

DP09

Investment

14 APRIL 2005

1. Time allowed : Three (3) hours
2. Total number of questions : Five (5) questions
3. Number of questions to be answered : All five (5) questions
Part A : One (1) question [20 marks]
Part B : Four (4) questions [20 marks each]
4. Show details of workings, where appropriate. Silent, non-programmable calculators may be used.
5. Begin each answer to a new question on a fresh page.
6. Answer **all** questions in **English**.
7. A blank page is provided at the end of the question paper for rough work.

PART A

1. **Only brief answers are required in this section (a few words or a few sentences). Answer ALL parts of the question.**

- (a) Each ICN Bhd share has a par value of RM1.00. On 1 April 2005, ICN Bhd issued its shares to the public at RM2.00 per share.
- (i) Calculate the share premium for each ICN Bhd share. [2]
- (ii) Can ICN Bhd issue its shares at a discount? Briefly explain your answer. [2]
- (b) (i) SBC Bhd declared a dividend of RM0.50 per share on 28 March 2005. The shares of SBC Bhd will trade ex-dividend on 22 April 2005 and the payment date is 28 May 2005.
- If Jack buys the shares of SBC Bhd on 21 April 2005 and Juliet buys the shares of SBC Bhd on 28 May 2005, who will be entitled to the dividend that will be distributed by SBC Bhd? [1]
- (ii) What does an "ex-dividend date" mean? [2]
- (c) Briefly explain the following types of shares:
- (i) Cumulative preference shares [3]
- (ii) Redeemable preference shares [3]
- (iii) Convertible preference shares [2]
- (iv) Participating preference shares [3]
- (d) State **two** characteristics of Cagamas Berhad. [2]

(Total:20 marks)

PART B

ANSWER ALL QUESTIONS

2. (a) Consider the following data:

Stock	Year	Beginning share price (RM)	Ending share price (RM)	Dividend (RM)
K	1	1.20	1.50	0.01
	2	1.50	1.10	0.01
	3	1.10	1.30	0.01
L	1	0.50	0.60	-
	2	0.60	0.45	-
	3	0.45	0.68	-

- (i) Compute the holding period return for Stock K and Stock L in Year 1, Year 2 and Year 3. [6]
- (ii) Compute the holding period yield for Stock K in Year 1, Year 2 and Year 3. [3]
- (iii) Using geometric mean rate of return, determine which stock will be a better investment in the first two years. Briefly explain your answer. [5]

(b) Consider a portfolio with the following data:

Stock	Probability of return	Possible return
A	0.2	10%
B	0.4	15%
C	0.6	20%

(i) Which stock has the highest expected return? [3]

(ii) Compute the total expected return for the portfolio. [1]

(c) Define risk-free rate of return. [2]

(Total:20 marks)

3. (a) You are a fund manager responsible for a fixed income fund. You hold the view that interest rates are going to increase over the next few weeks. The following are in your portfolio:

- A 1-year 7% coupon government bond. The yield-to-maturity is expected to increase from 2.8% to 3.0%.
- A 5-year 5% coupon government bond. The yield-to-maturity is expected to increase from 4.0% to 4.5%.
- A 10-year 4% coupon government bond. The yield-to-maturity is expected to increase from 5.0% to 6.0%.

Based on your view, which government bond would you sell? Briefly explain your answer. [4]

(b) (i) What is a convertible bond? [2]

(ii) State **six** advantages of a convertible bond. [6]

(iii) KL Bhd has just issued 100,000 6% RM100 par value convertible bond. The bond is convertible to common shares at RM5 per share. The last traded price of KL Bhd is RM6 per share.

(aa) What is the conversion ratio of the convertible bond? [2]

(bb) What is the conversion value of the convertible bond? [2]

(cc) If the market price of the convertible bond is RM105, calculate the conversion parity price. [2]

(dd) What will happen if the conversion parity price is below the current stock price? [2]

(Total:20 marks)

4. (a) You are given the Income Statement and Balance Sheet of SW Bhd as at 31 December 2004:

**CONSOLIDATED INCOME STATEMENT
FOR THE YEAR ENDED 31 DECEMBER 2004**

Item	RM'000
Turnover	317,935
Cost of goods sold	(185,338)
Gross profit	132,597
Other operating income	6,950
Distribution costs	(49,128)
Administrative expenses	(21,983)
Profit from operations	68,436
Finance costs	(11,583)
Share of loss of an associate	(51)
Profit before tax	56,802
Tax	(4,572)
Profit before minority interests	52,230
Minority interests	(1,776)
Net profit for the year	50,454

CONSOLIDATED BALANCE SHEET AS AT 31 DECEMBER 2004

Item	RM'000
Non-current assets	309,259
Current assets	208,328
Current liabilities	204,423
Net current assets	3,905
	313,164
Shareholders' equity	155,463
Minority interests	2,741
Non-current liabilities	154,960
	313,164

