## חAmIBIA UחIVERSITY OF SCIEחCE AחD TECHחOLOGY

## FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

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

| QUALIFICATION(S) : BACHELOR OF PROPERTY STUDIES, DIPLOMA IN PROPERTY STUDIES, BACHELOR OF LAND ADMINISTRATION |  |
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| QUALIFICATION(S) CODE: 08BPRS, 06DPRS, 07BLAM | NQF LEVEL: 5 |
| COURSE CODE: ITV521S | COURSE NAME: INTRODUCTION TO VALUATION |
| EXAMS SESSION: NOVEMBER 2022 | PAPER: THEORY |
| DURATION: 3 HOURS | MARKS: 100 |


| FIRST OPPORTUNITY EXAMINATION QUESTION PAPER |  |
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| EXAMINER(S) | AMIN ISSA |
| MODERATOR: | SAMUEL A 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 CALCULATORS ARE ALLOWED

THIS QUESTION PAPER CONSISTS OF 10 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.
a) The value of a property may be affected negatively or positively by factors within the property itself and not by external factors.
b) A residential property built near an entertainment centre including a bar and a gambling place may experience a decline in value overtime.
c) A capitalization rate demonstrates the relationship between the net operating income of a property and its sales price.
d) To value properties like Town Halls and schools, valuers rely heavily upon the comparative approach to value.
e) A large factory is being built close to a town. No new construction has begun on new housing facilities. It is expected rent for dwelling space in that area will decline (decrease).
f) The formula for the Cost Method of valuation is: Reproduction or Replacement Cost of improvements - Depreciation on improvements + Site Value = Property Value.
g) Accrued depreciation is total depreciation due to all causes from time of construction to the date of appraisal.
h) Decrease in home loan rates may decrease the supply of residential properties.
i) Highest and best use is defined as the reasonably probable and legal use of vacant land or an improved property that is physically possible, appropriately supported, financially feasible, and that results in the highest value.
j) The concept behind the Present Value of $N \$ 1$ is that a person may accept to receive a higher 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 $\mathrm{N} \$ 1$.
k) In Valuation; repairs, municipal property taxes, management and collection charges, insurance premium and miscellaneous charges are known as outgoings.
I) One of the main characteristics of the property market is that it is disaggregated either on the basis of geographical location, use or tenure.
m) You are trying to verify the sales price of 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.
n) Two examples of special use property are a cemetery and a school.
o) A buyer pays more for a property than for what it would otherwise sell if offered on the market. They are aware that a new highway will soon be built in front of the property. It is said the property has a hidden value.
p) Where insufficient information on the transactions of similar properties is available and cannot be easily found in the open market, direct capital comparison may be possible.
q) The size of a subject building is $119 \mathrm{~m}^{2}$ while that of a comparable building is $130 \mathrm{~m}^{2}$. The adjustment to be made is to subtract the difference between the two from the comparable building.
r) Maerua Mall, Kristus Church, Zoo Park, Independence Stadium and the Parliament Building indicate the residential real estate sub-market in Windhoek.
s) An arms-length transaction is where the buyer and seller do not know each other and also act prudently.
t) The Profits method of valuation is used to value profit generating properties that have either a legal or factual monopoly.
u) A property sold at an auction as a result of a default in payment by a loan holder will reflect the market value of the property.
v) Functional obsolescence is a reduction of an object's usefulness or desirability because of an outdated design feature that cannot be easily changed.
w) Your subject property has one bathroom more than a possible comparable property. The properties are very similar in all other ways. You could get an adjusted sale price more representative of the market value for the subject property by subtracting the depreciated
value of an extra bath from the sale price of the comparable
x) Any increase in the population of informal settlement is the result of a lot of factors including lack of provision of serviced land by the central and local government.
y) Geographic information systems is a powerful tool for managing, manipulating, and displaying location-specific data.

