BACHELOR OF COMPUTER APPLICATIONS (Revised)
(BCA)

Term-End Practical Examination

DCS93

December, 2016

BCSL-058(P)/S1 : 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 cosine of an angle (given in radians or degrees), accurate up to four places of decimals, using the formula

$$\cos x = 1 - \frac{x^2}{(2!)} + \frac{x^4}{(4!)} + \ldots,$$

and then find the values of cos ($\pi/3$) and cos ($\pi/4$) (or cos 60° and cos 45°). *20*

2. Write a program to implement the trapezoidal rule for approximating the value of $\int_{4.3}^{5.3} x^{2/3}\,dx$, using only two nodal points. *20*