

**COVENANT UNIVERSITY
NIGERIA**

*TUTORIAL KIT
OMEGA SEMESTER*

**PROGRAMME: ESTATE
MANAGEMENT**

COURSE: ESM 521

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ESM 521: ADVANCED VALUATION

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Question One

Your uncle who is a layman in the field of built environment intends to invest in real estate development, he has however asked for your opinion on how to go about the scheme. Explain to him the various steps involved in a development scheme.

Question Two

A developer wishes to estimate the development value of a site, which is for sale, very close to Sango Overhead Bridge, with outline planning permission for 500m² (gross) of standard unit shops with 5,000m² (gross) of offices above. After consideration of various layouts and designs, an optimum scheme was finalised which the developer feels confident would receive detailed planning permission. From the knowledge of the area and the scheme proposed, the developer and his advisers consider the following additional information to be realistic; all building works could commence in 6 months time and take 18 months to complete. Current building costs are estimated by the QS to be – shops ₦350/m² and office ₦750/m².

Current rental values are estimated by the letting agent to be – shops ₦130/m² and offices ₦150/m²

The developer considers it prudent, after consultation with his agent, to allow 6 months period for letting the shops and offices. If the scheme goes ahead, it could be funded from a mixture of internal finance or short term bank loan, until a decision is made about whether to keep the completed building on a long term investment or to sell it and hopefully recoup a capital profit.

Question Three

You have just been employed as the General Manager of a property development company. Your first assignment is to carry out an analysis of the market for the development of a retail complex to be located at No. 190, Oju-Oore, Ota. Identify and explain the major focus of your analysis.

Question Four

A vacant and partially dilapidated Church building in the centre of a Local Government headquarters is being offered for sale at N2.5million. A local Property Development Company, who is interested in converting the building into small specialty shopping centre on two floors. The reconstructed building will be approximately 3000m² (gross) in size, providing about 2000m² of net lettable floor space divided into 18 units of between 50m² and 250m². Rental income is predicted to average out at ₦300.00/m². An investment return of 7½% is sought. Building costs are estimated at ₦550.00/m². Building finance is available at 1.4% per month. and

the development will take 24 months to complete and let. Costs of development will also include the following:

- i. professional fees at 15% of building cost
- ii. contingencies at 5% of building cost plus professional fees
- iii. promotional cost, say ₦50,000.00
- iv. letting fees at 10% of rent
- v. sale fees at 3% of GDV/Realisable Value

Calculate what will be the likely level of profit to the Development Company.

Question Five

A vacant and partially dilapidated Church building in the centre of a Local Government headquarters is to be purchased by a local Property Development Company, who is interested in converting the building into small specialty shopping centre on two floors. The reconstructed building will be approximately 3000m² (gross) in size, providing about 2000m² of net lettable floor space divided into 18 units of between 50m² and 250m². Rental income is predicted to average out at ₦300.00/m². An investment return of 7½% is sought. Building costs are estimated at ₦550.00/m². Building finance is available at 1.4% per month and the development will take 24 months to complete and let. Costs of development will also include the following:

- i. professional fees at 15% of building cost
- ii. contingencies at 5% of building cost plus professional fees
- iii. promotional cost, say ₦50,000.00
- iv. letting fees at 10% of rent
- v. sale fees at 3% of GDV/Realisable Value
- vi. allowance for profit and risk at 16%

How much should the Developer offer for the site?

Question Six

Captain Davis intends to acquire 3 plots of land having a tenement bungalow in Matori, Lagos, which has been valued at ₦1,000,000.00. The cost of acquiring the land will include 5% agency fees, 5% legal fees and stamp duty on the land would be 3%. Evidence abounds that there is high demand for office accommodation within the neighbourhood while planning laws could be obtained for office block having gross floor area 18m by 30m for 10 floors and having a lettable area of 400m² per floor. Rental evidence within the neighbourhood shows that similar property can let for ₦500.00/m² while similar freehold interest earns 4%. The QS has advised that the building will cost ₦3,000.00/m² while demolition will require ₦50,000.00, car park and landscaping will cost ₦300,000.00. The following professionals will be involved and will accept 2% respectively (Architect, QS, Land Surveyor, Structural Engineer and Town Planner). Construction has been estimated to be completed within four years, contingencies at 5% and cost of capital fixed at the current rate of 25%. On completion, the building will be disposed at agency

and legal fees of 5% respectively while the cost of advertisement is ₦100,000.00. You are required to assess and advice the developer, his probable profit on completion of the project.

