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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2018/2019**

COURSE NAME : REAL ESTATE INVESTMENT AND APPRAISALS
COURSE CODE : BPE 34003
PROGRAMME CODE : BPD
EXAMINATION DATE : JUNE / JULY 2019
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF FOUR (4) PAGES

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- Q1** The Equine Corporation is considering opening an office in a new market that would allow it to increase its annual sales by RM2.5 million. Cost of goods sold is estimated to be 40 percent of sales, and corporate overhead would be increase by RM300,000, not including the cost either acquiring or leasing office space. The corporation will have to invest RM2.5 million in office before considering the cost of owning or leasing the office space.

A small office building could be purchased for sole use by the corporation at a total price of RM3.9 million, of which RM600,000 of the purchase price would represent land value, and RM3.3 million would represent building value. The cost of the building would be depreciated over 39 years. The corporation is in 30 percent tax bracket.

An investor is willing to purchase the same building and lease it to the corporation from RM45,000 per year for a term of 15 years, with the corporation paying all real estate operating expenses (absolute net lease). Real estate operating expenses are estimated to be 50 percent of the lease payments.

It is estimated that the property value will increase over the 15-year lease term for a sale price of RM4.9 million at the end of the 15 years. If the property is purchased, it would be financed with an interest-only mortgage for RM2,730,000 at an interest rate of 10 percent with a balloon payment due after 15 years.

- (a) Compare return on the incremental cash flow from owning versus lease. (10 marks)
- (b) Evaluate the benefits to the corporation from opening the office building under the lease or owning assumptions. (15 marks)

- Q2** A building owner is evaluating the following alternatives for leasing space in an office building for the next five years:

Net lease with step: Rent will be RM15 per square foot (psf) for the first year and will increase by RM1.50 psf each year until the end of lease. All operating expenses will be paid by tenant.

Net lease with CPI adjustment: The rent will be RM16 psf for the first year. After the first year the rent is expected to increase by the amount of any increase in the Consumer Price Index (CPI). The CPI is expected to increase 3 percent per year.

Gross lease: Rent will be RM30 psf each year with the lessor/owner responsible for payment of all operating expenses. Expenses are expected to be RM9 during the first year and increase by RM1 per year thereafter.

Gross lease with expense stop and CPI adjustment: Rent will be RM22 the first year and increase by the full amount of any change in the CPI after the first year with an expense stop at RM9 psf. The CPI and operating expenses are assumed to change by the same amount as outlined above.

- (a) Calculate the effective rent to the owner (after expenses) for each lease alternative using a 10 percent discount rate. (10 marks)
- (b) Rank the alternatives in term of risk to the property owner. (5 marks)
- (c) Compare the **FOUR (4)** alternative based on your answer in **Q2(a)** and **Q2(b)**. (10 marks)

Q3 You are advising a group of investors who are considering the purchase of a shopping complex. They would like to finance 75 percent of the purchase price. A loan has been offered to them on the following terms: the contract interest rate is 10 percent and will be amortized with monthly payments over 25 years. The loan also will have an equity participation of 40 percent of the cash flow after debt service. The loan has a "lockout" provision that prevents it from being prepaid before year 5.

The property is expected to cost RM5 million. NOI is estimated to be RM475,000, including overages, during the first year, and to increase at the rate of 3 percent per year for the next five years. The property is expected to be worth RM6 million at the end of five years. The improvement represents 80 percent of the cost and depreciation will be over 39 years. Assume a 28 percent tax bracket for all income and capital gains and a holding period of five years.

- (a) Compute the Before Tax Internal Rate of Return (BTIRR) and After Tax Internal Rate of Return (ATIRR) by considering the equity participation. (15 marks)
- (b) Evaluate whether such favorable leverage exists with the proposed loan structure. (10 marks)

Q4 An investor has projected three possible scenarios for a project as follows:

Pessimistic: Net Operating Income (NOI) will be RM200,000 for the first year, and then decrease 2 percent per year over a five-year holding period. The property will sell for RM1.8 million after five years.

Most likely: NOI will be level at RM200,000 for the next five years (level NOI) and the property will sell for RM2 million.

Optimistic: NOI will be RM200,000 for the first year and increase 3 percent per year over a five-year holding period. The property will then sell for RM2.2 million.

The asking price for the property is RM2 million. The investor thinks there is about a 30 percent probability for the pessimistic scenario, a 40 percent probability for the most likely scenario, and a 30 percent probability for the optimistic scenario.

(a) Compute the Internal Rate of Return (IRR) for each scenario.

(15 marks)

(b) Compute the variance and standard deviation of the IRR.

(10 marks)

-END OF QUESTIONS-

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