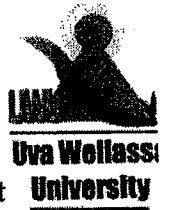




**Uva Wellassa University**  
**Faculty of Management**



**Degree of Bachelor of Business Management in Entrepreneurship and Management**  
**3<sup>rd</sup> YEAR 1<sup>st</sup> SEMESTER EXAMINATION – MARCH/APRIL 2013**

**EMG 332-2 Financial Mathematics**

**PART C- ESSAY**

❖ Answer only one question from two questions

1.

- a) An annuity provides for 20 annual payments, the first payment a year hence being \$1000. The payments increase in such a way that each payment is 4% greater than the preceding payment. Find the present value of this annuity at an annual effective rate of interest of 7%
- b) At what annual effective rate of interest is the present value of a series of payments of \$1 every 6 months forever, with the 1<sup>st</sup> payment made immediately, equal to \$10.

(Total 50 marks)

2.

- a) In return for a promise to receive \$600 at the end of 8 years, a person agrees to pay \$100 at once, \$200 at the end of 5 years, and to make a further payment at the end of 10 years, find the payment at the end of 10 years if the nominal rate of interest is 8% convertible semi-annually.
- b) Find the accumulated value at the end of ten periods, of an annuity in which payments are made at the beginning of each half year for five years. The 1<sup>st</sup> payment is \$2000 and each payment is 98% of the prior payment interest is credited at 10% convertible quarterly.

(Total 50 marks)