

# **NAMIBIA UNIVERSITY**

OF SCIENCE AND TECHNOLOGY

# **FACULTY OF NATURAL RESOURCES AND SPATIAL SCIENCES**

#### **DEPARTMENT OF LAND AND PROPERTY SCIENCES**

QUALIFICATION(S): BACHELOR OF PROPERTY STUDIES			
DIPLOMA IN PROPERTY STUDIES			
QUALIFICATION(S) CODE: 08BPRS 06DPRS	NQF LEVEL: 5		
COURSE CODE: ITV521S	COURSE NAME: INTRODUCTION TO VALUATION		
EXAMS SESSION: NOVEMBER 2019	PAPER: THEORY		
<b>DURATION:</b> 3 HOURS	MARKS: 100		

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER		
EXAMINER(S)	AMIN A. ISSA	
MODERATOR:	SAMUEL ATO K. HAYFORD	

INSTRUCTIONS		
1.	Read the entire question paper before answering the Questions.	
2.	Please write clearly and legibly!	
3.	The question paper contains a total of 4 questions.	
4.	You must answer ALL QUESTIONS .	
5.	Make sure your Student Number is on the EXAMINATION BOOK(S).	

# **PERMISSIBLE MATERIALS**

1. Non-programmable Scientific Calculator

THIS QUESTION PAPER CONSISTS OF 8 PAGES (Including this front page)

### **Question 1**

For each of the following statements indicate whether it is 'TRUE' or 'FALSE'. Each correct answer carries 1 mark. (25)

- a) The value of a property may be affected negatively or positively by factors within the property itself and external factors.
- b) A property built near an entertainment centre including a bar and a gambling spot may experience a rise in value overtime.
- c) You need previous years' rental information when carrying out for a valuation using the income approach.
- d) To value properties like townhalls and schools, valuers rely heavily upon the income approach to value.
- e) A few years ago, when the NamDeb Building was new, office space rented for N\$150 per square metre per year. This is known as contract rent.
- f) A large factory is being built close to a town. No new construction has begun on new housing facilities. Demand for housing is up because of the factory construction and new factory jobs.
  It is expected that rent for dwelling space in that area will remain the same.
- g) The formula for the Cost Method of valuation is: Reproduction or Replacement Cost of improvements + Depreciation on improvements Site Value = Property Value.
- h) Accrued depreciation is total depreciation due to all causes from time of construction to the date of appraisal.
- i) Loss of jobs due to layoffs or closures may cause loss of value in property and is known as external or economic obsolescence.

j) In order for property sales to be truly comparable in terms of time, they must occur within an appropriate time frame. The time variable is relative to the property under consideration.

- k) Full rental value is the value of a property to a particular investor, based on the investor's standards on investment acceptability rather than on objective market standards.
- I) The concept behind the Present Value of N\$1 is that a person may accept to receive a lesser sum now which could be invested to earn sufficient interest to ensure that by the time the future is reached, the invested sum plus the interest earned would equal N\$1.
- m) One of the main characteristics of the property market is that it is disaggregated either on the basis of geographical location, use or tenure.
- n) A commercial building sells for N\$300,000 and its rate of return or capitalization rate is 8 percent (8%). The net operating income (NOI) is thus calculated at N\$24,500.
- o) You are trying to verify the sales price on Mr Hayford's house. He tells you he bought it for N\$1,230,000. You check with the buyers and they tell you the sales price was N\$1,200,000. You will rely on value given to you by Mr Hayford's information when doing a comparable sales analysis.
- p) A forced property buyer is someone who has to take the first property that comes along although the property may be overpriced.
- q) A buyer pays more for a property than what it would otherwise sell if offered on the market. He is aware that a new highway will soon be built in front of the property. It is said the property has a hidden value.
- r) A person who sells a property for a low price because he is not knowledgeable of local market conditions is known as uniformed buyer.

s) The size of a subject building is 119m<sup>2</sup> while that of a comparable building is 130m<sup>2</sup>. The adjustment to be made is to add the difference between the two in dollar amount to the comparable building.