Question Seven

According International Valuation Standard Committee (2005), valuation report is a document that records the instructions for the assignment, the basis and purpose of the valuation, and the result of the analysis that led to the opinion of value. Explain.

Question Eight

CMFB, a prospective developer finds it necessary to ascertain how much it can afford to offer for a small prime sub-urban site in Ikeja which has a planning permission for 1000m² of offices producing 800m² of lettable floor space, car park with net area of 300m². The projected development period is expected to be 3 years and the building contract period of 2 years. Finance can be arranged at 21% with comparable schemes recently yielding 7%. Recent letting of similar properties within the neighbourhood is ₦250.00/m² net of all outgoings while the cost of construction is ₦1,000.00/m², for car park ₦250.00/m². Return for risk and profit of 25% of GDV is required. Set out, in detail, a development valuation to assess the residual value of the site.

Question Nine

Calculate the Royalty payment to be made to the freeholder by a mineral operator. The estimated output of the quarry is 30,000 tonnes p.a. and the market price is ₦2.00/tonne. The operator will invest ₦125,000.00 in the operation, and his working costs will be ₦30,000.00p.a.

Question Ten

Chief Oluwafemi has a freehold interest in an 8 hectare quarry site which he let to RATCON and Company for 40 years or until the quarry is exhausted. The total chalk content is considered to be 100,000 tonnes/hectare and the anticipated rate of working is 25,000 tonnes p.a. The lease requires a surface rent of ₦100.00/hectare and a dead rent of ₦2,500.00p.a. The royalty payment has been agreed at 30kobo/tonne. Determine the value of the quarry.

Question Eleven

In carrying out market area analysis, there are forces that influence value which must be critically examined by the Valuer/Appraiser. Explain.

Question Twelve

An investor plans to purchase a piece of development land for ₦1,400,000.00. A year following the purchase of the land, he plans to let out a portion of the land for two years to an industrial concern for the storage of its spare parts at ₦100,000.00p.a. In the second year following the purchase of the land, he intends to develop an industrial building at a cost N4million. By the third year, he would install the equipment at an all inclusive cost of N1.8million. An annex building would be added during the fifth year at a cost of ₦520,000.00. Beginning from the third

year, the venture is expected to provide a net yearly revenue of N2.2million and by the sixth year, the revenue will increase to N2.45million p.a. This return is expected to continue for the following three years. Market analysis indicates that similar investments in the neighbourhood have an average return of 15%. Determine the NPV and IRR of the investment and advice the investor accordingly.

Question Thirteen

A market area is the geographic area within which a subject property competes for the attention of buyers and sellers in the real estate market. Explain.

Question Fourteen

Market Analysis is a four stage study of the relative social and economic characteristics of a cohesive area, in order to determine the demand for the product analysed. Explain.

Question Fifteen

Differentiate between market area, neighbourhood and district. Explain the one preferable in real estate and why.

Question Sixteen

Prepare a dummy valuation report on one of the blocks in the student hostels in Covenant University.

Question Seventeen

Explain how income from mineral-bearing land may be structured in a mining lease.

Question Eighteen

In carrying out development valuation, it is important to understand some terms that are used. Explain.

Question Nineteen

Pastor Jesutofunmi has been offered the freehold interest in a property comprising a large factory for N70,000.00. The proposal is to modernise the factory in three stages spending N60,000.00 in year one, and N80,000.00 in year two and further N100,000.00 in year four. Pastor Jesutofunmi expects to let the first stage in year two at N9,000.00 p.a. the second stage in year three at N10,000.00 p.a. and final stage in year five at N14,000.00 p.a. All leases will be 15 years with 5 yearly reviews. Pastor Jesutofunmi will sell the whole interest in year six for N550,000.00 on which he will pay capital gains tax of N69,000.00. He will borrow money for the scheme at 15%. Determine the IRR that will justify Pastor Jesutofunmi's investment in the scheme.

Question Twenty

Mr. Joseph has a freehold interest in a block of 4 flats at Oju-Oore where he receives ₦100,000.00 p.a./flat and the freehold yield is 8%. He has however leased out this property to Johnson & Co. for a period of 20 years out of which the company has 10 years unexpired term. Johnson & Co. sub-let the property to Paul Silas & Co. at an annual rent of ₦200,000.00/flat for 8 years out of which 4 years has expired. Both companies are subject to company tax of 45 kobo in ₦1 and sinking fund of 2½%. With all transactions on FRI, assess the capital values of the companies' interests if the FRV of the property is ₦300,000.00 p.a./flat.