## Question 2

For each of the following questions chose the correct answer from the alternative answers provided. Each correct answer carries 2 marks.
i) The Gross Development Value of a residential development in Wanaheda is expected to be $N \$ 3,000,000$ while its total Cost of Development is $N \$ 2,000,000$. If the property agent's fee is at $3 \%$ and investor expects a profit margin of $12 \%$, the value of the land for the development will be:
A. $\mathrm{N} \$ 640,000$
B. $\mathrm{N} \$ 510,000$
C. $\mathrm{N} \$ 550,000$
D. $\mathrm{N} \$ 910,000$
ii) A property is being valued using the income capitalization approach. Annually, it has an estimated gross income of $N \$ 30,000$, vacancy and credit losses of $N \$ 1,500$, and operating expenses of $N \$ 10,000$. Using a capitalization rate of $9 \%$, what is the indicated value (to the nearest $N \$ 1,000$ )?
A. $N \$ 167,000$
B. $N \$ 222,000$
C. $\mathrm{N} \$ 180,000$
D. $\mathrm{N} \$ 206,000$
iii) If a commercial structure is a rectangle with sides of 65 meters and 35 meters and the current local cost to build a similar structure is $\mathrm{N} \$ 25,000$ per sq.m., what is the estimated construction cost of the structure using the square meter method?
A. $N \$ 56,875,000$
B. $N \$ 55,487,500$
C. $\mathrm{N} \$ 2,500,000$
D. $\mathrm{N} \$ 55,450,000$
iv) Suppose you have a possible comparable that is the same as the subject property except that the comparable has a finished basement valued at $\mathrm{N} \$ 43,000$. You can derive a closer estimate of the value of the subject property by:
A. adding $N \$ 43,000$ to the sale price of the comparable
B. subtracting $N \$ 43,000$ from the sale price of the comparable
C. using the comparable sale price as is
D. there is no need for comparing
v) A comparable property was sold 3 months ago at the price of $\mathrm{N} \$ 900,000$. If the sales price is adjusted for time and the percentage increase overtime is $10 \%$ per year. What will the adjusted sale price of the said comparable property be? Answer is to be given to the nearest decimal.
A. $\mathrm{N} \$ 922,500$
B. $N \$ 825,030$
C. $\mathrm{N} \$ 990,000$
D. $N \$ 800,000$
vi) Which approach has the best indication of market value?
A. The Income Approach
B. The profits method/Approach
C. The sales comparison approach
D. The Cost Method /Approach
vii) A property is estimated to produce a net operating income of $\mathbf{N} \$ 1,000,000$. Which of the following capitalization rates would produce the greatest estimated value of the property?
A. $8.5 \%$
B. $7.5 \%$
C. $6.5 \%$
D. $5.5 \%$
viii) If an appraiser is valuing real property by sales comparison, whose actions is he or she least likely to consider?
A. Own office records
B. Estate agents
C. Fellow valuers/appraisers
D. Government agencies
ix) A Valuer is appraising a Brewery in Windhoek northern industrial area. In defining her market for comparables, which of these should she most likely consider?
A. Windhoek northern industrial area
B. Windhoek north and Windhoek south industrial areas
C. Prosperita industrial area, Okahandja and Otjiwarongo towns
D. All of the above
x) The sales comparison approach is most effective when the subject property and comparable sales all have the same potential highest and best use.
A. False
B. True
C. Partly true
D. Partly false
xi) The subject industrial building has low ceiling which limits its functional utility. One of the comparable sales has a much higher ceiling, and is more usable. What type of adjustment should be made in the sales comparison approach?
A. The comparable should be adjusted down to the subject
B. The subject should be adjusted down to the comparable
C. There should not be any adjustment
D. All are correct
xii) Intangible adjustments made to comparable sales would include:-
A. Buyer and seller agreement
B. Financing terms, property rights conveyed, Market condition (time)
C. Deed of sales, verification certificate, comparison analysis
D. None of the above
xiii) A valuer finds a sale and re-sale of a property which occurred 18 months apart, indicating a $1.5 \%$ monthly decrease in value. What might be a problem with the valuer using this $1.5 \%$ market conditions adjustment in the sales comparison approach?
A. the valuer can only use the adjustment for the comparable property once
B. there is no problem as long as the monthly decrease of $1.5 \%$ changes
C. This adjustment assumes a steady decline over the entire period, which may or may not be accurate
D. B and C are correct
xiv) A property sold for $\$ 60,000$. Nine months later, it sold again for $\$ 69,000$. No modifications were made to the property during this period. What is the indicated annual adjustment for market conditions?
A. $+9 \%$
B. $+10 \%$
C. $+20 \%$
D. $+12 \%$
xv) A comparable property sold for $\$ 800,000$. In the sales comparison grid, it is adjusted downward 5\% for property rights, downward 10\% for financing terms, and upward 15\% for market conditions. What is the net adjusted sale price?
A. $N \$ 640,000$
B. $N \$ 760,000$
C. $N \$ 920,000$
D. $N \$ 786,600$
xvi) The effective gross annual income for an office complex is $\mathbf{N} \$ 250,000$. Total expenses for this year are $N \$ 175,000$. Using a capitalization rate of $10 \%$, the property is valued at:-
A. $N \$ 250,000$
B. $N \$ 750,000$
C. $N \$ 1,750,000$
D. $N \$ 2,500,000$
xvii) The cost of constructing new the existing building at today's construction standards using today's materials is known as:-
A. Replacement cost
B. Reproduction cost
C. Depreciation cost
D. Effective age
xvii) What is the present value of $N \$ 1$ per annum at $5 \%$ for 20 years given that the present value of $N \$ 1$ in 20 years at $5 \%$ is 0.3769 .
A. $N \$ 2.653$
B. $N \$ 10.462$
C. $N \$ 12.462$
D. $\mathrm{N} \$ 6.462$
xix) The owner of a large piece of land would like to sell it. Unfortunately, the land is located adjacent to the city sewage treatment plant. The value of this property will be affected by the incurable type of depreciation called:-
A. Physical deterioration
B. Functional obsolescence
C. External Obsolescence
D. Physical obsolescence
xx) Assuming the facts below, calculate the indicated value of the property using the cost approach.
Land value $=\mathrm{N} \$ 30,000$
Cost to reproduce or replace improvements $=\mathrm{N} \$ 180,000$
Depreciation $=30 \%$
A. $N \$ 84,000$
B. $N \$ 156,000$
C. $N \$ 210,000$
D. $N \$ 234,000$