- t) If the age of sale period of a comparable property is 5 months while the increment in value of properties in general is 10% per annum, then the adjustment is 3.75%.
- u) A comparable property sold 8 months ago for N\$123,200. If the appropriate adjustment for market conditions is 0.25% per month, the market-adjusted normal sale price of the comparable property is N\$ 125,664.
- v) Maerua Mall, Kristus Church, Zoo park, Independence Stadium and the Parliament Building constitute the residential real estate sub-market in Windhoek.
- w) An arms-length transaction is where the buyer and seller know each other and also act prudently.
- x) The Profits method of valuation is used to value profit generating properties that have either a legal or factual monopoly.
- y) In the residual method of valuation if the Cost of Development is N\$200,000 and the Gross Development Value is N\$600,000; then the profit margin at 12% will be N\$24,000.

[25]

#### Question 2

- a) Josephina owns a house which she thinks needs repairs in four (4) years' time. Interest rates are charged at around 5%. If she needs N\$6,000 at the end of the four years, what will she need to put aside annually at the end of each year? (2)
- b) Mr. lipumbu would like to repaint and fix the roof of his house. He has a quotation for the repairs as follows: Repainting N\$800; fixing of roof N\$600. What amount should he put in the

bank now in order that he is able to do the repairs in 4 years' time? The bank rate (interest rate) is presently 12%.

- c) An investment property having a freehold interest was recently sold for N\$1,500,000 at a yield of 12%. Calculate the rent (net income). (2)
- d) Calculate the value of a property if the yield is 7% and the income is N\$100,000 per annum.

e) Compute the Net Operating Income and value of a property from the following information:

Effective Gross Income N\$10,000,000

Property Management Expenses 15%

Operating Expenses 35%

Expected rate of return 8%

f) Compute the amount of depreciation for the items below, then compute loss due to depreciation (value after depreciation) if estimated replacement cost is N\$247,000.

Item	Reproduction Cost	Percentage Depreciation	Amount of Depreciation
Bath Fixtures	N\$1,800	75%	
Carpeting	N\$4,200	50%	
Furnace	N\$2,800	25%	
Roof	N\$5,500	90%	
Total Depreciation (TD)			
Replacement Cost (RC)			
Value after depreciation =			

(2)

(4)

f) Match the type of property to the appropriate and suitable method of valuation.

### Type of property

- i) Single storey residential property in an active property market
- ii) Ella Du Plessis Secondary school in Khomasdal
- iii) A new office block for rent along the central business district
- iv) A vacant piece of land with development potential in Windhoek north
- v) Roof Top Hotel in Kleine Windhoek

# **Methods of Valuation**

- A. The Profits method
- B. The Income Approach (Investment method)
- C. The Cost Method
- D. The Comparative Method
- E. The Residual Method

(5)

g) The Replacement Cost New (RCN) of a property is N\$960,000 and its depreciation is N\$240,000. Calculate the value of the land as well as the depreciation percentage if the value of the property is N\$1,160,000. (3)

[25]

#### **Question 3**

- a) Highlight the five (5) major steps in valuing a property using the comparative method of valuation.
- b) A comparable home has a value of N\$200,000. It has an extra bedroom compared to the subject property. The appraiser estimates this accounts for N\$15,000 difference in value between the two properties. The subject property has a larger garage which is worth an extra N\$2,000 in value. Considering these factors, what is the subject property's adjusted property value?

c) A residential property, built in 2004 in Wanaheda comprises a main building and a small flat on a 300m<sup>2</sup> erven/plot. With the information below and using the cost method of valuation, find the capital value of the property:

- Area of main building is 15m by 10m
- Area of flat is 40m<sup>2</sup>
- Construction rate/m<sup>2</sup> for the Main building is N\$6,000 while that of the flat is N\$3,000
- Land values in Wanaheda are at N\$600 per square metre

(8)

d) A new property development is to take place in Rocky Crest. A total of ten (10) houses will be built and later on sold at a good price of N\$800,000 each. A contractor has tendered to build each of the 110m² houses at a rate of N\$5,500 per square metre. The professional fees to be paid totals around N\$100,000 and the siteworks per house will be sub-contracted for N\$20,000 for each house. Calculate the residual value of the land if the expected profit margin is around 12%.

