BACHELOR OF COMPUTER APPLICATIONS (Revised) (BCA)

Term-End Practical Examination

00514

December, 2014

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 twenty marks.*

(iii)   *Ten 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 Sine of a given value x in radians, using the formula :   *20*

$$\sin(x) = x - (x^3/3!) + (x^5/5!) - (x^7/7!) + \ldots$$

2. Write a computer program that implements Trapezoidal rule for approximating the value of a definite integral. Use the program to approximate the value of

$$\int_{1\cdot0}^{2\cdot0} x^{2/3} \, dx \text{ (using only two nodal points).}$$ *20*

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