

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

00355

Term-End Practical Examination

December, 2013

**BCSL-058 : COMPUTER ORIENTED NUMERICAL
TECHNIQUES LAB**

Time allowed : 1 hour

Maximum Marks : 50

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- Note :** (i) There are *two* questions in this paper, both are compulsory.
(ii) Each question carries **20** marks.
(iii) **10** marks are for *viva-voce*.
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1. Write a program in C to calculate the value of e^x by using its series expansion, given **20**
below :

$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots$$

Note : evaluate e^x only up to first three terms.

also find the value of e^x by using the inbuilt function in C.

Compare the results produced by inbuilt function and the result produced by you, to find the error.

2. Write a programme in C to demonstrate the operation of following operators, for the **20**
function $f(x) = x^2 + x + 7$
- (a) Forward Difference Operator
(b) Central Difference Operator

The given interval is [2, 7] and stepsize (h) is 1.0