[25]

# Question 4

a) Hotel Pendaneni in Otjomuise is operating well and the owner needs advice on how much he should charge for letting. The following information is provided:

Gross sales

N\$3,000,000

**Purchases** 

N\$1,400,000

**Expenses** 

N\$850,000

**Tenants Remuneration** 

50%

(4)

- b) Briefly explain each of the following as used in valuation:
  - i) Physical Depreciation
  - ii) Externalities or economic obsolescence
  - iii) Functional Obsolescence

(3)

Int	rodu	ction to Valuation	ITV521S
c)	Ехр	plain in brief the following codes of measurements in valuation:	(4)
	i)	Gross External Area (GEA)	
	ii)	Gross internal Area (GIA)	
	iii)	Net Internal Area (NIA)	
d)	Hig	shlight any six (6) important contents of a good Valuation Report.	(3)
e)	Hig	shlight the four (4) conditions that a comparable property must meet.	(4)
f)	Wh	ny is a Deed an important source of market data to the valuer?	(4)
g)	In	squatter upgrading schemes, a valuer, in addition to assessing sale prices and	land rent,
	ma	ay be called upon to do other six (6) tasks. List these tasks.	(3)
			[25]
			[23]

All the best of luck.

ITV521S



# *NAMIBIA UNIVERSITY*

OF SCIENCE AND TECHNOLOGY

# **FACULTY OF NATURAL RESOURCES AND SPATIAL SCIENCES**

#### **DEPARTMENT OF LAND AND PROPERTY SCIENCES**

QUALIFICATION(S): BACHELOR OF PROPERTY STUDIES
DIPLOMA IN PROPERTY STUDIES

QUALIFICATION(S) CODE: 08BPRS
06DPRS

COURSE CODE: ITV521S

COURSE NAME: INTRODUCTION TO VALUATION

EXAMS SESSION: NOVEMBER 2019

PAPER: THEORY

DURATION: 3 HOURS

MARKS: 100

FIRST OPPORTUNITY EXAMINATION MEMORANDUM		
EXAMINER(S)	AMIN A. ISSA	
MODERATOR:	SAMUEL ATO K. HAYFORD	

THIS MEMORANDUM CONSISTS OF 11 PAGES (Including this front page)

The model answers are used as guidelines only.

The information presented by the students will be evaluated on merit.

#### Question 1

For each of the following statements indicate whether it is 'TRUE' or 'FALSE'. Each correct answer carries 1 mark. (25)

- a) The value of a property may be affected negatively or positively by factors within the property itself and external factors.
  TRUE
- b) A property built near an entertainment centre including a bar and a gambling spot may experience a rise in value overtime.

  FALSE
- c) You need previous years' rental information when carrying out for a valuation using the income approach.

  \*\*TRUE\*\*
- d) To value properties like townhalls and schools, valuers rely heavily upon the income approach to value.

  FALSE
- e) A few years ago, when the NamDeb Building was new, office space rented for N\$150 per square metre per year. This is known as contract rent.

  FALSE
- f) A large factory is being built close to a town. No new construction has begun on new housing facilities. Demand for housing is up because of the factory construction and new factory jobs.
  It is expected that rent for dwelling space in that area will remain the same.
  FALSE
- g) The formula for the Cost Method of valuation is: Reproduction or Replacement Cost of improvements + Depreciation on improvements Site Value = Property Value. FALSE
- h) Accrued depreciation is total depreciation due to all causes from time of construction to the date of appraisal.

  TRUE
- i) Loss of jobs due to layoffs or closures may cause loss of value in property and is known as

- j) In order for property sales to be truly comparable in terms of time, they must occur within an appropriate time frame. The time variable is relative to the property under consideration.

  \*\*TRUE\*
- k) Full rental value is the value of a property to a particular investor, based on the investor's standards on investment acceptability rather than on objective market standards. FALSE
- I) The concept behind the Present Value of N\$1 is that a person may accept to receive a lesser sum now which could be invested to earn sufficient interest to ensure that by the time the future is reached, the invested sum plus the interest earned would equal N\$1.
- m) One of the main characteristics of the property market is that it is disaggregated either on the basis of geographical location, use or tenure.