- (i) Compute the following for SW Bhd:
- (aa) Operating profit margin [2]
 - (bb) Asset turnover [2]
 - (cc) Interest expense rate [2]
 - (dd) Financial leverage multiplier [2]
 - (ee) Tax retention rate [2]
 - (ff) Using the Du Pont System, what is the return on equity (ROE) of SW Bhd?[2]
- (ii) State whether the following will cause an **“Increase”** or a **“Decrease”** in the return on equity:
- (aa) An increase in operating profit margin [1]
 - (bb) A reduction in asset turnover [1]
 - (cc) An increase in interest expense [1]
 - (dd) An increase in financial leverage multiplier [1]
 - (ee) An increase in tax rate [1]
- (b) State the difference between an American option and a European option. [2]
- (c) What is a long straddle? [1]
- (Total:20 marks)
5. (a) (i) List **five** main objectives of Malaysian Central Depository Sdn Bhd. [5]
- (ii) List **three** benefits of the Central Depository System to listed companies and their registrars. [3]
- (b) (i) What are designated securities? [2]
- (ii) Answer **“True”** or **“False”** for each of the following statements:
- (aa) The Exchange Committee may request all member companies to furnish the Committee with full particulars of all outstanding contracts, dealings and transactions in designated securities within 48 hours. [1]
 - (bb) The Exchange Committee may restrict any member company from trading in any designated securities such that the outstanding contracts of that member company at any one moment do not exceed 5% of its paid-up capital of the company, whose securities have been designated. [1]
 - (cc) A seller can sell designated securities if he delivers the shares together with the duly executed transfer form to his broker at the time of entering into a contract sale. [1]
- (c) Bursa Malaysia Berhad is a self-regulatory organisation.
State **five** obligations of Bursa Malaysia Berhad. [5]
- (d) What is the role of the Securities Commission? [2]
- (Total:20 marks)

OUTLINE ANSWERS

The comments given in the boxes below indicate the areas of weaknesses the examiners have identified and their advice to future candidates.

Part A

Question 1

Candidates could not explain the different types of preference shares, nor state characteristics of Cagamas Berhad.

1. (a) (i) Share premium
= Issued price of shares – Par value
= RM2 – RM1 = RM1
- (ii) No. Shares cannot be issued below their par value without a court sanction.
- (b) (i) Jack
- (ii) It means investors who bought the share on the ex-dividend date will not be entitled to the dividend entitlement attached to the share.
- (c) (i) For cumulative preference shares, unpaid dividends may accumulate as dividends in arrears, but must be paid to the cumulative preference shareholders before any dividend can be paid to the ordinary shareholders.
- (ii) Redeemable preference shares can be redeemed or recalled by the issuing company. When this option is exercised, the investors will receive a pre-determined sum of money, which usually include any unpaid dividends.
- (iii) A convertible preference share gives the holder the privilege to convert it into ordinary share at a specified price.
- (v) A participating preference share gives its owner the right to share both the fixed dividend and earnings of the company after all senior securities have been paid. This class of preference shares may be cumulative, non-cumulative or convertible.
- (d) Characteristics of Cagamas Berhad (any **two**):
 - Its shareholders comprise the major financial institutions, including Bank Negara Malaysia.
 - It acts as an intermediary between investors looking for fixed income investments and the originators of housing loans.
 - It raises funds for its purchase of housing loans by issuing loans to the public.

Part B

Question 2

- Candidates did not know that holding period return should include dividend income and how to calculate geometric mean rate of return.
- They also did not understand what risk-free rate of return is.
- Instead of memorising, candidates should understand the rationale behind each calculation or measurement of investment return.

2. (a) (i) Year 1 HPR (Stock K) = $(1.50+0.01)/1.20 = 1.26$
Year 2 HPR (Stock K) = $(1.10+0.01)/1.50 = 0.74$
Year 3 HPR (Stock K) = $(1.30+0.01)/1.10 = 1.19$

Year 1 HPR (Stock L) = $0.60/0.50 = 1.20$

Year 2 HPR (Stock L) = $0.45/0.60 = 0.75$

Year 3 HPR (Stock L) = $0.68/0.45 = 1.51$

- (ii) Year 1 HPY = $1.26 - 1 = 0.26 = 26\%$
Year 2 HPY = $0.74 - 1 = (0.26) = -26\%$
Year 3 HPY = $1.19 - 1 = 0.19 = 19\%$
- (iii) Geometric mean for Stock K = $[(1.26*0.74)^{1/2} - 1]*100\% = -3.4\%$
Geometric mean for Stock L = $[(1.20*0.75)^{1/2} - 1]*100\% = -5.1\%$

Stock K is a better investment, because its geometric mean of return of -3.4% is higher than Stock L's geometric mean of return of -5.1%.

- (b) (i) Stock A: $(0.2)(10\%) = 2\%$
Stock B: $(0.4)(15\%) = 6\%$
Stock C: $(0.6)(20\%) = 12\%$
Therefore, Stock C has the highest expected return.
- (ii) Total expected return = $[2\% + 6\% + 12\%] = 20\%$
- (c) The risk-free rate of return is a nominal return, comprising a real rate of return and inflation premium.

