BACHELOR OF COMPUTER APPLICATIONS (Revised)
(BCA)

Term-End Practical Examination

June, 2018

BCSL-058(P)/S3 : 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) *Rest 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 spreadsheet package.*

1. Write a program to implement Secant Method or Bisection Method (only one of these) for finding an approximate value of a positive root of equation

    $$x^2 - x - 20 = 0.$$

    Make your own assumptions about the bounds. *20*

2. Write a program to implement Trapezoidal rule for approximating the value of a definite integral. Use it to approximate the value of

    $$I = \int_{1 \cdot 2}^{2 \cdot 0} (x^2 + 3) \, dx, \quad \text{using } h = 0 \cdot 2.$$ *20*