Name : ***Student ID*** :

Question 1 (**2.5** ***marks***)

For a geometric annuity Immediate that pays **1** ***annually for n years . After the first payment , payments thereafter grow by rate of r and the annual interest rate is i .***

Show that for $i = r$:

- $(Ga)_{\overline{n}|} = n \cdot v$

- $(G\ddot{a})_{\overline{n}|} = n$

Question 2 (**2.5** ***marks***)

An annuity provides for **12** ***annual payments . The first payment is*** $100 ***, paid at the end of the first year, and each susequent payment is*** **5**% ***more than the one preceding it. Calculate the present value of this annuity, if*** $i = 0.05$