

**VOA/IRRV  
FULL PROFESSIONAL  
QUALIFICATION**

**Part 1**



**VALUATION THEORY AND PRACTICE**

Paper 1

**Monday 6<sup>th</sup> December 2004**

**9.30 am – 12.45 pm (including 15 minutes for reading)**

***Answer THREE questions –one from each section  
(Maximum marks 300)***

*Where questions are divided into sections, marks will be allocated equally between sections unless otherwise indicated.*

## **Section A: Answer ONE question from this section**

1. Analyse the comparables and value the freehold interest in the subject property. Annotate your valuations.

### Subject Property

An industrial unit that is currently let at £200,000 per annum (net). The unit is held on lease for 15-years, subject to 5-yearly upward-only rent reviews. The first rent review is due in 3 years. The unit comprises 2000m<sup>2</sup> of production space with 250m<sup>2</sup> of ancillary offices.

The tenant has an option to purchase the freehold for £2 million at the end of the lease.

### Comparable A

A similar unit, with 3000m<sup>2</sup> of production space and 100m<sup>2</sup> of ancillary offices, has recently let at £220,000 per annum (net). The letting was for 20 years, subject to rent reviews every 5 years.

As a condition of the lease, the tenant is obliged to carry out immediate improvements, at an estimated cost of £100,000. After improvement, the property will be in a similar condition to the subject unit.

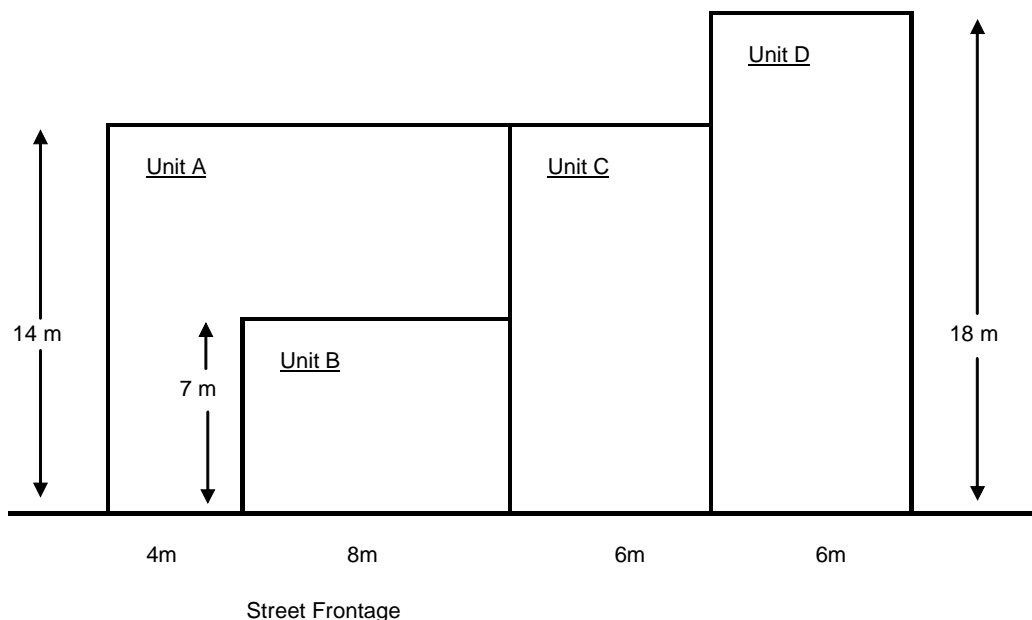
There is a nine-month rent-free period at the beginning of the lease. The normal rent-free period is 3 months.

### Comparable B

Another similar unit, with 2500m<sup>2</sup> of production space and 300m<sup>2</sup> of ancillary offices, has recently sold with vacant possession, for £2.5 million.

The expected total return is 10.5% per annum, with rental values expected to increase at 3% per annum.

2. The sketch plan shows the layout of four retail units. Rental evidence is available in respect of Units A, B and D. Analyse these rents and estimate the current open market rental value of Unit C, on the assumption that it will be let subject to 5-yearly upward-only rent reviews and with the benefit of a 6-month rent-free period.



Unit A was let 2 years ago at £20,400 pa. The landlord made a contribution of £5,000 to the tenant's fitting-out costs. There was a 6-month rent-free period. Rental values have increased at 5% pa over the past two years and this trend is expected to continue.

Unit B was let 1 year ago at £16,800 pa, with no rent-free period.

Unit D has just let for £20,000 pa in year 1, the rent rising at 2% each year for the first 5 years. There is a 3-month rent-free period (ie, the total rent paid in year 1 is £14,250).

All units are subject to upward-only rent reviews to open market rental value every 5 years. The current freehold initial yield for the properties is 7% and the expected total return about 11.5%.

**Section B: Answer ONE question from this section**

3. Your client is considering the following investments:

Investment A: Cost £120,000. Producing a net income of £6,500 pa, receivable annually in arrears. At the end of the 5<sup>th</sup> year it is expected that the investment can be sold for £150,000.

Investment B: Cost £200,000. Producing a net income of £11,000 pa, receivable half-yearly in arrears. At the end of the 5<sup>th</sup> year it is expected that the investment can be sold for £250,000.

Your client is prepared to invest £50,000 of his own money. In respect of Investment A, the balance of £70,000 can be borrowed at 6% interest. In respect of Investment B, the balance of £150,000 can be borrowed at 8% interest. Interest is payable annually in arrears, with the principal repayable on sale of the investment.

- (a) Adopting 10% as the target rate of return, demonstrate that Investment B would produce the higher return on the equity investment of £50,000. *(40 marks)*
- (b) Explain why the higher net present value does not necessarily indicate which is the more attractive of the two investment opportunities. *(20 marks)*
- (c) Describe internal rate of return (IRR) analysis and its use to evaluate investment opportunities. *(20 marks)*
- (d) Describe payback analysis and its limitations. *(20 marks)*
4. (a) Derive the formula for the Present Value of £1pa (YP Single Rate), from first principles. *(25 marks)*
- (b) Demonstrate that the formula allows for both a return on and return of capital. *(25 marks)*
- (c) By reference to Valuation Tables, the YP for 3 years at 9% & 3% (Tax at 30%) = 1.811. An investor pays £1,811 for an income of £1,000 pa for 3 years. Demonstrate that the returns predicted by the Tables will be received. *(25 marks)*
- (d) Calculate the internal rate of return (IRR) for the investment described at (c). *(25 marks)*

**Section C: Answer ONE question from this section**

5. (a) Explain the basis of a depreciated replacement cost (DRC) valuation. *(75 marks)*
- (b) In what circumstances would a DRC valuation be appropriate and what are its limitations? *(25 marks)*
6. (a) 'Quoting property market returns in nominal terms understates the worth of property as an investment medium.' Explain this statement. *(25 marks)*
- (b) Distinguish between a calculation of worth and an estimate of market value. *(25 marks)*
- (c) What do you understand by the term 'goodwill' and in what circumstances will it attach to the value of the property from which a business is conducted? *(25 marks)*
- (d) What is the attraction of full repairing and insuring (FRI) terms for property investors? *(25 marks)*

**VOA/IRRV  
FULL PROFESSIONAL  
QUALIFICATION**

**Part 1**



**VALUATION THEORY AND PRACTICE  
Paper 2**

**Monday 6<sup>th</sup> December 2004**

**2.00 – 5.15 pm (including 15 minutes for reading)**

***Answer THREE questions –one from each section  
(Maximum marks 300)***

*Where questions are divided into sections, marks will be allocated equally between sections unless otherwise indicated.*

### **Section A: Answer ONE question from this section**

1. Answer both parts of this question using a growth explicit valuation technique(s). Assume that rental values will increase at 3.5% per annum and that the required total return is 11% per annum.

