite integral (I) given below : 20

$$I = \int_{1}^{2} \frac{dx}{\sqrt{x+6}}$$

Take $h = 0.2$.

2. Write a program to demonstrate the operation of the following operators for a function $F(x) = x^2 + x + 7$: 20

   (i) Forward Difference Operator

   (ii) Backward Difference Operator

   (iii) Central Difference Operator

   (iv) Averaging Operator

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