



**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: 6
COURSE CODE: LEM621S	COURSE NAME: LAND ECONOMICS
EXAMS SESSION: NOVEMBER 2019	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	UAURIKA KAHIREKE
MODERATOR:	SAMUEL ATO K. HAYFORD

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

PERMISSIBLE MATERIALS

1. Non-programmable Scientific Calculator

THIS QUESTION PAPER CONSISTS OF 6 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. (20)

- a) Site-value taxation is a form of capital value taxation in which improvements are exempt. Lower assessment costs are one of the advantages of this approach because reassessment is not needed to capture the value of new buildings.
- b) A property value banding system has the advantage of at least mitigating the need for the individual valuation of every property tax purpose.
- c) A method of property tax assessment that requires property owners to tax themselves without a credible verification process will obviously boost the size of the tax base.
- d) Over taxing nonresidential properties has the general tendency of resulting in tax importing to residents of other jurisdictions who are consumers of the products or services produced in those properties.
- e) Under Severance Taxes normally involves either a fixed charge against the gross receipts or gross market value of raw products produced or a percentage charge against each unit of product severed.
- f) High property taxes can have the incidental effect of causing substantial areas of tax-delinquent land to shift to private ownership, leading to potential considerable social waste.
- g) Self-assessment seems likely to lead to inaccurate estimates of property values with a high tendency towards underestimation by property owners.
- h) Building Inheritance taxes are synonymous with severance taxes in the sense that it constitutes a tax on the privilege of harvesting, mining, extracting or otherwise severing natural resources.

- i) Land measuring is an important input in the whole issue of land management in the sense that it determines, scientifically and with a degree of accuracy, boundaries of various land parcels as well as the physical characteristics of land.
- j) Land Use Capacity measures the productive potential of units of land utilized for a given use at a given time with given technological and production conditions.
- k) An interest in land is considered to be at its highest and best use when it is used for that purpose or that combination of purposes for which it has the least comparative disadvantage relative to other uses.
- l) According to Von Thunen's Theory of Least-cost location activities located beyond the no-rent margin can be profitable only when the gains in reduction in labour and management costs more than compensate transportation cost (loss).
- m) By Von Thunen's land rent theory, land rent basically emerges only when increase in demand for land justify the use of less fertile lands
- n) There is said to be a positive relationship between profitability and utility on one hand and accessibility, demand and value on the other
- o) Biological framework concerned with the natural environment in which the operators find themselves. This includes differences in weather, climate etc., such as hours of sunlight, temperatures, rainfall, humidity.
- p) Where the rate of tax is fixed annually by local government taking into account the budgeted needs of the authority, annual fluctuation in the amount of tax is caused by fluctuation in the amount of revenue generated from sources other than property tax and changing expenditure requirements.
- q) In situations where the law fixes the rate of property tax in primary legislation, the tax revenues will vary according to changes in market values and regular revaluations.

- r) The essential nature of any investment is the attaining of a capital sum in return for a regular income over a period of time.
- s) Property investment is a large-scale investment for the longer term, it is regarded favorably by institutional investors such as pension funds and insurance companies who have large amounts of funds available for investment.
- t) Property as a medium of investment differs considerably in its qualities and characteristics compared with other forms of investment.

[20]

Question 2

- a) What is Land Economics? (2)
- b) Any potential land use (Potential Highest and Best Use) must pass a series of tests. These include the need for the use to be legally allowable. Elaborate further what it encompasses. (3)
- c) Supply of land for specific uses is comparatively static in the short term. Outline the reasons for this. (4)
- d) Elaborate why demand for land is term as "derived demand" and outline those influential demand factors. (12)
- e) Explain how economics systems allocates resources to different users. (9)

[30]

Question 3

- a) The contractor's basis for rating valuation involves five (5) stages. Explain these stages in detail. (10)

[10]

Question 4

- a) Outline the reasons and forms of government interventions in an urban land market. (10)
- b) Outline why it is important for authorities to introduce property tax? (5)
- c) Rewarding landowners is one of the functions of a Real Property Market. Account for the two (2) main kinds of reward available to landowners. (2)
- d) Von Thunen's and Ricardo Theories of Least-cost location and fertility attributed the formation of land rent over a piece of land to various factors. Kindly outline the factors responsible for land rent formation. (3)

[20]