(a) Commercial premises have recently let for 15 years, subject to rent review after 5 and 10 years. The net rent payable for the initial term is £5,000 per annum, rising to £8,000 per annum after 5 years and £12,000 per annum after 10 years. A premium of £30,000 has been paid by the tenant.

Calculate the current full rental value from the viewpoint of the freeholder.

(b) Identical premises are available to let at an initial rent of £12,500 per annum (net). The rent is subject to upward-only review after 5 and 10 years. The freeholder is prepared to offer a reverse premium to induce a tenant to take the premises.

Calculate what the premium should be from the viewpoint of the freeholder.

2. Commercial premises were let 8 years ago on a 15-year lease, with 5-year rent reviews. The current rent is £200,000 per annum (net). The tenant occupies the premises.

As a condition of the lease, the tenant carried out repairs and improvements to the premises on taking possession. These initial improvements cost £100,000. At the end of year 3, the tenant, with the consent of the landlord, carried out further improvements to the property at a cost of £125,000.

The current cost of carrying out the initial and subsequent improvements would be £150,000 and £200,000, respectively. Costs are expected to increase at 2% per annum over the next seven years. The current rental value of the property (assuming 5-year reviews) is £300,000 per annum (net), of which £25,000 is due to the initial works and £75,000 to the subsequent improvements.

The freehold yield for similar properties, let on FRI terms with 5-year rent reviews, is 8%. Rents are expected to rise at 3% per annum. The rateable value of the property is £225,000.

- (a) Value the tenant's interest, assuming that the tenant continues in possession at the end of the current lease. *(40 marks)*
- (b) Value the landlord's interest, assuming that the landlord obtains possession for his own occupation at the end of the current lease. *(40 marks)*
- (c) If at the end of the current lease the landlord seeks possession to redevelop the property, what statutory compensation would the tenant be entitled to receive? *(20 marks)*

**Section B: Answer ONE question from this section**

3. (a) Demonstrate that given an initial yield of 9.5%, rental growth at 3% pa and 5-year rent review periods, the expected total return from a property investment will be 12.0%. *(20 marks)*

- (b) A commercial property is held on lease with 5 years unexpired. The passing rent is £150,000 pa (net), rising to £200,000 pa after two years. The current open market rental value is £250,000 pa. The freehold interest has been valued as follows:

|               |                       |               |                        |
|---------------|-----------------------|---------------|------------------------|
| Next 2 years  | Contractual rent      | £150,000 pa   |                        |
|               | YP 2 yrs @ 6%         | <u>1.833</u>  |                        |
|               |                       |               | £275,950               |
| After 2 years | Contractual rent      | £200,000 pa   |                        |
|               | YP 3 yrs @ 6%         | 2.673         |                        |
|               | x PV £1 in 2 yrs @ 6% | <u>0.890</u>  |                        |
| —             |                       | <u>2.379</u>  |                        |
|               |                       |               | £475,794               |
| After 5 years | Full Rental Value     | £250,000 pa   |                        |
|               | YP in Perp @ 7%       | 14.286        |                        |
|               | x PV £1 in 5 yrs @ 7% | <u>0.713</u>  |                        |
| —             |                       | <u>10.186</u> |                        |
|               |                       |               | <u>£2,546,500</u>      |
| —             |                       |               | £3,298,244             |
|               |                       |               | say, <u>£3,300,000</u> |

- (i) Calculate the All Risks Yield *(10 marks)*  
(ii) Calculate the Equivalent Yield *(20 marks)*  
(iii) Calculate the Equated Yield, assuming rental growth at 3% pa. *(30 marks)*
- (c) £10,000 has been paid for a perpetual income of £1,000 per annum. If the income is received quarterly in advance (ie, £250 per Quarter), what is the true or effective annual rate of return? *(20 marks)*
4. (a) What is the difference between return on capital and return on equity? Illustrate your answer with an example calculation. *(20 marks)*
- (b) Demonstrate by means of an example calculation(s) that as gearing increases both risk and potential reward increase. *(20 marks)*
- (c) A loan of £100,000 is repayable by equal annual instalments over 20 years, with interest at 4% per annum (compound).
- (i) What is the outstanding loan after 10 years? *(20 marks)*
- (ii) If the interest rate is increased to 6% for the remaining 10 years, what is the revised annual payment? *(20 marks)*
- (iii) Alternatively, if the annual payments remain the same, how long will it take to redeem the loan? *(20 marks)*

**Section C: Answer ONE question from this section**

5. Explain how the following could affect the value of a freeholder's interest in property and how you would deal with the problems posed:
- (a) Onerous user restrictions.
  - (b) An absolute restriction on assignment and sub-letting.
  - (c) The period between rent reviews.
  - (d) Annual rent reviews, by reference to changes in the consumer price index.
  - (e) Upward only rent reviews when the contractual rent exceeds the current rental value.
6. (a) What do you understand by the expression 'hope value' and to what extent can it be reflected in a valuation to be included in a financial statement?
- (b) When valuing for the purposes of a financial statement, in what circumstances can the exiting use value exceed the market value of an interest in property?
- (c) To what extent can the special suitability or adaptability of land for a particular purpose be taken into account when valuing an interest in property for compulsory purchase?
- (d) What do you understand by the term 'equivalent reinstatement' and in what circumstances will it be adopted when valuing a property for compulsory purchase.

**VALUATION THEORY AND PRACTICE  
(VOA/IRRV FULL PROFESSIONAL PART 1)**

**DECEMBER 2004**

**ANSWERS / MARK SCHEME**

Paper 1, Question 1

|  |                              |         |                        |               |                           | <u>Marks</u> |
|--|------------------------------|---------|------------------------|---------------|---------------------------|--------------|
|  | <u>Subject</u>               |         | <u>m<sup>2</sup></u>   | <u>Weight</u> | <u>ITMS</u>               |              |
|  | Storage                      |         | 2,000                  | 1.00          | 2,000.0                   |              |
|  | Offices                      |         | 250                    | 1.25          | 312.5                     |              |
|  |                              |         |                        |               | 2,312.5                   |              |
|  | <u>Comp A</u>                | Storage | 3,000                  | 1.00          | 3,000.0                   |              |
|  |                              | Offices | 100                    | 1.25          | 125.0                     |              |
|  |                              |         |                        |               | 3,125.0                   | 10           |
|  | <u>Comp B</u>                | Storage | 2,500                  | 1.00          | 2,500.0                   |              |
|  |                              | Offices | 300                    | 1.25          | 375.0                     |              |
|  |                              |         |                        |               | 2,875.0                   |              |
|  |                              |         |                        |               |                           |              |
|  | 10.50%                       | pa =    | $(1.105)^{0.25} - 1 =$ | 0.0252755     |                           |              |
|  |                              |         |                        | ie, 2.53%     | /Q                        | 10           |
|  |                              |         |                        |               |                           |              |
|  | <u>Analysis Comparable A</u> |         |                        |               |                           |              |
|  | PV £1pQ (Adv)                | 19      | Q @ 2.53%              | 15.3193       | FRV (3 month rent-free) X |              |
|  | PV £1                        | 1       | Q @ 2.53%              | 0.9753        | 14.9417                   |              |
|  |                              |         |                        |               | 14.9417 X                 |              |

