

The Papua New Guinea University of Technology

Department of Surveying and Land Studies

Second Semester Examination-2024

BACHELOR OF PROPERTY STUDIES

SECOND (2ND) YEAR

PS 221 REAL ESTATE INVESTMENT

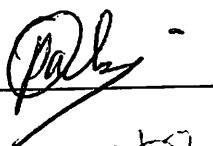
TIME ALLOWED: 3 HOURS

THREE QUESTIONS 100 MARKS

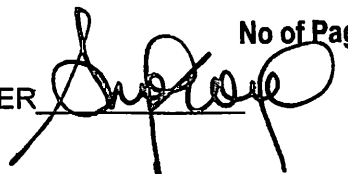
INFORMATION FOR STUDENTS:

1. Mobile phones and other recording devices are not allowed in the examination room.
2. All candidates must display their ID Cards on their desks for the Invigilator to check.
3. **SILENCE** must be maintained in the examination room.
4. Candidates may not leave the examination room within the first half hour.
5. Before answering any questions, fill in the information required.
 - i) Candidates are not to be allowed to bring in bilums or any types of bags into examination room.
 - ii) Reference books / materials **are strictly not allowed** in the examination hall.
 - iii) Before entering examination room students must remove jackets.
 - iv) Candidates must ensure that their hands and legs are free of any written information, scribbling marks, etc. which are related to the subject examined.
 - v) Candidates will not be allowed to go out for any purpose except for a medical emergency while in the middle of a session. Hence those wish to use toilets must do so before commencing the session.
6. Write on one side of the paper only.
7. Do not write in the margins; these must be kept clear.
8. Rough works should be done on the last sheets of each booklet and **should be crossed out before the examination ends**. Do not remove any sheets from this book.
9. If you use two or more booklets then place the second and succeeding booklets behind the first, and hold them together with the clip provided.
10. Graph paper, diagrams and other loose sheets should be fastened in the appropriate place with the clip provided.
11. Write the question and division of each question at the top of each page. Begin the answer to each question on a new page.

EXAMINER

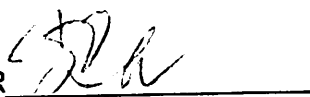


CO-EXAMINER



No of Pages: 4(Four)

CHIEF EXAMINER



Question 01 (5 x 4 = 20 Marks)

Given below are some important concepts in the area of real estate investment. Choose any Five (5) and discuss them in length with an example for each.

- a) Investment.
- b) Appraisal.
- c) Investment return.
- d) Investment risk.
- e) Investment speculation.
- f) Investment opportunity.
- g) Financial Intermediary.
- h) Financial innovation.
- i) Financial Markets.

Question 02 (7+ 3+ 10 = 20 Marks)

- (a) You have the opportunity to purchase an office building. You have a tenant lined up that will generate K16 000 per year in cash flows for three years. At the end of the three years you anticipate selling the building for K450 000 which yield an opportunity cost at 7% p.a.

How much would you be willing to pay for the building?

- (b) You invest K 1 500 at the end of year one and K 2 000 at the end of second year and K 5 000 each year from third to tenth. Find the present value of stream at discount rate of 10%.
- (c) Sandover Investment LTD wishes to invest an amount of K 50,000 in bank deposits. Three banks have quoted the following rates;
- ANZ Bank - 7.5 percent payable quarterly
 - West Bank - 7.45 percent per annum payable monthly

- BSP Bank - 7.55 percent per annum

With which bank should Sandover Invested LTD invest and why?

Question 03 (20 + 10 + 20 + 10 = 60 Marks)

Property Studies Enterprises is considering two mutually exclusive projects. The projected net cash flows for Projects A and B are summarized in the following table.

Net Cash Flows for Projects A and B				
Year (t)	Project A	PV	Project B	PV
0	(K27 000)		(K20 000)	
1	K8 000		K6 500	
2	K9 000		K6 500	
3	K10 000		K6 500	
4	K10 000		K6 500	
5	K6 000		K6 500	

With the cost of capital (interest rate) at 15 percent, compute the following;

- The Present Value.
- Net Present Value (NPV) for both projects.
- The Internal Rate of Interest (IRR) for both projects.
- Discounted Pay Back Period for both projects.

END OF EXAMINATION

Capital Budgeting Formula Sheet

1. Net Present Value

$$NPV = C_0 + \frac{C_1}{(1+r)^1} + \frac{C_2}{(1+r)^2} + \dots + \frac{C_t}{(1+r)^t}$$

2. Internal Rate of Return

Trial and Error Method

$$IRR = \text{Lower Trial Rate (LTR)} + NPV @ \text{LTR} \div (NPV @ \text{LTR} + NPV @ \text{HTR}) \\ \times \text{Difference in Trial Rates.}$$

$$IRR = NPV = 0 = \left[C_0 + \frac{C_1}{(1+i)^1} + \frac{C_2}{(1+i)^2} + \frac{C_3}{(1+i)^3} + \dots + \frac{C_n}{(1+i)^n} \right]$$

3. Pay Back Period

$$\text{Payback period} = \frac{\text{Investment Required}}{\text{Net annual cash inflow}}$$

$$\text{Payback period} = \text{Year before full recovery} + \left[\frac{\text{Unrecovered cost at start of the year}}{\text{Cash flow during the year}} \right]$$