  \*\*TRUE\*
- n) A commercial building sells for N\$300,000 and its rate of return or capitalization rate is 8 percent (8%). The net operating income (NOI) is thus calculated at N\$24,500. FALSE
- o) You are trying to verify the sales price on Mr Hayford's house. He tells you he bought it for N\$1,230,000. You check with the buyers and they tell you the sales price was N\$1,200,000. You will rely on value given to you by Mr Hayford's information when doing a comparable sales analysis.
  FALSE
- p) A forced property buyer is someone who has to take the first property that comes along although the property may be overpriced.
- q) A buyer pays more for a property than what it would otherwise sell if offered on the market. He is aware that a new highway will soon be built in front of the property. It is said the property has a hidden value.
  TRUE
- r) A person who sells a property for a low price because he is not knowledgeable of local market

conditions is known as uniformed buyer.

TRUE

- s) The size of a subject building is 119m<sup>2</sup> while that of a comparable building is 130m<sup>2</sup>. The adjustment to be made is to add the difference between the two in dollar amount to the comparable building.

  FALSE
- t) If the age of sale period of a comparable property is 5 months while the increment in value of properties in general is 10% per annum, then the adjustment is 3.75%.
- u) A comparable property sold 8 months ago for N\$123,200. If the appropriate adjustment for market conditions is 0.25% per month, the market-adjusted normal sale price of the comparable property is N\$ 125,664.
  TRUE
- v) Maerua Mall, Kristus Church, Zoo park, Independence Stadium and the Parliament Building constitute the residential real estate sub-market in Windhoek.
- w) An arms-length transaction is where the buyer and seller know each other and also act prudently.
- x) The Profits method of valuation is used to value profit generating properties that have either a legal or factual monopoly.
- y) In the residual method of valuation if the Cost of Development is N\$200,000 and the Gross Development Value is N\$600,000; then the profit margin at 12% will be N\$24,000. FALSE

[25]

#### **Question 2**

a) Josephina owns a house which she thinks needs repairs in four (4) years' time. Interest rates are charged at around 5%. If she needs N\$6,000 at the end of the four years, what will she need to put aside annually at the end of each year? (2)

Annual Sinking Fund =  $N$6000 \times i/[Amt. N$1 - 1]$  (1)

$$= N$6,000 \times 0.05/[1.216-1]$$

$$= N$1,389 (rounded off)$$
 (1)

b) Mr. lipumbu would like to repaint and fix the roof of his house. He has a quotation for the repairs as follows: Repainting N\$800; fixing of roof N\$600. What amount should he put in the bank now in order that he is able to do the repairs in 4 years' time? The bank rate (interest rate) is presently 12%.

Total Repair sum = N\$1,400

Present Value of 
$$N$1 = N$1,400 \times 1/(1.12)4$$
 (1)

$$= N$389.72$$
 (1)

c) An investment property having a freehold interest was recently sold for N\$1,500,000 at a yield of 12%. Calculate the rent (net income). (2)

Capital Value = Net Income x YP in perpetuity (1)  

$$N$1,500,000 = NI \times 1/0.12$$
  
 $N$1,500,000 = NI \times 8.33$   
 $NI = N$1,500,000 / 8.33$   
=  $N$180,072$  (rounded off) (1)

d) Calculate the value of a property if the yield is 7% and the income is N\$100,000 per annum.

Capital Value = Net Income x YP in perpetuity (1)  
= 
$$N$100,000 \times 1/0.07$$
  
=  $100,000 \times 14.2857$   
=  $N$1,428,570$  (rounded off) (1)

e) Compute the Net Operating Income and value of a property from the following information:

Effective Gross Income	N\$10,000,000	
Property Management Expenses	15%	
Operating Expenses	35%	
Expected rate of return	8%	
		(4)
$PME = 15\% \times N\$10,000,000 = N\$1,500,000$		

PME = 
$$15\% \times N\$10,000,000 = N\$1,500,000$$
  
 $OE = 35\% \times N\$10,000,000 = N\$3,500,000$   
 $Total = N\$5,000,000$  (1)

Net Operating Income (NOI) = 
$$N$10,000,000 - N$5,000,000$$
  
=  $N$5,000,000$  (1)

(2)

Capital Value = 
$$NOI / 0.08 (8\%)$$
 (1)  
=  $N$5,000,000 / 0.08$   
=  $N$62,500,000$  (1)

f) Compute the amount of depreciation for the items below, then compute loss due to depreciation (value after depreciation) if estimated replacement cost is N\$247,000.