|               |    |            |                   |          |                 |                |    |                        |
|---------------|----|------------|-------------------|----------|-----------------|----------------|----|------------------------|
|               |    |            |                   |          | Contracted Rent | £55,000        | /Q |                        |
| PV £1pQ (Adv) | 17 | Q @        | 2.53%             | 14.0271  |                 |                |    |                        |
| PV £1         | 3  | Q @        | 2.53%             | 0.9279   |                 | <u>13.0150</u> |    |                        |
|               |    |            |                   |          |                 |                |    | £715,826               |
|               |    | <u>Add</u> | Immediate repairs |          |                 |                |    | £100,000               |
|               |    |            |                   |          |                 |                |    | <u>£815,826</u>        |
|               |    |            |                   | £815,826 | =               | 14.9417        | X  |                        |
|               |    |            |                   | X        | =               | £54,601        | /Q |                        |
|               |    |            |                   |          |                 | £218,403       | pa | £69.89 /m <sup>2</sup> |

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Analysis Comparable B

|      |                         |                |                 |
|------|-------------------------|----------------|-----------------|
|      | FRV (3 month rent-free) |                |                 |
|      | say,                    | £69.89         | /m <sup>2</sup> |
| ITMS |                         | <u>2,875.0</u> |                 |
|      | Rental Value            | £200,931       |                 |
|      | Capital Value           | £2,500,000     |                 |
|      | Yield                   | 8.04%          |                 |

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Valuation

|        |   |       |       |                 |                         |                |                 |
|--------|---|-------|-------|-----------------|-------------------------|----------------|-----------------|
|        |   |       |       |                 | FRV (3 month rent-free) |                |                 |
|        |   |       |       |                 | say,                    | £70.00         | /m <sup>2</sup> |
|        |   |       |       |                 | ITMS                    | <u>2,312.5</u> |                 |
|        |   |       |       |                 | Rental Value            | £161,875       | pa              |
| Amt £1 | 3 | yrs @ | 3.00% |                 |                         | <u>1.0927</u>  |                 |
|        |   |       |       | FRV, 1st Review |                         |                | £176,885 pa     |
| Amt £1 | 5 | yrs @ | 3.00% |                 |                         | 1.1593         |                 |

|                       |         |          |        |  |                         |                |                        |  |
|-----------------------|---------|----------|--------|--|-------------------------|----------------|------------------------|--|
|                       |         |          |        |  | FRV, 2nd Review         | <u>1.1593</u>  | £205,058 pa            |  |
|                       | Amt £1  | 5 yrs @  | 3.00%  |  | FRV, end of lease       |                | £237,719 pa            |  |
| <hr/>                 |         |          |        |  |                         |                |                        |  |
| <u>First 3 years</u>  |         |          |        |  | Contracted Rent         | £200,000 pa    |                        |  |
|                       | PV £1pa | 3 yrs @  | 10.50% |  |                         | <u>2.4651</u>  |                        |  |
|                       |         |          |        |  |                         |                | £493,025               |  |
| <u>Years 5 to 9</u>   |         |          |        |  | FRV                     | £176,885 pa    |                        |  |
|                       |         |          |        |  | Contracted Rent         | £200,000       |                        |  |
|                       | PV £1pa | 5 yrs @  | 10.50% |  | 3.7429                  |                |                        |  |
| PV £1                 |         | 3 yrs @  | 10.50% |  | 0.7412                  | <u>2.7741</u>  |                        |  |
|                       |         |          |        |  |                         |                | £554,813               |  |
| <u>Years 10 to 14</u> |         |          |        |  | FRV                     | £205,058 pa    |                        |  |
|                       |         |          |        |  | Minimum Contracted Rent | £200,000       |                        |  |
|                       | PV £1pa | 5 yrs @  | 10.50% |  | 3.7429                  |                |                        |  |
| PV £1                 |         | 8 yrs @  | 10.50% |  | 0.4499                  | <u>1.6839</u>  |                        |  |
|                       |         |          |        |  |                         |                | £345,289               |  |
| <u>Year 15</u>        |         |          |        |  | FRV                     | £237,719 pa    |                        |  |
|                       | PV £1pa | Perp @   | 8.00%  |  |                         | <u>12.5000</u> |                        |  |
|                       |         |          |        |  |                         |                | £2,971,486             |  |
|                       |         |          |        |  |                         |                |                        |  |
|                       | PV £1   | 12 yrs @ | 10.50% |  | Adopt Option price      | £2,000,000     |                        |  |
|                       |         |          |        |  |                         | <u>0.3018</u>  |                        |  |
|                       |         |          |        |  |                         |                | £603,507               |  |
|                       |         |          |        |  |                         |                | £1,996,634             |  |
|                       |         |          |        |  |                         |                | say, <u>£2,000,000</u> |  |

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**Paper 1, Question 2**

Estimate ITZA areas

Assume 7 m zones, halving back

**Marks**

|               |        |    |                 |   |     |      |              |                |
|---------------|--------|----|-----------------|---|-----|------|--------------|----------------|
| <u>Unit A</u> | Zone A | 4  | x               | 7 |     |      | 28.00        |                |
|               | Zone B | 12 | x               | 7 | x   | 0.50 | 42.00        |                |
|               |        |    |                 |   |     |      | <u>70.00</u> | m <sup>2</sup> |
| <u>Unit B</u> | Zone A | 8  | x               | 7 |     |      | 56.00        |                |
|               |        |    | Reverse quantum |   | 20% |      | 11.20        |                |
|               |        |    |                 |   |     |      | <u>67.20</u> | m <sup>2</sup> |
| <u>Unit C</u> | Zone A | 6  | x               | 7 |     |      | 42.00        |                |
|               | Zone B | 6  | x               | 7 | x   | 0.50 | 21.00        |                |
|               |        |    |                 |   |     |      | <u>63.00</u> | m <sup>2</sup> |
| <u>Unit D</u> | Zone A | 6  | x               | 7 |     |      | 42.00        |                |
|               | Zone B | 6  | x               | 7 | x   | 0.50 | 21.00        |                |
|               | Zone C | 6  | x               | 4 | x   | 0.25 | 6.00         |                |
|               |        |    |                 |   |     |      | <u>69.00</u> | m <sup>2</sup> |

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Total return 11.5%, say 2.75%/Q

Analysis Unit A

|    |    |   |                |    |        |           |  |
|----|----|---|----------------|----|--------|-----------|--|
|    |    |   | Quarterly rent |    |        | £5,100 /Q |  |
| YP | 18 | Q | 2.75%          | /Q | 14.435 |           |  |

