

G.V.M'S G.G.P.R. COLLEGE OF COMMERCE & ECONOMICS
FARMAGUDI, PONDA
INTRA SEMESTER ASSESSEMENT TEST – III
B.C.A. SEMESTER II MARCH 2014
DISCRETE MATHEMATICS

G. V. M'S
SRM. S. S. PUY RAJENDRAN
COLLEGE OF COMMERCE & ECONOMICS

MARKS:- 15

Duration:- 45 minutes

Q.1] If p and q are two statements then show that the statement $(p \uparrow q) \Leftrightarrow (p \uparrow q)$ is equivalent to $(p \vee q) \wedge (p \downarrow q)$. (4 mks)

Q.2] Write the converse, inverse and contrapositive of the following: "It is raining if it is cloudy". (3 mks)

Q.3] Prove by the principle of mathematical induction that $4+8+12+\dots+4n = 2n(n+1)$. (5 mks)

Q.4] Prove the following using a direct proof. (3 mks)

Let the following statements be true

- If I sleep, then I do not go to college.
- I go to college or I enjoy myself.
- I do not enjoy myself.

Show that the statement "I do not sleep" is a true statement.

.....ALL THE BEST-----