Item	Reproduction Cost	Percentage Depreciation	Amount of Depreciat	ion
Bath Fixtures	N\$1,800	75%	N\$1,350 1/2	
Carpeting	N\$4,200	50%	N\$2,100 1/2	
Furnace	N\$2,800	25%	N\$ 700 1/2	
Roof	N\$5,500	90%	N\$4,950 1/2	
Total Depreciation (TD)			N\$9,100 1	
Replacement Cost (RC)			N\$247,000	
Value after depreciation = RC-TD		<b>N\$237,900</b> 2		

(5)

f) Match the type of property to the appropriate and suitable method of valuation.

# Type of property

i)	Single storey residential property in an active property market	D	(1)
ii)	Ella Du Plessis Secondary school in Khomasdal	С	(1)
iii)	A new office block for rent along the central business district	В	(1)
iv)	A vacant piece of land with development potential in Windhoek north	E	(1)
v)	Roof Top Hotel in Kleine Windhoek	А	(1)

# Methods of Valuation

- A. The Profits method
- B. The Income Approach (Investment method)

ITV521S

- C. The Cost Method
- D. The Comparative Method

E. The Residual Method (5)

g) The Replacement Cost New (RCN) of a property is N\$960,000 and its depreciation is N\$240,000. Calculate the value of the land as well as the depreciation percentage if the value of the property is N\$1,160,000.

Replacement Cost New	N\$960,000	
Depreciation N\$240,000/ N\$960,000] x 100 = <b>25</b> %	N\$240,000	(1)
Depreciated Repl. Cost Land Value = <b>N\$1,160,000 - N\$760,000 =</b>	N\$760,000 <b>N\$400,000</b>	(2)
Value of property	N\$1,160,000	(-/

[25]

#### **Question 3**

- a) Highlight the five (5) major steps in valuing a property using the comparative method of valuation. (5)
  - Select suitable comparables (comparable set)
  - Extract relevant information
  - Analyse information including comparable sale prices, rental values, yields etc.
  - Adjust sale prices for noted differences.
  - Formulate an opinion of market value for subject property

Note: one (1) mark for each major step

b) A comparable home has a value of N\$200,000. It has an extra bedroom compared to the subject property. The appraiser estimates this accounts for N\$15,000 difference in value between the two properties. The subject property has a larger garage which is worth an extra N\$2,000 in value. Considering these factors, what is the subject property's adjusted property value?

(8)

Subject Property	Assumption	Comparable N\$200,000	
Bedroom	3	4 (one bedroom xtra)	
Adjustment		-N\$15,000	(1)
Garage	Larger	smaller	
Adjustment		+N\$2,000	(1)
Total Adjustments		-N\$13,000	(1)
Adjusted property		N\$187,000	(2)
Value			

- c) A residential property, built in 2004 in Wanaheda comprises a main building and a small flat on a 300m<sup>2</sup> erven/plot. With the information below and using the cost method of valuation, find the capital value of the property:
  - Area of main building is 15m by 10m
  - Area of flat is 40m<sup>2</sup>
  - Construction rate/m<sup>2</sup> for the Main building is N\$6,000 while that of the flat is N\$3,000
  - Land values in Wanaheda are at N\$600 per square metre

Area of Main Building = 
$$150 m^2 \times N\$6,000$$
 $N\$900,000$ 
 (1)

 Area of Flat =  $40m^2 \times N\$3,000$ 
 $N\$120,000$ 

 Replacement Cost New
  $N\$1,020,000$ 
 (1)

 Less: Depreciation @25% ( $15/60$ )\* $100\%$ 
 $N\$255,000$ 
 (1)

 Depreciated Replacement Cost
  $N\$765,000$ 
 (1)

 Add: Land Value ( $300m^2 \times N\$600$ )
  $N\$180,000$ 
 (1)

 CAPITAL VALUE
  $N\$945,000$ 
 (3)

d) A new property development is to take place in Rocky Crest. A total of ten (10) houses will be built and later on sold at a good price of N\$800,000 each. A contractor has tendered to build each of the 110m² houses at a rate of N\$5,500 per square metre. The professional fees to be paid totals around N\$100,000 and the siteworks per house will be sub-contracted for N\$20,000 for each house. Calculate the residual value of the land if the expected profit margin is around 12%.

