2008 – SIKKIM MANIPAL UNIVERSITY OF HEALTH MEDICAL & TECHNOLOGICAL SCIENCE

M.C.A COMPUTER APPLICATION

I SEMESTER ASSIGNMENT PAPER

DISCRETE MATHAMATICS

TIMES-2 HOUR
MARKS-60

Sub Co:Mc 0061

Each question carries TEN marks [10*6=60]

1.If A = {4,5,6,7} B = {1,2,3,10,11} C={5,7,8,9} find the value of A?(B?C) and (A?B)?C. Show that they are equal.

2. Prove by the concept of M.I. that is divisible by 11 for all n?N.

3. Consider the series
find its sum to n terms.

4. Prove that the relation is an equivalence relation.

5. Write short notes on

(a) Public key cryptography.
(b) The R.S.A. Cryptosystem

6. Let (A,?,?,?) be a finite Boolean algebra . Let b be any non-zero element in A and a1,a2,....,ak be all the atoms of A such that ai?b then b=a1?a2?....?ak be all the atoms of A such that ai?b then b=a1?a2?....?ak.