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|              |   |       |       |       |                                     |          |                    |
|--------------|---|-------|-------|-------|-------------------------------------|----------|--------------------|
|              |   | @     |       | (Adv) |                                     |          |                    |
| PV           | 2 | @     | 2.75% | /Q    | 0.947                               |          |                    |
|              |   |       |       |       |                                     | 13.673   | (A)                |
|              |   |       |       |       |                                     | £69,731  |                    |
| <u>Less:</u> |   |       |       |       |                                     | (£5,000) |                    |
|              |   |       |       |       |                                     | £64,731  |                    |
|              |   |       |       |       |                                     | 13.673   | (A)                |
|              |   |       |       |       |                                     |          |                    |
|              |   |       |       |       | Equivalent rent, 6 months rent-free | £4,734   | /Q                 |
| Amt          | 2 | yrs @ | 5%    | pa    |                                     | 1.103    |                    |
| £1           |   |       |       |       |                                     | £5,220   | /Q                 |
|              |   |       |       |       |                                     | 70.00    | m <sup>2</sup>     |
|              |   | ITZA  |       |       |                                     | £74.57   | /m <sup>2</sup> /Q |

Analysis Unit B

|     |    |      |       |          |  |         |                    |  |
|-----|----|------|-------|----------|--|---------|--------------------|--|
|     |    |      |       |          |  | £4,200  | /Q                 |  |
|     |    |      |       |          |  | 15.646  |                    |  |
| YP  | 20 | @    | 2.75% | /Q (Adv) |  | £65,713 |                    |  |
|     |    |      |       |          |  | 13.673  | (A)                |  |
|     |    |      |       |          |  | £4,806  | /Q                 |  |
| Amt | 1  | yr @ | 5%    | pa       |  | 1.050   |                    |  |
| £1  |    |      |       |          |  | £5,046  | /Q                 |  |
|     |    |      |       |          |  | 67.20   | m <sup>2</sup>     |  |
|     |    | ITZA |       |          |  | £75.10  | /m <sup>2</sup> /Q |  |

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Analysis Unit D

|    |   |   |       |       |       |        |    |  |
|----|---|---|-------|-------|-------|--------|----|--|
|    |   |   |       |       |       | £5,000 | /Q |  |
| YP | 3 | @ | 2.75% | (Adv) | 2.920 |        |    |  |

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|            |    |     |        |       |              |         |
|------------|----|-----|--------|-------|--------------|---------|
| PV         | 1  | Q   | 2.75%  | /Q    | <u>0.973</u> |         |
|            |    | @   |        |       |              | £14,211 |
| Q5 to Q8   |    |     | Income |       | £5,000       | /Q      |
| Amt        |    | yr  |        |       |              |         |
| £1         | 1  | @   | 2%     | pa    | <u>1.020</u> |         |
|            |    |     |        |       | £5,100       | /Q      |
| YP         | 4  | Q   | 2.75%  | /Q    | 3.842        |         |
|            |    | @   |        | (Adv) |              |         |
| PV         | 4  | Q   | 2.75%  | /Q    | <u>0.897</u> |         |
|            |    | @   |        |       |              | £17,580 |
| Q9 to Q12  |    |     | Income |       | £5,000       | /Q      |
| Amt        |    | yrs |        |       |              |         |
| £1         | 2  | @   | 2%     | pa    | <u>1.040</u> |         |
|            |    |     |        |       | £5,202       | /Q      |
| YP         | 4  | Q   | 2.75%  | /Q    | 3.842        |         |
|            |    | @   |        | (Adv) |              |         |
| PV         | 8  | Q   | 2.75%  | /Q    | <u>0.805</u> |         |
|            |    | @   |        |       |              | £16,088 |
| Q13 to Q16 |    |     | Income |       | £5,000       | /Q      |
| Amt        |    | yrs |        |       |              |         |
| £1         | 3  | @   | 2%     | pa    | <u>1.061</u> |         |
|            |    |     |        |       | £5,306       | /Q      |
| YP         | 4  | Q   | 2.75%  | /Q    | 3.842        |         |
|            |    | @   |        | (Adv) |              |         |
| PV         | 12 | Q   | 2.75%  | /Q    | <u>0.722</u> |         |
|            |    | @   |        |       |              | £14,722 |
| Q17 to Q20 |    |     | Income |       | £5,000       | /Q      |
| Amt        |    | yrs |        |       |              |         |
| £1         | 2  | @   | 2%     | pa    | <u>1.040</u> |         |
|            |    |     |        |       | £5,202       | /Q      |
| YP         | 4  | Q   | 2.75%  | /Q    | 3.842        |         |
|            |    | @   |        | (Adv) |              |         |
| PV         | 16 | Q   | 2.75%  | /Q    | <u>0.648</u> |         |

|                         |                       |     |                    |                |                    |
|-------------------------|-----------------------|-----|--------------------|----------------|--------------------|
|                         | @                     |     |                    | <u>£12,949</u> |                    |
|                         |                       |     |                    | £75,551        |                    |
|                         |                       |     |                    | <u>13.673</u>  | (A)                |
|                         |                       |     |                    | £5,526         | /Q                 |
|                         | ITZA                  |     |                    | <u>69.00</u>   | m <sup>2</sup>     |
|                         |                       |     |                    | £80.08         | /m <sup>2</sup> /Q |
| <br>                    |                       |     |                    |                |                    |
| <u>Rental Valuation</u> |                       |     |                    |                |                    |
| 63.00                   | m <sup>2</sup> ITZA @ | £76 | /m <sup>2</sup> /Q | £4,788         | /Q                 |
|                         |                       |     |                    | £19,152        | pa                 |
|                         |                       |     |                    |                | <b>10</b>          |

**December 2004 Marking Scheme - Paper 1, Question 3**

(a) NPV Analysis

|                         |          |
|-------------------------|----------|
| Investment              | £120,000 |
| Target Return           | 10.00%   |
| Annual Return           | £6,500   |
| Expected Terminal Value | £150,000 |
| Loan                    | £70,000  |
| Interest Payable        | 6.00%    |

A

| (Annual) Period | Flow     | Loan     | Net Flow | PV     | NPV      |
|-----------------|----------|----------|----------|--------|----------|
| 0               | -£50,000 |          | -£50,000 | 1.0000 | -£50,000 |
| 1               | £6,500   | -£4,200  | £2,300   | 0.9091 | £2,091   |
| 2               | £6,500   | -£4,200  | £2,300   | 0.8264 | £1,901   |
| 3               | £6,500   | -£4,200  | £2,300   | 0.7513 | £1,728   |
| 4               | £6,500   | -£4,200  | £2,300   | 0.6830 | £1,571   |
| 5               | £6,500   | -£4,200  | £2,300   | 0.6209 | £1,428   |
| 5               | £150,000 | -£70,000 | £80,000  | 0.6209 | £49,674  |
|                 |          |          |          | NPV    | £8,393   |

**Marks**

20

|                         |                             |
|-------------------------|-----------------------------|
| Investment              | £200,000                    |
| Target Return           | 10.00% 4.88% half-yearly    |
| Annual Return           | £11,000 payable half-yearly |
| Expected Terminal Value | £250,000                    |
| Loan                    | £150,000                    |
| Interest Payable        | 8.00%                       |

B

| (Half-Year) Period | Flow     | Loan | Net Flow | PV     | NPV      |
|--------------------|----------|------|----------|--------|----------|
| 0                  | -£50,000 |      | -£50,000 | 1.0000 | -£50,000 |
| 1                  | £5,500   |      | £5,500   | 0.9535 | £5,244   |

|    |          |           |          |        |         |
|----|----------|-----------|----------|--------|---------|
| 2  | £5,500   | -£12,000  | -£6,500  | 0.9091 | -£5,909 |
| 3  | £5,500   |           | £5,500   | 0.8668 | £4,767  |
| 4  | £5,500   | -£12,000  | -£6,500  | 0.8264 | -£5,372 |
| 5  | £5,500   |           | £5,500   | 0.7880 | £4,334  |
| 6  | £5,500   | -£12,000  | -£6,500  | 0.7513 | -£4,884 |
| 7  | £5,500   |           | £5,500   | 0.7164 | £3,940  |
| 8  | £5,500   | -£12,000  | -£6,500  | 0.6830 | -£4,440 |
| 9  | £5,500   |           | £5,500   | 0.6512 | £3,582  |
| 10 | £5,500   | -£12,000  | -£6,500  | 0.6209 | -£4,036 |
| 10 | £250,000 | -£150,000 | £100,000 | 0.6209 | £62,092 |

NPV      £9,319

(b) Risk:Return relationship generally. In particular the greater gearing risk associated with Investment B.