ANSWERS

1. Students are to list and explain the following steps:
 - i. Identify the best use to which the piece of land or land property to be developed can be put in future, having regard to feasibility consideration;
 - ii. Estimate the market value of the land when put into this use (GDV)
 - iii. Consideration must be given to the period of development (including gestation period)
 - iv. The estimated cost of development must be determined
 - v. Deduct the estimated cost of development from the market value of the development

2. Calculation of Royalty

	₦	₦	
Selling Price		2.00	
Less: i. Working Cost/Tonne	<u>₦25,000.00</u>		
	25,000.00Tonnes	1.00	
ii. Interest on Capital	<u>₦100,000.00</u> x 12½%		
	25,000.00Tonnes	<u>0.50</u>	
		<u>1.50</u>	
Residue		0.50	
Operator's Profit @ 50%		<u>0.25</u>	
Royalty/Tonne		0.25	

3. Determination of Internal Rate of Return

Year	Cash Outflows (₦)	Cash Inflows (₦)	PV of ₦1 @ 15%	PV of Cash Outflows (₦)	PV of Cash Inflows (₦)
0	70,000.00	-	1.0000	70,000.00	-
1	60,000.00	-	0.8696	52,176.00	-
2	80,000.00	9,000.00	0.7561	60,488.00	6,804.90
3	-	19,000.00	0.6575	-	12,492.50
4	100,000.00	19,000.00	0.5718	57,180.00	10,864.20
5	-	33,000.00	0.4972	-	16,407.60
6	69,000.00	550,000.00	0.4323	29,828.70	237,765.00
PVs of Cashflows				269,672.70	284,334.20

$$\begin{aligned}
 \text{NPV} &= \text{PV}(\text{Cash Inflows} - \text{Cash Outflows}) \\
 &= \text{N}(269,672.70 - 284,334.20) \\
 &= \text{N}14,661.50
 \end{aligned}$$

Since the NPV is positive, it shows that the yield of 15% is low therefore a higher yield that will produce a negative NPV will be applied.

Year	Cash Outflows (N)	Cash Inflows (N)	PV of N1 @ 18%	PV of Cash Outflows (N)	PV of Cash Inflows (N)
0	70,000.00	-	1.0000	70,000.00	-
1	60,000.00	-	0.8475	50,850.00	-
2	80,000.00	9,000.00	0.7182	57,456.00	6,463.80
3	-	19,000.00	0.6086	-	11,563.40
4	100,000.00	19,000.00	0.5158	51,580.00	9,800.20
5	-	33,000.00	0.4371	-	14,424.30
6	69,000.00	550,000.00	0.3704	25,557.60	203,720.00
PVs of Cashflows				255,443.60	245,971.70

$$\begin{aligned}
 \text{NPV} &= \text{PV}(\text{Cash Inflows} - \text{Cash Outflows}) \\
 &= \text{N}(245,971.70 - 255,443.60) \\
 &= (\text{N}9,471.90)
 \end{aligned}$$

With negative NPV, it means that the IRR lies between 15% and 18%, therefore it has to be calculated using interpolation.

$$\begin{aligned}
 \text{IRR} &= R_1 + (R_2 - R_1) \frac{\text{NPV}_1}{\text{NPV}_1 - \text{NPV}_2} \\
 &= 15 + (18 - 15) \frac{\text{N}14,661.50}{\text{N}14,661.50 - (\text{N}9,471.90)} \\
 &= 15 + (3) \frac{\text{N}14,661.50}{\text{N}14,661.50 - (-\text{N}9,471.90)} \\
 &= 15 + (3) \frac{\text{N}14,661.50}{\text{N}24,133.40} \\
 &= 15 + (3)(0.6075)
 \end{aligned}$$

$$\begin{aligned}
&= 15 + 1.8225 \\
&= 16.8225 \\
&= \mathbf{16.8\%}
\end{aligned}$$

4. In answering this question, students are to:
- i. Define Market Area;
 - ii. Differentiate among Market Area, Neighbourhood and District;
 - iii. List and explain the following value influences:
 - ❖ Social Influences;
 - ❖ Economic Influences;
 - ❖ Governmental Influences;
 - ❖ Environmental Influences.

