Nepal College of Information Technology

**Unit Test**

Fall 2012

Program : BE CE/ELX Time : 2 hrs

Semester : (I) FM : 70

Subject : Engineering Math-I PM : 35

* *Candidates are requested to give their answer as far as practicable in their own words.*
* *The figure in the margin indicates the full marks*
* ***Attempt ALL question***

1. Evaluate the integrals: 7x5=35

a) 

b) 

c) 

d) 

e) 

f) 

g) 

2. a) Show that the area common to circle x2+y2=1 and the parabola y2=1-x

is . 8

b) Find the area bounded by the curve y=x2, the x-axis and the ordinates x=1,

and x=3. 5

3. Evaluate: by summation method. 7

4. Find the reduction formula for  and  and then evaluate 8

.

5. Show that :  7