Introduction to Valuation	ITV521S
Gross Development Value (GDV) (10hses x N\$800,000) N\$8,000,000	(1)
Less: Development Costs	
10hses x 110m² x N\$5,500 N\$6,050,000	(1)
Professional fees N\$ 100,000	
Siteworks (10hses @N\$20,000) <u>N\$ 200,000</u>	(1)
N\$6,350,000	
Profit margin @12% of GDV <u>N\$ 960,000 (1) N\$7,310,000</u>	(1)
LAND RESIDUAL VALUE N\$ 690,000	(3)
	[25]

# **Question 4**

a) Hotel Pendaneni in Otjomuise is operating well and the owner needs advice on how much he should charge for letting. The following information is provided:

Gross sales	N\$3,000,000	
Purchases	N\$1,400,000	
Expenses	N\$850,000	
Tenants Remuneration	50%	(4)
Gross sales	N\$3,000,000	
Less: Purchases	<u>N\$1,400,000</u>	
	N\$1,600,000	(1)
Less: Expenses	<u>N\$ 850,000</u>	
Net Income	N\$ 750,000	(1)
Less: Tenant Remuneration @50	0%. <u>N\$ 375,000</u>	
Rental	N\$ 375,000	(2)

- b) Briefly explain each of the following as used in valuation:
  - i) Physical Depreciation

Physical deterioration is the most obvious form of depreciation because it can be seen. It is a loss of value from all causes of age and action of the elements. (1)

ii) Externalities or economic obsolescence

Economic obsolescence is when a property's value decreases because of external factors e.g. increase in repo rate. (1)

# iii) Functional Obsolescence

Functional obsolescence is a reduction of an object's usefulness or desirability because of an outdated design feature that cannot be easily changed. (1)

(3)

# c) Explain in brief the following codes of measurements in valuation:

(4)

# i) Gross External Area (GEA)

Involves measuring a building (external wall thickness) taking each floor into account. (1½)

### ii) Gross internal Area (GIA)

Involves measurement of a building on the same basis as GEA but excluding external wall thicknesses. (1)

### iii) Net Internal Area (NIA)

Net Internal Area (NIA) is the usable space within a building measured to the internal finish of structural, external or party walls, taking each floor into account. (1½)

# d) Highlight any six (6) important contents of a good Valuation Report.

(3)

- General description of the property
- Location and locality
- Tenure details and Outgoings
- Building details and accommodation details
- Date of Valuation, Opinion of value and Valuation Worksheet
- Appendices (sketch plans, copy of Title deed, site plan etc)

Note: Half (0.5) mark for each highlighted content

# e) Highlight the four (4) conditions that a comparable property must meet.

(4)

- It must have been recently sold in the open market
- It must be very similar to the subject property
- It must be in the location where the subject property is (also called local comparability)
- The Conditions of Sale must be comparables (mortgage financing to mortgage financing)

Note: One (1) mark for each condition highlighted

f)	Why is	a Deed an important source of market data to the valuer?	(4)
	i)	The identification of the parties involved and the description of the property of	conveyed
		represent information that is similar to that in the real estate sales contract.	(1)
	ii)	The statement of the consideration or price paid is provided.	(1)
	iii)	It is a statement of interest conveyed together with limitations.	(1)
	iv)	The date of signing and recording the deed.	(1)

- g) In squatter upgrading schemes, a valuer, in addition to assessing sale prices and land rent, may be called upon to do other six (6) tasks. List these tasks. (3)
  - i) Baseline surveys for needs assessment and enrolment of beneficiaries
  - ii) House numbering and registration (termed "referencing")
  - iii) Compensation for wayleaves and social facilities.
  - iv) Financial analysis and projections
  - v) To assess the impact of upgrading on property prices in the neighbourhood by using the 'before-and-after' approach.
  - vi) The valuer may also be required to work in a regularisation scheme (recording, adjudication, classification and registration)

Note: Half (0.5) mark for each condition highlighted

[25]

# **End of Memorandum!**