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

Fiona Chan, who spent more than ten years living, studying and working in England, decided to start her own business in Hong Kong seven years ago. She believed the western style of living was attractive to a lot of the emerging middle class local HK people. This might present business opportunities for her. In this connection, she pushed two lines of business, under her new start-up corporation, GoHK Limited, back then. GoHK Limited is a private company and has yet to pay a dividend to the seven shareholders who supported Fiona from the beginning of her venture. The company has zero debt.

Gogo Limited, a wholly owned subsidiary of GoHK Limited, manufactures and markets two types of new products: a remote control flying camera helicopter ("Heli") and an electronic robot ("Robo"). It contributes 66% of the revenue to GoHK Limited. Data concerning selling prices and costs for each unit are as follows:

	Heli HK$	Robo HK$
Selling price	8,000	24,000
Materials	(2,400)	(6,400)
Direct labour	(400)	(800)
Overhead expense	(2,400)	(8,000)
Gross profit margin	2,800	8,800
Marketing expense	(200)	(1,400)
Administrative expense	(400)	(1,600)
Profit	2,200	5,800

The overhead expense is 90% fixed. Marketing expense is variable whereas administrative expense is 100% fixed. The management of Gogo Limited target to produce and sell at least 280 Heli and at least 100 Robo each month.

Gogo Limited's production facilities are limited by machine capacity in the Assembly Department. Each Heli requires 80 minutes and each Robo requires 140 minutes in the Assembly Department. A total of 680 hours is available per month in the Assembly Department. There are no other relevant constraints on the production side.

Goburger Limited, another wholly owned subsidiary of GoHK Limited, is a premier burger restaurant chain where the food ingredients are sourced 33% from England. It has grown to over 200 restaurants within the past three years in Hong Kong and southern China, 80% of which are franchised and independently owned. It makes up 34% of the sales of GoHK Limited. Two of its units, HKburger and Chinaburger, are among the fastest growing restaurants in the region.

Now Fiona plans to expand the menus to include pasta, pizza and yogurt to broaden the customer's choice and hopefully draw more traffic. In this connection, the installation of the necessary ovens and acquisition of the necessary equipment would cost HK$1.8 million per restaurant. The current investment in HKburger totals HK$8.9 million. Restaurant sales are HK$11,005,000 and expenses are HK$9,240,000. The expansion of HKburger's menu is likely to increase profits by HK$306,000. The current investment in Chinaburger restaurants totals HK$17.4 million. Its sales are HK$17,680,000 and expenses are HK$14,966,800. The addition of pasta, pizza and yogurt to Chinaburger's menu is likely to increase its profits by HK$346,000.

GoHK Limited evaluates the managers of HKburger and Chinaburger based on the return on investment. Managers of individual locations have responsibility for the pasta, pizza and yogurt expansion.

Recently, some tycoons from China approached Fiona to discuss the possibility of acquiring GoHK Limited. David Lee, the CFO of GoHK Limited is told to value the company before meeting with these potential investors. In order to value GoHK Limited, David has to determine the weighted average cost of capital of the company and use it to discount future free cash flow in the process.

<u>Question 1</u> (11 marks – approximately 20 minutes)

(a) Calculate the contribution per unit for Heli and Robo.

(3 marks)

(b) Determine the time consumed in the Assembly Department so as to reach the management's minimum target levels of production.

(2 marks)

(c) Assume the demand for Heli and Robo at current prices is unlimited. Construct the appropriate production schedule in terms of Heli output volume and Robo output volume such that it would maximise Gogo Limited's profit while meeting the management's minimum target levels of production. Calculate the total monthly contribution margin on the decision.

(6 marks)

<u>Question 2</u> (25 marks – approximately 45 minutes)

(a) Calculate the return on investment ("ROI") for both HKburger and Chinaburger based on:

(i) existing operation;
(ii) the standalone capital expenditure: expansion project; and
(iii) after expansion of the menu.

(5 marks)

(b) Assuming a 9% cost of capital, calculate the residual income for both HKburger and Chinaburger based on:

(i) existing operation;
(ii) the standalone capital expenditure: expansion project; and
(iii) after expansion of the menu.

(5 marks)

(c) Compare and contrast using ROI versus residual income as a performance measure with reference to HKburger and Chinaburger.

(7 marks)

(d) Consider whether the managers of HKburger and Chinaburger will choose to expand or not. Evaluate whether the franchised unit owners whose objectives are to maximise investors value will choose to expand or not if they are the decision maker.

(8 marks)

<u>Question 3</u> (14 marks – approximately 25 minutes)

(a) Explain whether David should consider to use single or multiple costs of capital for GoHK Limited.

(4 marks)

(b) Evaluate which method would be appropriate to estimate the cost of equity for GoHK Limited in this case.

(4 marks)

(c) State and describe THREE valuation models which are appropriate for GoHK Limited in this case.

(6 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)**

Co X is a company listed on the Main Board of the Hong Kong Stock Exchange. Mr Chan, CFO, is considering several dividend proposals to be presented to the Board of Directors for the 20x4 financial year just ended, during which the company sold a business and realised HK$60 million of cash which can be returned to shareholders. If not returned, the HK$60 million can be reserved for future investment. Dividend has been around HK$0.10 per share for the past few years. The company has no extra borrowing capacity. The current share price is HK$10 cum dividend. Number of shares issued and outstanding is 400 million.

The three dividend proposals are summarised below.

