

**BACHELOR OF COMPUTER APPLICATIONS (Revised)
(BCA)**

03003

Term-End Practical Examination

December, 2015

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 written in any **one** of the programming languages out of C, C++, MS-Excel or Spreadsheet.*

1. Write a program to calculate the value of cosine of an angle given in radians, accurate upto four places of decimal, using the formula

$$\cos(x) = 1 - (x^2/2!) + (x^4/4!) - \dots,$$

where $n!$ denotes factorial of $n = 1.2. \dots .n$

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2. Write a program to implement Simpson's 1/3 formula to approximate the value of

a definite integral. Use it to approximate the value of $\int_0^2 dx/(1+x^2)$, using three

nodal points.

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