



**PAMIBIA UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

**FACULTY OF ENGINEERING AND SPATIAL SCIENCES**

**DEPARTMENT OF ARCHITECTURE AND SPATIAL SCIENCES**  
*(LAND AND PROPERTY SECTION)*

<b>QUALIFICATION(S):</b> BACHELOR OF PROPERTY STUDIES DIPLOMA IN PROPERTY STUDIES	
<b>QUALIFICATION(S) CODE:</b> 08BPRS 06DPRS	<b>NQF LEVEL:</b> 6
<b>COURSE CODE:</b> PMV611S	<b>COURSE NAME:</b> PRINCIPLES AND METHODS OF VALUATION
<b>EXAMS SESSION:</b> JULY 2022	<b>PAPER:</b> THEORY
<b>DURATION:</b> 3 HOURS	<b>MARKS:</b> 100

<b>SECOND OPPORTUNITY / SUPPLEMENTARY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER(S)</b>	AMIN ISSA
<b>MODERATOR:</b>	SAMUEL ATO K. HAYFORD

<p style="text-align: center;"><b>INSTRUCTIONS</b></p> <ol style="list-style-type: none"><li>1. Read the entire question paper before answering the Questions.</li><li>2. Please write clearly and legibly!</li><li>3. The question paper contains a total of <b>4 questions</b>.</li><li>4. You must answer <b><u>ALL QUESTIONS</u></b>.</li><li>5. Make sure your Student Number is on the EXAMINATION BOOK(S).</li></ol>
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**PERMISSIBLE MATERIALS**

1. Non-programmable Scientific Calculator

**THIS QUESTION PAPER CONSISTS OF 9 PAGES** (Including this front page)

**Question 1**

- a) For each of the following statements indicate whether it is true or false. Each correct answer carries 1 (one) mark. (20)
- i) The number of years a house has been built is its effective age while the condition and utility of a house is its actual age.
  - ii) It is the discounted or present value of a series of future cash flows, where the initial outlay is included as an outflow. The NPV is therefore the surplus or deficit present valued monetary sum above or below the initial outlay (purchase price).
  - iii) The effective age of a property is the age indicated by the condition and utility of a structure and is based on a valuer's judgement and interpretation of market perceptions.
  - iv) In the same market category, similar buildings do depreciate at the same rate.
  - v) Reproduction cost is the cost of constructing, using current construction methods and materials, a substitute structure equal to the existing structure in quality and utility.
  - vi) The principle of anticipation in the investment method of valuation may involve the anticipated future income or estimating a capitalization rate that implicitly reflects the anticipated pattern of change in income overtime.
  - vii) The Amount of N\$1 Per Annum refers to the amount to which annual deposits of N\$1 each will grow in a given number of years and at a stated rate of interest.
  - viii) If a building layout or style fails to meet market tastes or standards due to changes in design and technological advances, the building suffers from economic obsolescence.

- ix) The difference between a building's economic life and its remaining economic life is the actual age.
- x) The Internal Rate of Return (IRR) is the actual return provided by an investment which equates the present value of the future cash flow with the initial outlay.
- xi) The Residual Method is used to find the value of special purpose properties and the land on which they are built.
- xii) The main challenges in the residual method is in estimating the amounts of the many variables that go into the valuation.
- xiii) The method is used for the purposes of finding the residual value of land only and if the land is bought then it is also used to find the value of the developments on the land.
- xiv) If the land is already owned by the developer, the profit margin and cost of development can then be easily calculated.
- xv) Gross development value is the value of the development intended by the developer and is realized by either sale of the developed properties or the renting out of rooms in an estate or even income generated by the hotel.
- xvi) The contingencies that are part of the cost of development include, amongst others, industrial action by the construction workers, floods, sudden increase in construction materials
- xvii) In the Profits method of valuation the value of the property will be related to the profits which can be made from their use in as far as the value is derived from the income generated by the business.

- xviii) Both rental and capital values tend to be directly influenced by the potential for profit and in these circumstances a valuation having regard to the profits achieved is more likely to produce a realistic valuation than any application of comparison methods.
- xix) A prospective purchaser may hold the view that current profits could be improved substantially by better management, improved financial controls, the incorporation of other sales lines or improvements to the premises. This is called business acumen.
- xx) Pump prices and income margins available to both dealer and oil company are prescribed and also the availability of sites for the construction of petrol stations are restricted and these influence the way valuations are carried out.

b) **Multiple Choice Questions**

(10)

- i) Which formula is applicable in establishing value of a property by cost approach?
- A. Cost of site + cost of building – obsolescence – depreciation = value of the property
  - B. Cost of site + cost of building + obsolescence – depreciation = value of the property
  - C. Cost of materials + cost of building – expenses = value of the property
  - D. Cost of money + cost of building – obsolescence – depreciation = value of the property.
- ii) Which method is best suited for the valuation of hotels, lodges and cinemas?
- A. Cost approach
  - B. Accounts method
  - C. Residual method
  - D. Hospitality comparable method
- iii) A property valuer is undertaking the valuation of NUST in August 2018, which property type should he/she consider in establishing the rate of land per square metre?
- A. The NUST land rates
  - B. The rate being applied on public universities in Windhoek



