EXAMINATIONS

11 April 2000 (pm)

Subject 201 — Communications

Time allowed: 1½ hours

INSTRUCTIONS TO THE CANDIDATE

Write your surname in full, the initials of your other names and your Candidate's Number on the front of the answer booklet.

AT THE END OF THE EXAMINATION

Hand in BOTH your answer booklet and this question paper.

In addition to this paper you should have available Actuarial Tables and an electronic calculator.

You are an actuary working for an independent firm of investment advisers in a small country.

One of your clients is considering buying a plan from a life insurance company to help with educational expenses. Under this type of plan premiums are payable yearly in advance for 10 years, and are invested in company shares on the stock market. At the end of ten years the total proceeds are used to buy a level annuity certain payable yearly in advance for 8 years. The amount of the annuity payments depends on the accumulated value of the plan after 10 years and interest rates at that point. Your client requires the annuity payments to be £5,000 per year.

Your client has obtained illustrations from the two major insurance companies in the country. Details are shown in the table below. Each has suggested a yearly contribution, but your client is able to choose a different contribution level.

She has noticed that the yearly contribution suggested by one is over £200 less than for the other, and has asked whether she should therefore accept the lower quotation. In fact, the difference is solely due to the growth assumptions used. Draft a letter to your client explaining how the plans work and how the assumptions affect the premium required.

The letter should be 450–550 words long.

	Company A	*Company B*
Assumed growth rate p.a. in first 10 years	8%	7%
Assumed interest rate after 10 years	5%	4%
Annual charge in first 10 years (percentage of fund deducted yearly in advance after payment of premium due)	1%	1%
Annuity charge (percentage of accumulated fund deducted when annuity is bought)	4%	4%
Suggested contribution	£2,305.65	£2,515.72
Illustrated value after 10 years	£33,932	£35,010
Illustrated annuity amount	£5,000 p.a.	£5,000 p.a.

Notes

- You should assume that there are no regulations governing the projections used by the companies, and no regulatory restrictions on your advice.
- You may assume that the illustrations are accurate, that the plans are identical in design and charging structure, that the past investment returns achieved by the two companies are comparable and that the future investment strategies will be similar.
- You are not asked to comment on whether the assumptions used are realistic.
- You are not expected to discuss investment issues such as long and short-term interest rates, yield curves etc.