(c) The discount rate that produces a nil NPV.  
The higher the IRR the greater the return.  
A higher return does not necessarily mean a better investment, the risk also needs to be considered.

(d) Payback examines the speed of return only, and ignores the time value of money and indeed all flows after payback is achieved.

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**Paper 1, Question 3**

(a) NPV Analysis

|                         |          |
|-------------------------|----------|
| Investment              | £120,000 |
| Target Return           | 10.00%   |
| Annual Return           | £6,500   |
| Expected Terminal Value | £150,000 |
| Loan                    | £70,000  |
| Interest Payable        | 6.00%    |

A

| (Annual) Period | Flow     | Loan     | Net Flow | PV     | NPV      |
|-----------------|----------|----------|----------|--------|----------|
| 0               | -£50,000 |          | -£50,000 | 1.0000 | -£50,000 |
| 1               | £6,500   | -£4,200  | £2,300   | 0.9091 | £2,091   |
| 2               | £6,500   | -£4,200  | £2,300   | 0.8264 | £1,901   |
| 3               | £6,500   | -£4,200  | £2,300   | 0.7513 | £1,728   |
| 4               | £6,500   | -£4,200  | £2,300   | 0.6830 | £1,571   |
| 5               | £6,500   | -£4,200  | £2,300   | 0.6209 | £1,428   |
| 5               | £150,000 | -£70,000 | £80,000  | 0.6209 | £49,674  |
|                 |          |          |          | NPV    | £8,393   |

**Marks**

20

|                         |          |         |             |
|-------------------------|----------|---------|-------------|
| Investment              | £200,000 |         |             |
| Target Return           | 10.00%   | 4.88%   | half-yearly |
| Annual Return           | £11,000  | payable | half-yearly |
| Expected Terminal Value | £250,000 |         |             |
| Loan                    | £150,000 |         |             |
| Interest Payable        | 8.00%    |         |             |

B

| (Half-Year) Period | Flow     | Loan | Net Flow | PV     | NPV      |
|--------------------|----------|------|----------|--------|----------|
| 0                  | -£50,000 |      | -£50,000 | 1.0000 | -£50,000 |
| 1                  | £5,500   |      | £5,500   | 0.9535 | £5,244   |

|    |          |           |          |        |         |
|----|----------|-----------|----------|--------|---------|
| 2  | £5,500   | -£12,000  | -£6,500  | 0.9091 | -£5,909 |
| 3  | £5,500   |           | £5,500   | 0.8668 | £4,767  |
| 4  | £5,500   | -£12,000  | -£6,500  | 0.8264 | -£5,372 |
| 5  | £5,500   |           | £5,500   | 0.7880 | £4,334  |
| 6  | £5,500   | -£12,000  | -£6,500  | 0.7513 | -£4,884 |
| 7  | £5,500   |           | £5,500   | 0.7164 | £3,940  |
| 8  | £5,500   | -£12,000  | -£6,500  | 0.6830 | -£4,440 |
| 9  | £5,500   |           | £5,500   | 0.6512 | £3,582  |
| 10 | £5,500   | -£12,000  | -£6,500  | 0.6209 | -£4,036 |
| 10 | £250,000 | -£150,000 | £100,000 | 0.6209 | £62,092 |

NPV      £9,319

- |     |  |  |    |
|-----|--|--|----|
| (b) | Risk:Return relationship generally. In particular the greater gearing risk associated with Investment B.   |  | 20 |
| (c) | The discount rate that produces a nil NPV.<br>The higher the IRR the greater the return.<br>A higher return does not necessarily mean a better investment, the risk also needs to be considered. |  | 20 |
| (d) | Payback examines the speed of return only, and ignores the time value of money and indeed all flows after payback is achieved.   |  | 20 |

**Paper 1, Question 4**

**Marks**

(a)

|           |               |   |               |   |                       |       |             |           |             |
|-----------|---------------|---|---------------|---|-----------------------|-------|-------------|-----------|-------------|
| [1]       | PV            | = | $1/(1+r)$     | + | $1/(1+r)^2$           | + ... | $1/(1+r)^n$ | <b>10</b> |             |
| [2]       | PV            | x | $(1+r)$       | = | 1                     | +     | $1/(1+r)$   | + ...     | $1/(1+r)^n$ |
| [2] - [1] | PV + PVr - PV | = | 1             | - | $1/(1+r)^n$           |       |             |           | <b>15</b>   |
|           | PV            | = | $\frac{1}{r}$ | - | $\frac{1/(1+r)^n}{r}$ |       |             |           |             |

(b)

eg, YP 3 years @ 10% = 2.4869

|      |                            |        |           |                  |           |
|------|----------------------------|--------|-----------|------------------|-----------|
|      | Gross income               |        | £1,000.00 | pa               |           |
| Less | Remunerative return        | £2,487 | 10%       | <u>(£248.69)</u> |           |
|      | Available for accumulation |        |           | £751.31          | pa        |
| x    | Amt £1pa in 3 years @ 10%  |        |           | <u>3.310</u>     |           |
|      |                            |        |           | £2,486.84        | <b>25</b> |

(c)

|      |                             |        |           |                  |  |
|------|-----------------------------|--------|-----------|------------------|--|
|      | Gross income                |        | £1,000.00 | pa               |  |
| Less | (Gross) Remunerative return | £1,811 | 9%        | <u>(£162.99)</u> |  |

|      |                            |                  |    |
|------|----------------------------|------------------|----|
|      |                            | <u>£837.01</u>   | 5  |
| Less | Tax @ 30%                  | <u>(£251.10)</u> |    |
|      | Available for accumulation | £585.91 pa       | 10 |
| x    | Amt £1pa in 3 years @ 3%   | <u>3.091</u>     |    |
|      |                            | £1,810.98        | 10 |

(d)

| Period | Flow     | PV @<br>25% | PV          |
|--------|----------|-------------|-------------|
| 0      | (£1,811) | 1           | (£1,811.00) |
| 1      | £1,000   | 0.8         | £800.00     |
| 2      | £1,000   | 0.64        | £640.00     |
| 3      | £1,000   | 0.512       | £512.00     |
|        |          | NPV         | £141.00     |

15

| Period | Flow     | PV @<br>35% | PV          |
|--------|----------|-------------|-------------|
| 0      | (£1,811) | 1           | (£1,811.00) |
| 1      | £1,000   | 0.74074     | £740.74     |
| 2      | £1,000   | 0.5487      | £548.70     |
| 3      | £1,000   | 0.40644     | £406.44     |
|        |          | NPV         | (£115.12)   |