- C. The rate being applied on properties within Windhoek West
  - D. All of the above.
- iv) For a good valuation report to be compiled, it is vital for the valuer to note the following sources of information except for:-
- A. Estate agents
  - B. Deeds registry
  - C. Real estate newspaper pull out
  - D. Interior design magazine
- v) The sales comparison approach involves various elements of comparison. Which of the following elements is NOT one employed in this approach?
- A. Cost
  - B. Property rights conveyed
  - C. Conditions of sale
  - D. Date of sale
- vi) The following are the purposes for which a property valuation is done, except for
- A. Cost estimation
  - B. Insurance
  - C. Expropriation
  - D. Purchase and sale
- vii) What is the capitalization factor for years purchase in perpetuity at a yield of 8% to 1 decimal place?
- A. 12.5
  - B. 10.0
  - C. 11.5
  - D. 9.0

- viii) How does the sales comparison approach estimate property value?
- A. Calculates price as a function of estimate rental income
  - B. Estimates price appreciation based on the past year of market performance
  - C. Compares the asking price to the last time the home was sold
  - D. Compares the subject property to nearby recently sold properties
- ix) What is the best description of the discounted cash flow method?
- A. The sum of the future value of rents over a specified period of time
  - B. A discount paid at the purchase because the seller guarantees cash flow
  - C. The sum of the present value of rents over a specified period of time
  - D. The ratio of rent over the selling price of the home
- x) For which of the following, profit method of valuation is most appropriate?
- A. Vacant Land
  - B. Petrol station
  - C. Residential Home
  - D. Public School

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**Question 2**

- a) Under what circumstances would a valuer use the Cost Method of valuation? (6)
- b) Derive the Net Rate from a comparable whose sale price is N\$300 000, and the Erf value being N\$80,000 while value of its outbuilding is N\$25,000 and value of siteworks and other improvements is N\$5, 000. It has an area of 200m<sup>2</sup>. (6)
- c) Use the Reduced Floor Area analysis to calculate the value of a house whose rate per square metre is N\$3,000. The area of the main house is 200m<sup>2</sup>, the verandah is 10m<sup>2</sup>, the granny flat is 40m<sup>2</sup> and the garage has an area of 20m<sup>2</sup>. Apply standardized conversion factors. (5)

- d) Using the cost approach, determine the market value of a property with a 300 square metre building if construction costs new are N\$5,000 per square metre, land value is estimated to be N\$400,000 and total depreciation on the building to date is estimated to be 8%? (3)

[20]

**Question 3**

- a) Using the following information provided by owners of Mopani Hotel (freehold property) for the year 2020, calculate the Rental Value and also the Capital Value for the hotel.

• Total Gross Earnings	N\$4 000 000
• Cost of Sales/Purchases	N\$ 800 000
• Hotel expenses	N\$1 650 000

**Additional Information**

Interest on Tenant's capital	12%	
Tenants remuneration for working in Business	12%	
Risk taking & Entrepreneurship	15%	
Yield for the hotel business	9%	(10)

- b) The Gross development value of a town house development in Rocky Crest is N\$16,250,000 while its building costs (including cost of roads and professional fees) is N\$ 8,400,000. The cost of finance is N\$840,000. If the Developer's Profit is 20% calculate the Land Residual Value. (5)
- c) Mzekezeke intends to construct a much larger single storey residence once a rural plot is purchased. As a preliminary step, he wants to estimate the cost of the main building, along with a detached garage and a large workshop. To assist, a local builder has provided you with replacement cost figures for homes of equal quality to the one contemplated by Mzekezeke. Calculate the replacement cost, based on the following information. (5)

<u>Structure</u>	<u>Measurement</u> <u>(metres)</u>	<u>Total</u> <u>m<sup>2</sup></u>	<u>Rep Cost</u> <u>/m<sup>2</sup></u>	<u>Rep. Cost</u> N\$
Main Bldg.	9.15 x 18.29		N\$6,925	
Garage	7.32 x 12.19		N\$3,432	
Workshop	6.10 x 6.10		N\$3,225	

Total Replacement cost:

[20]

#### Question 4

a) The following is data on a property in Windhoek West:

Sale price	N\$ 400 000
Value of Land	N\$ 100 000
Cost of Improvements new	N\$ 450 000

i) Calculate the Lump-sum dollar depreciation as well as the Lump-sum percentage depreciation of the property. (4)

ii) Calculate the average annual percentage depreciation if the property is 8 years old. (2)

b) The operating statement of a prime apartment block (freehold) is as follows:

Effective Gross Income	N\$500 000
Fixed Operating Expenses	N\$41 000
Variable Operating Expenses	N\$55 000
Replacement Allowance	N\$35 600



Using the information provided above, calculate the:

- i. Total Operating Expenses (2)
  - ii. Operating Expense Ratio (2)
  - iii. Net Operating Income (2)
  - iv. Net Operating Income Ratio (2)
  - v. Value of the property given the yield for similar type of properties being 8% (4)
- c) A freehold property on the market has an asking price of N\$600 000 and a rental income of N\$1 800 per month. Calculate the yield? (3)
- d) Shombo CC intends to build a total of 25 one bedroom flats in Otjomuise whose end sales value is N\$180 000 each. The cost of constructing each flat is N\$850 per m<sup>2</sup>. Each flat has an area of 55 m<sup>2</sup>. Shombo CC wants your professional advice on the price of the land they need to build the 25 flats. The following additional information is provided:
- Ancillaries (other improvements) @ 3% of building costs
  - Professional fees @ 12.5%
  - Contingencies @ 3%
  - Finance Costs @ 7%
  - Marketing fees @ 3%
  - Entrepreneurs Profit @ 15% (9)

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**End of Examination**