Question 3

Candidates could not compute the conversion ratio, conversion value and the conversion parity price of convertible bonds.

3. (a) **Sell the 10-year government bond**
When interest rates go up, then prices of bonds will decline. The larger the increase in interest rates, the larger the capital losses for the bond. In this case, the 10-year government bond is expected to increase the sharpest, i.e. from 5.00% to 6.00%, resulting in the largest capital losses.
- (b) (i) A convertible bond gives the holder the right to convert the bond to a stipulated amount of shares at a specific price in a specific period of time.
- (ii) Advantages of convertible bonds
- The issuer often gets a lower interest rate on its debt.
 - The convertible bond represents potential common stock and is desirable for an issuer, which eventually needs equity capital but not before the new investment begins generating earnings.
 - If the company performs well, bondholders will be able to gain by converting their bonds into more valuable common stock.
 - Convertible bonds have upside potential of common stocks; it contains an option to buy the stock by simply surrendering the bond.
 - Convertible bonds have downside protection of a bond; irrespective of what happens to the stock, the bond will not decline below what it would be worth as a straight bond.
 - Convertible bonds usually have higher current yields than the underlying common stock.
- (iii) (aa) Conversion ratio
= Par value of bond/Conversion price
= $RM100/RM5 = 20$

- (bb) Conversion value
 = Conversion ratio x Current price of common stock
 = 20 x RM6 = RM120
- (cc) Conversion parity
 = Market price of convertible bond/conversion ratio
 = RM105/20 = RM5.25
- (dd) If the conversion parity price is below the current stock price, someone could buy the convertible, immediately convert it and sell the stock for a risk-free profit.

Question 4

Candidates could not compute the financial ratios and did not know the computation of return on equity based on the Du Pont System.

4. (a) (i) (aa) Operating profit margin
 = Earnings before interest and tax/Turnover
 = RM(68,436,000/317,935,000) = 21.53%
- (bb) Asset turnover
 = Sales / Total assets
 = RM[317,935,000/(309,259,000+208,328,000)]
 = 0.614x
- (cc) Interest expense rate
 = Interest expense/Total assets
 = RM(11,583,000/517,587,000)
 = 2.24%
- (dd) Financial leverage multiplier
 = Total assets/Equity
 = RM(517,587,000/155,463,000)
 = 3.33x
- (ee) Tax retention rate
 = (1 – Effective tax rate)
 = [1 – (Income tax/Net pre-tax profit)]
 = [1 – (4,572,000/56,802,000)]
 = 1–0.08 = 0.92 → 92%
- (ff) Return on equity
 = (Operating profit margin x Asset turnover – Interest expense rate) x
 Financial leverage multiplier x Tax retention rate
 = [(0.2153 x 0.614) – 0.0224] x 3.33 x 0.92
 = 0.336 → 33.6%
- (ii) (aa) Increase
- (bb) Decrease
- (cc) Decrease
- (dd) Increase
- (ee) Decrease

- (c) An American option permits the holder to exercise them at any time up to the expiration day. A European option permits the holder to exercise them only on the expiration day.
- (d) A long straddle refers to a pair of long call and long put at the same strike price.

Question 5

Candidates did not know functions and operations of the institutions in the Malaysian capital market.

5. (a) (i) Main objectives of Malaysian Central Depository Sdn Bhd
- To establish and operate a system for the central handling of securities, whether or not they are listed on any stock exchange.
 - To increase the capacity of clearing and settlement of securities.
 - To reduce the costs and risks of settlement of securities.
 - To enhance the liquidity and efficiency of the Malaysian capital market.
 - To promote Malaysia's competitiveness by complying with the latest international standards for settlement and clearing of securities.
- (ii) Three benefits of the Central Depository System to listed companies and their registrars:
- Savings in registration costs.
 - Efficient retrieval and up-to-date knowledge of the actual beneficial shareholders and their holdings.
 - Automatic registration system.
- (b) (i) Designated securities are listed securities which in the opinion of the Exchange Committee have been manipulated or have excess speculation.
- (ii) (aa) False
- (bb) True
- (cc) True
- (c) Obligations of Bursa Malaysia (choose any **five**):
- To provide, regulate and maintain facilities for conducting the business of a stock exchange in Malaysia.
 - To promote and protect the interests and welfare of the members of the Exchange.
 - To provide an authority for the interpretation and means for the enforcement of the rules relating to member companies on the Stock Exchange and to undertake arbitration between members by the Committee of the Exchange.
 - To establish just and equitable principles in the securities market.
 - To make and amend from time to time rules relating to member companies, and for trading by member companies.
 - To provide investors' service and to promote interest in the securities market as a whole.
 - To promote the commerce and industries of Malaysia and to augment to facilities with which it may be conducted.
 - To provide and enact listing requirements and undertakings relating to listed companies and to enunciate and enforce the Code for Mergers, Takeovers and Acquisitions.
 - To institute a policy of market surveillance and corporate disclosure.
- (d) The Securities Commission regulates and advises the Minister of Finance on all matters relating to the securities and futures industries.