Question 5

- a) The table below illustrate rental market evidence data for industrial properties in the Southern industrial area of Windhoek. With these market evidence value the 5 Units (Unit 1 to Unit 5) for land tax purpose assuming the following:

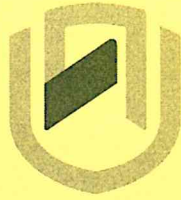
Assuming:

- rate of return of 8%,
- repairs of 10%,
- insurance to be taken at 5% and
- a yard rate of N\$5m

Rental evidence						
UNIT No.	Warehouse area (m2)	Office area (m2)	Concrete Yard area (m2)	Rent	Date struck	Comments
1	120	30	250	N\$12,000	01/10/2014	10 yr FRI lease Tenant paid N\$10,000 for heating system
2	105	25	180	N\$10,000	15/04/2013	FRI
3	105	20	170	N\$11,500	13/05/2015	FRI
4	125	25	180	N\$15,500	01/02/2015	Landlord pays for repairs & insurance
5	120	28	250	-	-	Occupied by owner of development

[20]

All the best of luck.



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FIRST OPPORTUNITY EXAMINATION MEMORANDUM	
EXAMINER(S)	UAURIKA KAHIREKE
MODERATOR:	SAMUEL ATO K. HAYFORD

THIS MEMORANDUM CONSISTS OF 9 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. (20)

- a) Site-value taxation is a form of capital value taxation in which improvements are exempt. Lower assessment costs are one of the advantages of this approach because reassessment is not needed to capture the value of new buildings. *TRUE*
- b) A property value banding system has the advantage of at least mitigating the need for the individual valuation of every property tax purpose. *TRUE*
- c) A method of property tax assessment that requires property owners to tax themselves without a credible verification process will obviously boost the size of the tax base. *FALSE*
- d) Over taxing nonresidential properties has the general tendency of resulting in tax importing to residents of other jurisdictions who are consumers of the products or services produced in those properties. *FALSE*
- e) Under Severance Taxes normally involves either a fixed charge against the gross receipts or gross market value of raw products produced or a percentage charge against each unit of product severed. *FALSE*
- f) High property taxes can have the incidental effect of causing substantial areas of tax-delinquent land to shift to private ownership, leading to potential considerable social waste. *FALSE*
- g) Self-assessment seems likely to lead to inaccurate estimates of property values with a high tendency towards underestimation by property owners. *FALSE*
- h) Building Inheritance taxes are synonymous with severance taxes in the sense that it constitutes a tax on the privilege of harvesting, mining, extracting or otherwise severing natural resources. *FALSE*

- i) Land measuring is an important input in the whole issue of land management in the sense that it determines, scientifically and with a degree of accuracy, boundaries of various land parcels as well as the physical characteristics of land. *TRUE*
- j) Land Use Capacity measures the productive potential of units of land utilized for a given use at a given time with given technological and production conditions. *TRUE*
- k) An interest in land is considered to be at its highest and best use when it is used for that purpose or that combination of purposes for which it has the least comparative disadvantage relative to other uses. *TRUE*
- l) According to Von Thunen's Theory of Least-cost location activities located beyond the no-rent margin can be profitable only when the gains in reduction in labour and management costs more than compensate transportation cost (loss). *TRUE*
- m) By Von Thunen's land rent theory, land rent basically emerges only when increase in demand for land justify the use of less fertile lands *FALSE*
- n) There is said to be a positive relationship between profitability and utility on one hand and accessibility, demand and value on the other *TRUE*
- o) Biological framework concerned with the natural environment in which the operators find themselves. This includes differences in weather, climate etc., such as hours of sunlight, temperatures, rainfall, humidity. *TRUE*
- p) Where the rate of tax is fixed annually by local government taking into account the budgeted needs of the authority, annual fluctuation in the amount of tax is caused by fluctuation in the amount of revenue generated from sources other than property tax and changing expenditure requirements. *TRUE*
- q) In situations where the law fixes the rate of property tax in primary legislation, the tax revenues will vary according to changes in market values and regular revaluations. *TRUE*

- r) The essential nature of any investment is the attaining of a capital sum in return for a regular income over a period of time. FALSE
- s) Property investment is a large-scale investment for the longer term, it is regarded favorably by institutional investors such as pension funds and insurance companies who have large amounts of funds available for investment. TRUE
- t) Property as a medium of investment differs considerably in its qualities and characteristics compared with other forms of investment. TRUE
- [20]**
-

