SECTION A – CASE QUESTIONS (Total: 50 marks)

Answer ALL of the following questions. Marks will be awarded for logical argumentation and appropriate presentation of the answers.

CASE

Mr. Stephen So has been employed as the Finance Manager. Stephen has been asked to give advice to the board of directors of LED Expert Holdings Limited ("LEDEHL"), a listed company in Hong Kong, which is principally engaged in providing energy management contracts for changing the Toll Road lighting from traditional lighting to LED lighting in mainland China.

LEDEHL draws upon three major sources of finance from the capital and finance markets:

1. Listed bonds = $3,400 million face value paying 9% coupon annually maturing in 5 years currently trading at 90% of its face value, the identified after tax cost of debt is 8.20%;

2. Shares issued = 1,000,000,000 ordinary shares traded at the current market value of $20, the identified cost of equity is 10.4%; and

3. Finance leases = $1,000 million obligation to pay and the effective interest rate after tax on the leases is 6%.

LEDEHL is now considering two toll road LED light projects, GZ project and SZ project. The following are the expected saving on the value of the electricity consumption for each project:

Year	GZ project	SZ project
	$million	$million
1	50	60
2	55	63
3	60	66
4	65	69
5	-	72
6	-	75

During the negotiation process, LEDEHL has agreed the following benefits and investments for the GZ project and the SZ project after using LED lighting:

	GZ project	SZ project
Share of cash distribution by saving electricity consumption	40%	50%
Initial investment incurred in year 0 ($million)	120.42	200.00
Proceeds received at year 0 of the lighting installed	40%	30%

Normally, LEDEHL requires an internal rate of return of 11% for a project.

The operations manager of the Company reported that one of the middlemen involved in the GZ project has requested a 3% commission. The manager advises the Company that the 3% commission could be recovered by putting the selling prices up by 5%. Therefore, both parties will benefit from the transaction. The middleman also requested the payment of the commission be made through a Hong Kong bank account.

Question 1 **(21 marks – approximately 38 minutes)**

Assuming you are Stephen So, prepare a memorandum to advise the board regarding the following questions:

(a) Why does a company need to know its cost of capital? (3 marks)

(b) What is the rate of the weighted average cost of capital (WACC) for LEDEHL? (5 marks)

(c) What are the net present values by using the discounting rate of WACC and IRR of the Company for both projects? (13 marks)

Question 2 **(19 marks – approximately 34 minutes)**

(a) Base on the results obtained in part 1(c) above, which project, or both projects, should the board accept or reject for the benefit of shareholders under the following scenarios? Please note that no calculation is required.

(i) No capital restriction. (4 marks)

(ii) With only $200 million in capital available. (2 marks)

(iii) With only $200 million in capital available but the management will borrow debt to finance two projects. (5 marks)

(b) Advise your concerns to the operations manager and the board of directors on the 3% commission transaction and recommend the necessary protection if such commission is going to be paid. (8 marks)

Question 3 **(10 marks – approximately 18 minutes)**

What are the limitations in using WACC to evaluate projects and under what conditions could WACC be applied properly for the evaluation of projects? (10 marks)

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End of Section A

SECTION B – ESSAY / SHORT QUESTIONS (Total: 50 marks)

Answer ALL of the following questions. Marks will be awarded for logical argumentation and appropriate presentation of the answers.

Question 4 **(20 marks – approximately 36 minutes)**

Company A, an all equity firm, plans to invest in equipment which has an NPV of $2m and initial investment of $30m. Currently, the company has 100m shares outstanding. Its investment banker offers two financing options.

1) Issue new shares at $2 per share. Total existing common shares outstanding is 100m shares.

2) Issue 5 year $30m bond with yield to maturity (YTM) of 5% per annum, redeemable after 3 years at the option of the company.

Low interest environment is expected to last for at least another 2 years. Company A has been paying 100% of its profit after tax as dividends. When going for debt, a lender will require the company to limit its payout ratio to 50% until the debt is paid off.

Current and expected EBIT is $10m.
Tax rate is 16.5%.

Required:

(a) **Calculate the EPS of each financing option. Which option should the company choose based on EPS?**

(4 marks)

(b) **At what level of EBIT (the breakeven EBIT) will both financing options in (a) result in the same EPS? Calculate this EPS.**

(3 marks)

(c) **The investment bank indicates that if the company is willing to give up the redemption option, the YTM can be lowered to 3%. Advise with justification what the company should choose under this scenario.**

(6 marks)

(d) **Verify your recommendation in (c) by calculating the EPS under equity and debt financing options.**

(2 marks)

(e) **What other factors should the company consider in deciding which financing option to use?**

(5 marks)

Question 5 **(15 marks – approximately 27 minutes)**

Company B, listed in Hong Kong, recently acquired an Australian subsidiary in natural resources. Currently, the Board has three independent non-executive directors and only one has limited market experience in managing large scale foreign exchange risk.

The existing relevant policy indicates that the CFO will have to review and approve all foreign exchange (FX) risk management contracts. Due to the scale of FX exposure, the Board has asked the CFO for a proposal to enhance the management of this risk.

Required:

(a) **Assume you are the CFO, advise the Board on the enhancement of FX risk management practice via a formal memo.**

(10 marks)

(b) **The Australian subsidiary will sell only to Company B, in USD, who in turn sells to PRC customers in RMB. Identify the FX risks of the group. Design, supported with an explanation, a hedging strategy for Company B for both Australian dollar and RMB that creates maximum hedging effectiveness if Australian dollar is expected to appreciate against the USD, while the movement of RMB against the USD is not certain. Company B and its subsidiary are not interested in making a profit from hedging.**

(5 marks)

Question 6 **(15 marks – approximately 27 minutes)**

Company C, a Hong Kong listed company, is planning to raise $50m for investment via a rights issue with a subscription price of $5 per share. The current share price is $10 per share. The company's current share capital consists of 100m shares of common stock, par value of $1. There is no share premium. The company's last reported net income is $80m, with a dividend payout ratio of 30%. Net profit ratio (NPR = Net income / Sales) is 10%.

Total asset turnover (TAT) = Sales / Total Assets is 1.5.
Equity multiplier (EM) = Total Assets / Equity is 2.

Required:

(a) **What is the subscription ratio, i.e. how many shares must an existing shareholder have in order to subscribe to one new share?**

(2 marks)

(b) **What is the value of one rights given each existing share will be given one rights?**

(2 marks)

(c) **Assuming the new funds of $50m will generate the same Return on Equity (ROE) before the rights issue and the PE ratio does not change after the issue, estimate the share price in one year's time.**

(11 marks)

* * * END OF EXAMINATION PAPER * * *