BACHELOR OF COMPUTER APPLICATIONS (Revised)
(BCA)

Term-End Practical Examination

00965

June, 2017

BCSL-058(P)/S4 : 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 Spreadsheet.*

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1. Write a program to calculate the value of sine of an angle given in radians, or in degrees, accurate up to four places of decimals, using the formula

$$\sin(x) = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \ldots$$

where $n! = 1.2.3 \ldots n$.

Then find the value of sin ($\pi/2$) and sin ($\pi/4$)... (or sin 90° and sin 45°) *20*

2. Write a program to implement the Trapezoidal rule for approximating the value of $\int_{4\cdot2}^{5\cdot2} x^{3/4}\,dx$, using two nodal points. *20*