(i) pay a regular cash dividend of HK$0.25 per share (combining the historical HK$0.10 per share plus additional HK$0.15 per share to return the extra HK$60 million) or a regular dividend of HK$0.10 per share with a special dividend of HK$0.15 per share, or
(ii) pay a scrip dividend of 2.5%, or
(iii) repurchase shares from the market, up to a total of HK$100 million.

Extract of Shareholders' Equity section of the 20x4 Statement of Financial Position is shown below:

Statement of Financial Position 20x4	
Extract of Shareholders' Equity Section	
	HK$m
Shareholders' equity	
Share capital	200
Retained earnings	1,000
	1,200

<u>Required:</u>

(a) Calculate the total shareholders' wealth for EACH dividend proposal. Ignore tax of shareholders.

(6 marks)

(b) What do you observe from the calculation in (a)? State the theory and respective assumptions that support your observation.

(3 marks)

(c) Dividend policy has a signalling effect. Choose from the three proposals in (a), what would be the preferred choice for EACH of the following three independent scenarios. Justify your recommendation. You may recommend an alternative amount of dividends in order to pass the correct signal to the market. Each proposal should only be applied to one scenario.

(i) Earnings prospects are good and EPSs are expected to increase substantially in the next few years and the company will not need further financing for future capital investment.

(ii) Earnings prospects are not promising due to intensive competition and the share price has been depressed lately. In order to boost future earnings, the Board plans to invest aggressively next year.

(iii) The share price is at a low level, earnings are fair and stable. The company would like to boost the ROE and share price.

(9 marks)

(d) With reference to any two relevant fundamental principles of the HKICPA Code of Ethics, explain the considerations that Mr Chan, CFO, should consider when proposing and recommending dividend policies to the Board.

(2 marks)

Question 5 **(10 marks – approximately 18 minutes)**

There are a lot of factors that affect everyday share price movements. The Efficient Market Hypothesis ("EMH") attempts to categorise stock markets based on the relationship of share prices and information. According to the EMH, there are three forms of market efficiency, i.e. weak, semi-strong and strong.

Required:

Assume you are Ken Wong, the CFO of a Hong Kong listed company, who has been asked by Mrs Alice Fong, the chairperson of the Board to prepare a memo explaining the following aspects of the EMH in preparation for the next Board meeting.

(a) **Explain the form of market efficiency to which the Hong Kong stock market belongs. In your answer, also describe the practical factors that make the Hong Kong stock market achieve that form of efficiency.**

(3 marks)

(b) **For listed companies, it is expected that a results announcement indicating a profit increase has a positive impact on the share price on the day of the announcement. Advise why in some cases, the share price declines instead of increases when a growth in profit is announced by a company in a semi-strong form of efficient market. What is the implication of this for the investors?**

(4 marks)

(c) **Evaluate whether a strong form of efficient market is merely an academic theory or it does exist in practice. What is the implication of this for the issuer?**

(3 marks)

Question 6 **(20 marks – approximately 36 minutes)**

Mr Lee, CFO of Company B, a manufacturer of high precision engineering equipment, is planning to review the working capital management practices and existing credit terms for customers in order to boost sales and profits. The company has no long term debt. Among other things, he is particularly interested in comparing the cash operating cycle performance of 20x4 with the industry benchmarks listed below. Assume a 365-day year.

Industry averages:

Inventory days: 90
Receivables days: 60
Payables days: 45

The following is the summary financial information of Company B.

Excerpts from financial statements of 20x4 and 20x3.

Income Statement

	20x4	20x3
	HK$m	HK$m
Revenue	20,592	14,652
Cost of sales	(12,276)	(8,712)
Gross profit	8,316	5,940
Administrative expenses	(1,320)	(990)
Profit before interest and tax	6,996	4,950
Interest expense	(132)	(20)
Profit before tax	6,864	4,930
Note: Purchases	11,662	8,276

Statement of Financial Position

	20x4		20x3	
	HK$m	HK$m	HK$m	HK$m
Non-current assets		12,938		12,150
Current assets				
Inventories	3,900		1,690	
Trade receivables	3,686		1,795	
Cash and cash equivalents	138		1,035	
		7,724		4,520
Current liabilities				
Bank overdraft	(1,250)		(188)	
Trade payables	(1,435)		(800)	
		(2,685)		(988)
Total assets less current liabilities		17,977		15,682
Shareholders' Equity		17,977		15,682

Upon further analysis, it was also found that during 20x4, actual sales were 30% below the forecast. Furthermore, in order to take advantage of a bulk discount, excessive high value components needed in production were purchased. Company B has been using the traditional inventory management system, while its major competitors have adopted Just-In-Time ("JIT") in order to save costs.

Required:

(a) **All sales and purchases were on credit. Calculate, to 2 decimal places, the cash operating cycle of the company for the years ended 20x4 and 20x3. Evaluate the performance between these two years, and between 20x4 and industry averages.**

(10 marks)

(b) **Assume Company B wants to align with the industry average cash operating cycle as much as possible, advise as to the possible actions available that address the operating conditions.**

(4 marks)

(c) The company is considering extending credit terms from the existing 60 days to 75 days in order to stimulate sales in 20x5. It is expected that sales will increase by 5% and the gross profit margin will be reduced to 90% of 20x4 levels. The required return on investment is 20%. Additional sales will increase both inventory and payables by 5% over the 20x4 levels. Assume all customers will take the longer credit term of 75 days.

Required:

Consider whether Company B should adopt the new credit term. Support your answer with calculations.

(6 marks)

* * * END OF EXAMINATION PAPER * * *