Solve by interpolation

30.2%

10

**Paper 1, Question 5**

(a) Methodology

Outline

|      |   |
|------|---|
|      | Land value for EU                               |
| Add  | Gross replacement cost buildings and structures |
| Less | Obsolescence, Environmental factors etc         |
|      | Subject to adequate potential profitability     |

**Marks**

Land Value

EU value of actual site or notional replacement site in same locality  
 May be difficult because specialised nature  
 Notional replacement the same physical and locational characteristics  
 May be smaller than actual - modern substitute

25

Gross Replacement costs buildings and structures

All costs to complete from green field site, including fees  
 Consider modern substitute building - but not always appropriate

25

Deductions

Normally three heads  
 (1) Economic obsolescence - existing compared to modern  
 (2) Functional obsolescence - suitability for present use and prospect of continuance  
 (3) Environmental factors - consider local area + local/national planning policies

25

(b) Use and limitations

Valuation of specialised property for which rarely, if ever, sold on the open market  
 for continuing use, except on sale of business  
 eg, Oil refineries, chemical works - buildings merely clad specialised plant

Power stations - structures business specific  
Standard properties, but abnormal for location  
Schools, colleges - no competing market demand  
Museums, libraries - provided by public sector

Limitation: Cost does not necessarily = value.

**Paper 1, Question 6**

|     |  | <u>Marks</u> |
|-----|--|--------------|
| (a) | Capital value £100,000. Rent £10,000 pa ie, 10% nominal annual return.<br><br>In fact, rent £2,500/Q, payable in advance.<br><br>$2,500/97,500 = 0.02564$<br><br>$(1+0.02564)^4 - 1 = 0.10658$<br><br>ie, 10.66% effective annual return.  | 25           |
| (b) | <u>Calculation of worth</u> - estimate of the costs and benefits of ownership of an interest in property from the perspective of a specific client.<br>Will reflect the particular circumstances and criteria of the client.<br><u>Market value</u> - an estimate of the price achievable in the market.   | 25           |
| (c) | <u>Goodwill</u> - the possession of ready-formed business connections, as a separate element in the saleable value of a business.<br>Not all can be sold separately from the property. Inherent goodwill - difficult to distinguish from locational advantages. 'Adherent goodwill' not inherent, but sticks provided the business continues to be run in a reasonably competent manner. | 25           |
| (d) | FRI terms - shifts risk to tenant.   | 25           |

**Paper 2, Question 1**

(a) Freehold Interest    Let FRV=X

**Marks**

First 5 years

|         |   |       |        |                        |               |    |  |
|---------|---|-------|--------|------------------------|---------------|----|--|
|         |   |       |        | Current FRV            | X             | pa |  |
|         |   |       |        | Less: Contractual rent | -£5,000       |    |  |
| PV £1pa | 5 | yrs @ | 11.00% |                        | <u>3.6959</u> |    |  |

3.6959 X  
-£18,479

10

Second 5 years

|         |   |       |        |                        |               |    |  |
|---------|---|-------|--------|------------------------|---------------|----|--|
|         |   |       |        | Current FRV            | X             | pa |  |
| Amt £1  | 5 | yrs @ | 3.50%  |                        | <u>1.1877</u> |    |  |
|         |   |       |        | Less: Contractual rent | -£8,000       |    |  |
| PV £1pa | 5 | yrs @ | 11.00% | 3.6959                 |               |    |  |
| PV £1   | 5 | yrs @ | 11.00% | 0.5935                 | <u>2.1933</u> |    |  |

2.6050 X  
-£17,547

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Final 5 years

|         |    |       |        |                        |               |    |  |
|---------|----|-------|--------|------------------------|---------------|----|--|
|         |    |       |        | Current FRV            | X             | pa |  |
| Amt £1  | 10 | yrs @ | 3.50%  |                        | <u>1.4106</u> |    |  |
|         |    |       |        | Less: Contractual rent | -£12,000      |    |  |
| PV £1pa | 5  | yrs @ | 11.00% | 3.6959                 |               |    |  |
| PV £1   | 10 | yrs @ | 11.00% | 0.3522                 | <u>1.3016</u> |    |  |

1.8361 X  
-£15,620

10

8.1370 X  
-£51,646

$$\begin{array}{rclclcl} \pounds 30,000 & = & -\pounds 51,646 & + & 8.1370 & \times & \\ & & & & & & \\ & \times & = & & \underline{\pounds 10,034} & & \end{array} \quad \left| \quad \begin{array}{l} 20 \end{array} \right.$$

(b) Freehold Interest

|        |   |       |       |                 |               |         |    |
|--------|---|-------|-------|-----------------|---------------|---------|----|
| Amt £1 | 5 | yrs @ | 3.50% | Current FRV     | £10,034 pa    |         |    |
|        |   |       |       |                 | <u>1.1877</u> |         |    |
|        |   |       |       | FRV, 1st Review |               | £11,917 | 10 |

|        |    |       |       |                 |               |         |    |
|--------|----|-------|-------|-----------------|---------------|---------|----|
| Amt £1 | 10 | yrs @ | 3.50% | Current FRV     | £10,034 pa    |         |    |
|        |    |       |       |                 | <u>1.4106</u> |         |    |
|        |    |       |       | FRV, 2nd Review |               | £14,154 | 10 |

First 5 years

|         |   |       |        |                 |                |        |    |
|---------|---|-------|--------|-----------------|----------------|--------|----|
| PV £1pa | 5 | yrs @ | 11.00% | Contracted Rent | £12,500 pa     |        |    |
|         |   |       |        | FRV             | <u>£10,034</u> |        |    |
|         |   |       |        | Excess          | £2,466 pa      |        |    |
|         |   |       |        |                 | <u>3.6959</u>  |        |    |
|         |   |       |        |                 |                | £9,114 | 10 |

Second 5 years

|         |   |       |        |                 |                |                       |    |
|---------|---|-------|--------|-----------------|----------------|-----------------------|----|
| PV £1pa | 5 | yrs @ | 11.00% | Contracted Rent | £12,500 pa     |                       |    |
|         |   |       |        | FRV             | <u>£11,917</u> |                       |    |
|         |   |       |        | Excess          | £583           |                       |    |
| PV £1   | 5 | yrs @ | 11.00% | 3.6959          |                |                       |    |
|         | 5 | yrs @ | 11.00% | 0.5935          | <u>2.1933</u>  |                       |    |
|         |   |       |        |                 |                | <u>£1,278</u>         | 20 |
|         |   |       |        |                 |                | <u><u>£10,393</u></u> |    |