Question 2

- a) What is Land Economics? (2)
- Land economics is a branch of economics that deals with the economic relationship that people have with other economic factors with respect to land (1) and is concerned with concerned with the allocation and use of scarce resources and the economic use of the surface of the earth. (1)*
- b) Any potential land use (Potential Highest and Best Use) must pass a series of tests. These include the need for the use to be legally allowable. Elaborate further what it encompasses. (3)
- Land economics **legally allowable** thus exclude uses;*
- *not allowed by zoning (town and municipal laws), (0.5)*
 - *forbidden by government regulations, and (0.5)*
 - *prohibited by deed restrictions or covenants. (0.5)*
- For example, a property that is in an area that is zoned only for single family residential houses could not legally be used for a commercial or industrial facility. (1.5)*
- c) Supply of land for specific uses is comparatively static in the short term. Outline the reasons for this. (4)
- *It takes some time to react to changes in demand.*
 - *This is because of the scarcity of land in urban areas.*
 - *Construction takes time and*
 - *need to arrange for funding takes time also.*

1 Mark for correct answer

- d) Elaborate why demand for land is term as "derived demand" and outline those influential demand factors. (12)

Land factors are purchased, not for their own sake, but because they can be used to produce goods or *services* (output) that can be sold at a profit or to derive satisfaction. (2)

- *Inflation*: - *property becomes attractive because it is regarded as a hedge against inflation i.e. "place" to store assets and protect them from inflation. Hence demand for land increases.* (3)
- *Credit **availability*** - *availability of credit to finance land will enhance demand, shortages will dampen demand.* (2)
- *Increased **affluence*** *i.e. rise in incomes* (2)
- ***Population growth*** – *e.g. If a city is suddenly confronted with a flood of immigrants needing housing and vice versa.* (3)

- e) Explain how economics systems allocates resources to different users. (9)

Through the market (1)

- *The 'market' plays an important role in making these decisions - free market economies* (1)
- market forces - supply (sellers) and demand (buyers)_which many believe interact to give an outcome which results in the most efficient allocation of resources.* (3)

Centrally Planned Economies (1)

- *Means of production and distribution are owned and controlled by the central government. (2) i e the state allocates and distribute resources.* (1)

[30]

Question 3

- a) The contractor's basis for rating valuation involves five (5) stages. Explain these stages in detail. (10)

Stage 1 Estimated replacement cost (2)

- *Cost of all buildings, site works and all rateable plant and machinery on an undeveloped site.*
- *Consider between actual property or modern substitute and actual costs or unit costs from analysis. Unremunerative expenditure must be excluded and adjustments for time, location, contract size made.*

Stage 2 Adjusted replacement cost. (2)

- *Factors consider includes physical obsolescence, functional obsolescence and technical*

obsolescence. Adjustment must reflect a modern substitute for the subject property.

Stage 3 Land value (2)

- *Find 'cost' of site by reference to open market transactions for undeveloped land with planning permission for similar use.*
- *Ground rents may provide evidence of land value*
- *Adjust land value to reflect the fact that it is encumbered by the buildings etc. standing upon it?*

Stage 4 Decapitalization (2)

- *Conversion of cost to annual equivalent through application of an interest rate. Prior to 1990 a matter of Valuer judgement but now statutorily prescribed. Lower rate for church, educational, healthcare and MoD property.*

Stage 5 "Stand back and look" (2)

- *Compare with other subjects and apply end allowances to factors affecting the whole eg. access, layout etc. Also consider the economic obsolescence / State of the industry.*

[10]

Question 4

- a) Outline the reasons and forms of government interventions in an urban land market. (10)

Reasons

- *To remove the constraints and facilitate the urban land market operation* (1)
- *To get rid of the externalities (i.e. the spill over effect of costs and benefits e.g. adverse effect of noisy and dusty factories on residential neighborhoods).* (2)
- *To ensure that land is available for public goods i.e. the goods which cannot be provided through the price mechanism as they are not profit oriented e.g. roads.* (2)
- *To ensure equitable distribution of income (access to land resources).* (1)

Forms

- *Zoning and planning regulations- these ensure that land goes to the best and highest use* (1)
- *Government fiscal and monetary policies e.g. subsidies, taxation.* (1)
- *Government legislations such as rent control, landlords and tenant legislation.* (1)
- *Govern provision of public goods such as include parks and open space, roads and sidewalks, and community facilities such as drainage and water systems.* (1)

