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Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

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

COURSE NAME : REAL ESTATE FINANCE /
PRINCIPLES OF FINANCE FOR
REAL ESTATE MANAGEMENT

COURSE CODE : BPE 23402 / BPE 22802

PROGRAMME CODE : BPD

EXAMINATION DATE : DECEMBER 2018 / JANUARY 2019

DURATION : 2 HOURS

INSTRUCTION : ANSWER ALL QUESTIONS

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THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

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- Q1** Careena Development Sdn. Bhd. is considering three mutually exclusive projects, Project X, Project Y and Project Z. The company's Board of Directors has set a maximum 3-year payback requirement and has set its cost of capital at 10%. The cash inflows associated with the three projects are tabulated in **Table Q1** below.

Table Q1 : Cash Flow for Project X, Project Y and Project Z

Year	Expected Net Cash Flows		
	Project X (RM)	Project Y (RM)	Project Z (RM)
0	-1,000	-10,000	-5,000
1	600	5,000	1,000
2	300	3,000	1,000
3	200	3,000	2,000
4	100	3,000	2,000
5	500	3,000	2,000

- (a) Calculate each project's payback period. (6 marks)
- (b) Calculate each project's net present value (NPV). (12 marks)
- (c) Calculate each project's internal rate of return (IRR). (12 marks)
- (d) Justify which project should be chosen based on your answer in **Q1** (a), (b) and (c). (5 marks)
- Q2** Your company is planning to borrow RM500,000 on a 10-year, 15%, annual payment, fully amortized term loan. To help you make the final decision, it is vital that you calculate the loan repayment for the next five years. You are confident and able to pay back the loan if the repayment amount is lower than RM110,000 per month.
- (a) Calculate the yearly repayment amount. (5 marks)
- (b) Prepare an amortization schedule. (15 marks)
- (c) Justify your decision on the loan application. (5 marks)

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Q3 Ahmad, a 22 years old real estate graduate, is about to begin his career as a valuation officer at a reputable company in Kuala Lumpur. Ahmad realises at early stage that he needs to plan his retirement plan in order to ensure a comfortable life. Ahmad’s retirement plan allows him to make equal yearly contributions, and it pays 9% interest annually. Upon retirement at the age of 65, Ahmad plans to buy a property, which he estimates will cost him RM300,000 in 43 years. He also estimates that in order to live comfortably he will require a yearly income of RM80,000 for each year after he retires. Based on his family history, Ahmad expects to live until the age of 80 (that is he expects to received 18 payments of RM80,000 at the end of each year). When he retires, he will purchase his property in one lump sum and place the remaining balance into an account that pays 6% interest, from which he will withdraw his RM80,000 per year. If Ahmad’s first contribution is made one year from today, and his last is made the day he retires :

- (a) Calculate present value of the property which he plans to purchase when he retires. (5 marks)
- (b) Calculate how much must Ahmad invests at the end of each year for his retirement funds. (5 marks)

Q4 Diva Dance Company, a manufacturer of dance and exercise apparel, is considering replacing an existing piece of equipment with a more sophisticated machine. The firm pays 40 percent taxes on ordinary income and capital gains. The information of the existing and proposed machine are shown in **Table Q4**.

Table Q4 : Information for existing and new machine

		Existing Machine	Proposed Machine
		<ul style="list-style-type: none"> • Cost = RM100,000 • Purchased 2 years ago • Depreciation using MACRS over a 5-year recover schedule • Five year usable life remaining 	<ul style="list-style-type: none"> • Cost = RM150,000 • Installation = RM20,000 • Depreciation using MACRS over a 5-year recover schedule • Five year usable life expected
Earnings before depreciation and taxes			
Year	1	160,000	170,000
	2	150,000	170,000
	3	140,000	170,000
	4	140,000	170,000
	5	140,000	170,000



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- (a) Calculate the book value of the existing asset being replaced. (2 marks)
- (b) Calculate the tax effect from the sale of the existing asset. (5 marks)
- (c) Calculate the initial investment required for the new asset. (3 marks)
- (d) Prepare the incremental cash flow schedule. (20 marks)

- END OF QUESTIONS -

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