BACHELOR OF COMPUTER APPLICATIONS (Revised)
(BCA)

Term-End Practical Examination

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June, 2016

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.*

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

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

   and then find the values of $\cos(\pi/2)$ and $\cos(\pi/4)$ (or $\cos 90°$ and $\cos 45°$).　　**20**

2. Write a program to implement secant method for finding an approximate root of an equation. Use it to find a root of $6x^2 - 11x + 3 = 0$, which is a positive root.　　**20**

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