5. i. **Valuation of Johnson and Company's Leasehold Interest**

Term	₦	₦
Rent Reserved (₦200,000.00/flat p. a for 4flats)	800,000.00	
Less:		
Rent paid to Mr. Joseph (₦100,000.00/flat p. a for 4flats)	400,000.00	
Profit Rent	<u>400,000.00</u>	
YP 4 years @ 9% & 2½%, tax @ 45%	<u>1.8945</u>	
		757,800.00
Reversion		
FRV (₦300,000.00/flat p. a. for 4 flats)	1,200,00.00	
Less:		
Rent paid to Mr. Joseph (₦100,000.00/flat p. a. for 4flats)	400,000.00	
Profit Rent	<u>800,000.00</u>	
YP 2 years @ 9½% & 2½%, tax @ 45%	1.0072	
PV of ₦1 in 4 years 9½%	<u>0.8340</u>	
YP 2 years deferred 4 years 9½%	0.8400	
		<u>672,000.00</u>
Capital Value of Johnson & Company's Interest		<u>1,429,800.00</u>

ii. **Valuation of Paul Silas and Company's Sub-leasehold Interest**

	₦
FRV (₦300,000.00/flat p. a. for 4 flats)	1,200,000.00
Less: Rent Reserved (₦200,000.00/flat p. a for 4flats)	<u>800,000.00</u>
Profit Rent	400,000.00
YP 4 years @ 10% & 2½%, tax @ 45%	<u>1.8593</u>
Capital Value of Paul Silas & Company's Interest	<u>743,720.00</u>

6. Students are to list and explain the stages involved in valuation exercise.
- i. Taking instruction or brief from the client;
 - ii. Preparation for survey or inspection;
 - iii. The inspection;

vi. Preparation and submission of report.

7. Students are to explain the following terms

- ❖ Development Period
- ❖ Construction Period
- ❖ Construction Costs
- ❖ Income
- ❖ Cost of Fund (Interest Rate)
- ❖ Return for Risk and Profit (Developer's Profit)

8. Value of Scheme (GDV)	₦	₦
Income p. a.		
Shops 500m ² less 10%		
= 450m ² @ ₦130/m ²	58,500.00	
Offices 5,000m ² less 20%		
= 4,000m ² @ ₦150/m ²	<u>600,000.00</u>	
Total Annual Income	658,500.00	
YP in perp. @ say 7%	<u>14.2857</u>	
Capital Value (GDV)		9,407,133.45

Cost of Scheme (Development)

Building Costs

	₦
Shop - 500m ² @ ₦350/m ²	175,000.00
Offices - 5,000m ² @ ₦750/m ²	<u>3,750,000.00</u>
	3,925,000.00

Ancillary Costs

Landscaping, Cr Parking, Access Road, Services, etc. say	200,000.00
Demolition	<u>-</u>
	4,125,000.00

Professional Fees

Architect, QS, Engineers etc say 12½%	515,625.00
	<u>4,640,625.00</u>

Contingencies @ say 3% of total costs incurred	139,218.75
	<u>4,779,843.75</u>

Short Term Finance @ say 14% p.a. (on total building costs, ancillary costs professional fees and contingencies) for say ½ building period $(1 + i)^n - 1$	519,059.77
	<u>5,298,903.52</u>

(on total costs incurred on completion of building works for full length of letting delay – i.e. 6 months) $(1 + i)^n - 1$	358,777.23
	<u>5,657,680.75</u>

Letting and Sale Fees

Letting fee @ say 15% (of income)	98,775.00	
Advertising and Marketing say	25,000.00	
Fees for selling @ say 2% of Sale Price	<u>188,142.67</u>	
	5,969,598.42	
Return for Risk and Profit – Developer’s Profit @ say 17% (of GDV)	<u>1,599,212.69</u>	
Total Expected (Development) Costs		<u>7,568,811.11</u>
site Value in 2½ years time		1,838,322.34
PV of ₦1 2½ years @ 14%		<u>0.72067</u>
		1,324,823.34
<i>Less</i> Acquisition Costs @ say 2½%		<u>33,120.59</u>
Site Value Today		<u>1,291,702.75</u>
	Say	<u>₦1,300,000.00</u>

9. Students are to list and explain the following stages of market analysis
- ❖ Data Collection
 - ❖ Data Analysis
 - ❖ Analysis of the Effect of Introducing the New Project into the Market
 - ❖ Development of Conclusions and Recommendations