## QUESTION 3:

For each of the following questions chose the correct answer from the alternative answers provided. Each correct answer carries 2 marks.
i) If $N \$ 20,000$ has been invested for the last 3 years at $6 \%$ per annum compound interest, calculate the total amount invested to-date.
A. $N \$ 23,820$
B. $N \$ 16,180$
C. $N \$ 3,820$
D. $N \$ 1,200$
ii) The roof of a factory will need replacing in four years' time as part of a maintenance management programme. The current cost of the work is estimated to be $N \$ 25,000$. Building costs are forecast to increase at an average rate of $3.5 \%$ per annum over this period of time. What will the cost of the repair be in four years' time?
A. $N \$ 21,312.50$
B. $N \$ 50,000$
C. $N \$ 28687.50$
D. None of the above
iii) You invest $N \$ 10,000$ at $10 \%$ for 8 years and then withdraw the funds and invest them at $12 \%$ for 3 years. What is the value of the investment at the end of 11 years?
A. $N \$ 21,436$
B. $\mathrm{N} \$ 30,117.60$
C. $N \$ 51,553.60$
D. None of the above
iv) An investment will return the sum of $\mathrm{N} \$ 50000$ in six years' time. What would be the current value of this sum allowing for discounting at the interest rate of $6 \%$ per annum?
A. $N \$ 18,000$
B. $N \$ 17,248$
C. $N \$ 67,248$
D. $N \$ 35,248$
v) VaKwetu wants to buy a laptop worth $N \$ 9000,3$ years from now. How much should he deposit at the end of each year at an interest rate of $11.5 \%$ in order for him to get the amount to buy the laptop?
A. $N \$ 6,320$
B. $N \$ 11,680$
C. N\$2 680
D. None of the above
vi) There are major repair works planned in 8 years' time for the entire industrial estate that you hold in your investment portfolio. Assuming that you can invest money at an average rate of return of $6 \%$ per annum, how much will accrue if you invest $N \$ 50,000$ at the end of each year for the next eight years?
A. $N \$ 494,873$
B. $N \$ 79,692.40$
C. $N \$ 11,182.60$
D. $N \$ 115,182.60$
vii) If you invested $\mathbf{N} \$ 10,000$ at $6 \%$ on your 20th birthday, how much would you have on your 40th birthday?
A. $N \$ 32,071.40$
B. $N \$ 102,857.18$
C. $N \$ 3,118.05$
D. $367,855.91$
viii) Kamosho needs to do roof repairs to her house in 4 years' time at a cost of $N \$ 28,688$. Advise her on how much money she should set aside each year assuming that she can invest money at a rate of return of $4 \%$ p.a.
A. $N \$ 6,666$
B. $N \$ 6,656$
C. $N \$ 6,566$
D. $N \$ 6,756$
ix) An investment will return a sum of $N \$ 50,000$ in 6 years' time. What would the current value of this be allowing for discounting at the interest rate of $6 \%$ per annum?
A. $N \$ 53,000.00$
B. $N \$ 70,925.95$
C. $N \$ 35,248.03$
D. $N \$ 75,925.95$
x) Mr. Tau Tshwane want to buy a house worth N\$600 000 in 10 years' time. He has decided to deposit his money in FNB which gives him an interest rate of $10.5 \%$ per annum. If he deposits $N \$ 50000$ now, will he be able to buy the dream house?
A. Yes
B. No
C. Maybe
D. None of the above

## Question 4

a) A developer requires a 4000 square metres site to build town houses and wishes to be advised on the likely selling price of the land. The following details are given:

| Gross Development Vaiue | N\$ 625000 |
| :--- | :---: |
| Building Costs | N $\$ 360000$ |
| Siteworks | N\$ 45000 |
| Professional fees | N\$ 21260 |
| Contingencies | N\$ 20250 |
| Bridging Finance | N\$ 28140 |
| Developers profit | $20 \%$ |

Calculate the Gross residue for land. In other words, how murh should he pay for the land? (5)
b) The estimated gross earnings of Manitu Hotel is N\$1800000 per annum. The cost of goods sold (purchase) amount to N\$ 1000000 and working expenses amount to $\mathrm{N} \$ 300000$. If tenant remuneration for working in the business is $45 \%$ of the Net Income and interest on capital is $8 \%$, calculate the rental value.
c) Highlight any six (6) types of Values other than open market value that are reiated to valuation of landed property.
d) List any four (4) investment characteristics of real property.

## END OF EXAMINATION PAPER!!