**Paper 2, Question 2**

(a) Tenant's Interest

|                      |    |       |        |  |                 | <u>Marks</u> |
|----------------------|----|-------|--------|--|-----------------|--------------|
|                      |    |       |        | Current FRV, excluding second improvements | £225,000 pa     |              |
| Amt £1               | 2  | yrs @ | 3.00%  |  | <u>1.0609</u>   |              |
|                      |    |       |        |  | £238,703 pa     |              |
|                      |    |       |        | Current FRV, excluding second improvements | £225,000 pa     |              |
| Amt £1               | 7  | yrs @ | 3.00%  |  | <u>1.2299</u>   |              |
|                      |    |       |        |  | £276,722 pa     | 10           |
|                      |    |       |        | Current FRV, excluding second improvements | £225,000 pa     |              |
| Amt £1               | 12 | yrs @ | 3.00%  |  | <u>1.4258</u>   |              |
|                      |    |       |        |  | £320,796 pa     |              |
| <u>Next 2 years</u>  |    |       |        | FRV 2-year reviews, say                    | £290,000 pa     |              |
| Less:                |    |       |        | Contractual rent                           | <u>£200,000</u> |              |
|                      |    |       |        | Profit Rent                                | £90,000 pa      |              |
| PV £1pa              | 2  | yrs @ | 11.50% |  | <u>1.7012</u>   |              |
|                      |    |       |        |  |                 | 10           |
|                      |    |       |        |  | £153,110        |              |
| <u>After 2 years</u> |    |       |        | Current FRV 5-year reviews                 | £300,000 pa     |              |
| Amt £1               | 2  | yrs @ | 3.00%  |  | <u>1.0609</u>   |              |
|                      |    |       |        |  | £318,270 pa     |              |
|                      |    |       |        | Less: FRV, excluding second improvements   | £238,703        |              |

|                       |    |              |  |  |                 |                 |  |
|-----------------------|----|--------------|--|--|-----------------|-----------------|--|
|                       |    |              |  | Profit Rent                              | £79,568         |                 |  |
| PV £1pa               | 5  | yrs @ 11.50% |  | 3.6499                                   |                 |                 |  |
| PV £1                 | 2  | yrs @ 11.50% |  | 0.8044                                   | <u>2.9358</u>   |                 |  |
|                       |    |              |  |  |                 | £233,595        |  |
| <u>After 7 years</u>  |    |              |  | Current FRV 5-year reviews               | £300,000 pa     |                 |  |
| Amt £1                | 7  | yrs @ 3.00%  |  |  | <u>1.2299</u>   |                 |  |
|                       |    |              |  |  |                 | £368,962 pa     |  |
|                       |    |              |  | Less: FRV, excluding second improvements | <u>£276,722</u> |                 |  |
|                       |    |              |  | Profit Rent                              | £92,241         |                 |  |
| PV £1pa               | 5  | yrs @ 11.50% |  | 3.6499                                   |                 |                 |  |
| PV £1                 | 7  | yrs @ 11.50% |  | 0.4667                                   | <u>1.7035</u>   |                 |  |
|                       |    |              |  |  |                 | £157,136        |  |
| <u>After 12 years</u> |    |              |  | Current FRV 5-year reviews               | £300,000 pa     |                 |  |
| Amt £1                | 12 | yrs @ 3.00%  |  |  | <u>1.4258</u>   |                 |  |
|                       |    |              |  |  |                 | £427,728 pa     |  |
|                       |    |              |  | Less: FRV, excluding second improvements | <u>£320,796</u> |                 |  |
|                       |    |              |  | Profit Rent                              | £106,932        |                 |  |
| PV £1pa               | 5  | yrs @ 11.50% |  | 3.6499                                   |                 |                 |  |
| PV £1                 | 12 | yrs @ 11.50% |  | 0.2708                                   | <u>0.9885</u>   |                 |  |
|                       |    |              |  |  |                 | £105,703        |  |
|                       |    |              |  |  |                 | <u>£649,545</u> |  |

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(b) Landlord's Interest

|                     |   |              |  |        |             |  |
|---------------------|---|--------------|--|--------|-------------|--|
| <u>Next 2 years</u> |   |              |  | Income | £200,000 pa |  |
| PV £1pa             | 2 | yrs @ 10.58% |  |        | 1.7221      |  |





**Paper 2, Question 3**

(a)

|        |             |        |                       |             |
|--------|-------------|--------|-----------------------|-------------|
| YP     | Perp        | @      | Rent                  | £100,000 pa |
|        |             |        | 9.5%                  | 10.526      |
|        |             |        | Initial Capital Value | £1,052,632  |
| Amt    | £1          | 5      | 3%                    | 1.159       |
|        |             |        | Future Capital Value  | £1,220,288  |
| <hr/>  |             |        |                       |             |
| Period | Flow        | PV     | NPV                   |             |
|        |             | 12.01% |                       |             |
| 0      | -£1,052,632 | 1.0000 | £1,052,632            |             |
| 1      | £100,000    | 0.8928 | £89,280               |             |
| 2      | £100,000    | 0.7971 | £79,710               |             |
| 3      | £100,000    | 0.7117 | £71,165               |             |
| 4      | £100,000    | 0.6354 | £63,536               |             |
| 5      | £100,000    | 0.5673 | £56,725               |             |
| 5      | £1,220,288  | 0.5673 | £692,215              |             |
|        |             |        | £0                    |             |

**Marks**

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(b)(i)

|     |                     |           |  |
|-----|---------------------|-----------|--|
| ARY | £150,000/£3,300,000 | 0.0455    |  |
|     |                     | ie, 4.55% |  |

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(b)(ii)

|                            |      |   |             |
|----------------------------|------|---|-------------|
| Assumed Value on Reversion |      |   | £250,000 pa |
| YP                         | Perp | @ | 7%          |
|                            |      |   | 14.286      |

| Period | Flow        | PV<br>6.83% | NPV        |
|--------|-------------|-------------|------------|
|        |             |             | £3,571,429 |
| 0      | -£3,300,000 | 1.0000      | £3,300,000 |
| 1      | £150,000    | 0.9361      | £140,411   |
| 2      | £150,000    | 0.8762      | £131,435   |
| 3      | £200,000    | 0.8202      | £164,044   |
| 4      | £200,000    | 0.7678      | £153,558   |
| 5      | £200,000    | 0.7187      | £143,741   |
| 5      | £3,571,429  | 0.7187      | £2,566,810 |
|        |             |             | £0         |

By iteration 6.83%

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|          |                             |      |         |    |             |
|----------|-----------------------------|------|---------|----|-------------|
| (b)(iii) | Current FRV                 |      |         |    | £250,000 pa |
|          | Amt                         | £1   | 5 yrs @ | 3% | 1.159       |
|          | Estimated FRV in 5 years    |      |         |    | £289,819    |
|          | YP                          | Perp | @       | 7% | 14.286      |
|          | Capital Value after 3 years |      |         |    | £4,140,265  |

| Period | Flow        | PV<br>9.58% | NPV        |
|--------|-------------|-------------|------------|
|        |             |             | -          |
| 0      | -£3,300,000 | 1.0000      | £3,300,000 |
| 1      | £150,000    | 0.9126      | £136,891   |
| 2      | £150,000    | 0.8328      | £124,927   |

|   |            |              |            |    |
|---|------------|--------------|------------|----|
| 3 | £200,000   | 0.7601       | £152,012   |    |
| 4 | £200,000   | 0.6936       | £138,727   |    |
| 5 | £200,000   | 0.6330       | £126,603   |    |
| 5 | £4,140,265 | 0.6330       | £2,620,841 |    |
|   |            |              | £0         |    |
|   |            | By iteration | 9.58%      | 30 |

|     |                                       |            |               |    |
|-----|---------------------------------------|------------|---------------|----|
| (c) | $\frac{£250 \text{ per Q}}{£9,750} =$ | 0.02564103 |               |    |
|     | $(1 + 0.02564)^4 - 1 =$               | 0.1066     | ie, 10.66% pa | 20 |