- b) Outline why it is important for authorities to introduce property tax? (5)

- *The money the state government generates through this **tax** is used for development of*

local amenities like roads, maintenance of parks, schools etc. (1.5)

- *Can significantly improve the quality of land use. If land is taxed according to its location value in urban areas, and if assessment is at its highest and best use, a more rational distribution of land use will occur.* (2)
- *Can significantly improve value of surrounding properties with provision of amenities such as roads or parks which enhanced property values.* (1.5)

- c) Rewarding landowners is one of the functions of a Real Property Market. Account for the two (2) main kinds of reward available to landowners. (2)

Two main kinds of reward

- *Return on the capital invested in relation to risk;*
- *Economic rent in the form of super-normal profit – depend upon demand*

Note: 1 Mark for correct answer

- d) Von Thunen's and Ricardo Theories of Least-cost location and fertility attributed the formation of land rent over a piece of land to various factors. Kindly outline the factors responsible for land rent formation. (3)

as a result of demand for and supply of land (1)

- *given its attributes such as location, accessibility and natural features* (1)
- *under a given level of technology and a given institutional regime.* (1)

[20]

Question 5

- a) The table below illustrate rental market evidence data for industrial properties in the Southern industrial area of Windhoek. With these market evidence value the 5 Units (Unit 1 to Unit 5) for land tax purpose assuming the following:

Assuming:

- rate of return of 8%,
- repairs of 10%,
- insurance to be taken at 5% and
- a yard rate of N\$5m

Rental evidence

UNIT No.	Warehouse area (m2)	Office area (m2)	Concrete Yard area (m2)	Rent	Date struck	Comments
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3	105	20	170	N\$11,500	13/05/2015	FRI
4	125	25	180	N\$15,500	01/02/2015	Landlord pays for repairs & insurance
5	120	28	250	-	-	Occupied by owner of development

Add annual equivalent of improvements

Tenant paid for heating

N\$ 10,000/6.71 (YP 10yrs @ 8%) = N\$ 1,490

Equivalent rent: N\$ 13,490

Deduct yard: 250m² @ N\$ 5/m² N\$ 1,250

Adjusted rent: N\$ 12,240

Modified area: Warehouse 120m² @ 100% = 120

Office 30m² @ 200% = 60

Total modified area: 180m²

Basic rate = N\$ 12,240/180 = N\$ 68.00/m²

(4)

Unit 2: 15 April 2013 FRI Rent N\$ 10,000 p.a.

No stage 2 adjustment required

Deduct yard: 180m² @ N\$ 5/m² N\$ 900

Adjusted rent: N\$ 9,100

Modified area: Warehouse 105m² @ 100% = 105

Office 25m² @ 200% = 50

Total modified area: 155m²

Basic rate = N\$ 9,100/155 = N\$ 58.71/m²

(4)

Unit 3: 13 May 2015 FRI Rent N\$ 11,500 p.a.

No stage 2 adjustment required

Deduct yard: 170m² @ N\$ 5/m² N\$ 850

Adjusted rent: N\$ 10,650

Modified area: Warehouse 105m² @ 100% = 105

Office 20m² @ 200% = 40

Total modified area: 145m²

Basic rate = N\$ 10,650/145 = N\$ 73.45/m²

(4)

Unit 4:	1 February 2015 Rent	N\$ 15,500 p.a.
	Deduct repairs and building insurance say 10% reps. and 5% ins. = -15%	<u>N\$ 2,325</u>
	Equivalent rent:	N\$ 13,175
	Deduct yard: 180m ² @ £5/m ²	<u>N\$ 900</u>
	Adjusted rent:	N\$ 12,275
	Modified area: Warehouse 125m ² @ 100% =	125
	Office 25m ² @ 200% =	50
	Total modified area:	175m ²
	Basic rate = N\$ 12,375/175 =	<u>N\$ 70.71/m²</u>

(4)

Valuation of Unit 5

Warehouse	120m ² @ 100% =	120
Office	28m ² @ 200% =	<u>56</u>
Total modified area	176 @ N\$70/m ² =	N\$12,320
Concrete yard	250 @ N\$5/m ² =	<u>N\$1,250</u>

N\$13,570

Say N\$ 13,500 NAV/RV

(4)

[20]

End of Memorandum