Paper 2, Question 4

**Marks**

(a)

|                       |          |
|-----------------------|----------|
| Investment            | £100,000 |
| Annual return (Gross) | £8,000   |
| Debt Funded           | £50,000  |
| Interest              | 6%       |
| Sale after 3 years    | £120,000 |

| <u>Return on Capital</u> |          |              |           |
|--------------------------|----------|--------------|-----------|
| Period                   | Flow     | PV           | NPV       |
|                          |          | <b>13.8%</b> |           |
| 0                        | £100,000 | 1.000        | -£100,000 |
| 1                        | £8,000   | 0.879        | £7,028    |
| 2                        | £8,000   | 0.772        | £6,175    |
| 3                        | £8,000   | 0.678        | £5,425    |
| 3                        | £120,000 | 0.678        | £81,372   |
|                          |          |              | £0        |

| <u>Return on Equity</u> |          |              |          |
|-------------------------|----------|--------------|----------|
| Debt Service            | Net Flow | NPV          |          |
|                         |          | <b>20.9%</b> |          |
| £50,000                 | -£50,000 |              | -£50,000 |
| -£3,000                 | £5,000   |              | £4,136   |
| -£3,000                 | £5,000   |              | £3,421   |
| -£3,000                 | £5,000   |              | £2,830   |
| -£50,000                | £70,000  |              | £39,614  |
|                         |          |              | £0       |

20

(b)

|                    |         |
|--------------------|---------|
| Sale after 3 years | £90,000 |
|--------------------|---------|

| <u>Return on Capital</u> |      |             |           |
|--------------------------|------|-------------|-----------|
| Period                   | Flow | PV          | NPV       |
|                          |      | <b>4.8%</b> |           |
| 0                        | -    | 1.000       | -£100,000 |

| <u>Return on Equity</u> |          |             |          |
|-------------------------|----------|-------------|----------|
| Debt Service            | Net Flow | NPV         |          |
|                         |          | <b>3.6%</b> |          |
| £50,000                 | -£50,000 |             | -£50,000 |

|   |         | £100,000 |         |          |         |         |  |    |
|---|---------|----------|---------|----------|---------|---------|--|----|
| 1 | £8,000  | 0.954    | £7,632  | -£3,000  | £5,000  | £4,828  |  |    |
| 2 | £8,000  | 0.910    | £7,281  | -£3,000  | £5,000  | £4,662  |  |    |
| 3 | £8,000  | 0.868    | £6,946  | -£3,000  | £5,000  | £4,501  |  |    |
| 3 | £90,000 | 0.868    | £78,141 | -£50,000 | £40,000 | £36,009 |  | 20 |
|   |         |          | £0      |          |         | £0      |  |    |

(c) Loan Repayment

|      |   |          |                  |                  |           |                   |    |    |
|------|---|----------|------------------|------------------|-----------|-------------------|----|----|
| (i)  |   |          | Loan             | £100,000         |           |                   |    |    |
|      | / | PV £1 pa | 20 yrs @         | 4%               | 13.5903   |                   |    |    |
|      |   |          |                  | Annual repayment | £7,358.18 |                   |    |    |
|      | x | PV £1 pa | 10 yrs @         | 4%               | 8.1109    |                   |    |    |
|      |   |          |                  | Loan Outstanding |           | <b>£59,681.39</b> |    | 20 |
| (ii) |   |          | Loan Outstanding | £59,681.39       |           |                   |    |    |
|      | / | PV £1 pa | 10 yrs @         | 6%               | 7.3601    |                   |    |    |
|      |   |          |                  | Annual repayment |           | <b>£8,108.79</b>  | pa | 20 |
| (ii) |   |          | Loan Outstanding | £59,681.39       |           |                   |    |    |
|      | / |          | Annual repayment | £7,358.18        |           |                   |    |    |
|      |   |          | YP               | 8.1109           |           |                   |    |    |

@

6%

by interpolation or  
calculation

**11.4** years

| 20

**Paper 2, Question 5**

|     |   | <u>Marks</u> |
|-----|---|--------------|
| (a) | If the potential use of the property is restricted, the rent and capital value should be less.<br>May require adjustment of the rental value of the subject premises as compared to comparables subject to normal user restrictions.  | 20           |
| (b) | Will have a negative impact on rental value as compared to comparable subject to normal assignment terms.   | 20           |
| (c) | The longer the period, the more exposed is the landlord to inflation and therefore the higher the rent and the yield that would be demanded.  | 20           |
| (d) | The normal capitalisation rate will not be appropriate. Annual reviews are not common and the rent is not directly linked to the property market.<br><u>Solution:</u> Growth explicit valuation model, either to calculate the appropriate yield given annual reviews, or to convert the annual rent to the equivalent standard review pattern. | 20           |
| (e) | Best solution, growth explicit valuation model adopting market or contractual rent as appropriate. Discount at the equated yield.   | 20           |

Paper 2, Question 6

|     |   | <u>Marks</u> |
|-----|---|--------------|
| (a) | Appraisal and Valuation Standards, PS3.3, Commentary -<br>Market Value will include elements of ...'hope value' ... arising from any expectation that circumstances affecting the property may change in the future ...<br>... amount ... must be limited to the extent that it would be reflected in offers made by prospective purchasers in the open market.   | 25           |
| (b) | Appraisal and Valuation Standards, UKPS1.4,<br>5.1 -<br>... personal planning consent<br>... contaminated, but continued use not inhibited<br>... overdeveloped<br>... old buildings, high replacement<br>cost<br>... market buy-to-let only, buy-to-use higher<br>value.   | 25           |
| (c) | Can be reflected provided that Rule 3 is not offended ie, that the purpose is not 'a purpose to which it could be applied only in pursuance of statutory powers, or for which there is no market apart from the requirements of any authority possessing compulsory purchase powers.'<br><br>... only in pursuance of statutory powers ... not controversial<br><br>... no market apart from the needs ... prevents competition between statutory bodies.<br><br>'special needs of a particular purchaser' - now deleted.<br><br>applies to land not to an interest in land | 25           |

(d)

Rule 5 - value to the owner - contractor's basis with allowance for disrepair and obsolescence of the existing premises.

Requirements -

- (1) Devoted to a purpose and, but for the compulsory acquisition, would continue to be used for that purpose.
- (2) No general demand or market for the land for that purpose.
- (3) Bona fide intention to reinstate on another site.
- (4) Lands Tribunal has discretion to adopt market value basis.

25

## Valuation Theory and Practice

### Examiner's Comments on Candidate Answers December 2004

#### Paper 1

##### Question 1

Not attempted by the candidates.

##### Question 2

Generally, candidates failed to make appropriate adjustments for the varying rent-free periods and for the timing of the stepped rental.

##### Question 3

Candidates generally provided good answers to this question, but payback analysis and its limitations was not well explained.

##### Question 4

Not attempted by the candidates.

##### Question 5

Very well answered.

##### Question 6

Well answered.

#### Paper 2

##### Question 1

Not attempted by the candidates.

##### Question 2

Generally well answered.

##### Question 3

Parts (a) and (d), in particular, were poorly answered.  
A simple dcf analysis would suffice for part (a).  
Part (d) was not attempted by candidates.

##### Question 4

Part (c) in particular, was poorly answered. PV £1 pa (YP) tables should have been used, but were not.

##### Question 5

Well answered.

##### Question 6

Not attempted by the candidates.