DP09

Investment

11 MAY 2000

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**.

PART A

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

   (a) Under the Securities Industry Act 1983, it is an offence to engage in false trading and stock market manipulation.

   Explain what is "false trading" and "stock market manipulation". [9]

   (b) Kuala Lumpur Options and Financial Futures Exchange (KLOFFE) is a self-regulatory body which establishes rules governing various areas. List **five** of these areas. [5]

   (c) Explain the following types of share issues:

   (i) private placements [2]

   (ii) rights issues [2]

   (iii) issues of shares arising from conversion [2]

   (Total:20 marks)

PART B

ANSWER ALL QUESTIONS

2. (a) How are futures and options integral to the growth of the Malaysian capital market? [6]

   (b) State the **three** distinctive differences between a call option and a warrant. [3]

   (c) List and briefly explain **six** determinants of a warrant premium. [6]

   (d) Explain when and why would an investor buy:

   (i) a call option; and [2½]

   (ii) a put option. [2½]

   (Total:20 marks)

3. (a) You are given the following data for Company A and Company B:

Items	**Company A**	**Company B**
Operating margin	10.75%	25.3%
Pre-tax margin	7.25%	21.2%
Return on total assets	4.0%	11.3%
Return on equity	8.5%	18.9%
Total asset turnover	2.58	1.20
Current ratio	1.23	1.65
Quick ratio	0.81	0.47
Total debt-to-equity ratio	22.3%	76.4%

   (i) Define the formula for the following ratios and briefly explain what these ratios measure:
   - Return on total assets
   - Return on equity
   - Current ratio
   - Quick ratio [6]

(ii) From the above table, we see that the quick ratio of Company B is much lower than its current ratio, whereas in Company A, the quick ratio is close to its current ratio.

What would be the most likely reason for the large difference between the quick ratio and the current ratio in Company B? [2]

(b) The "Earnings Multiplier Model" is a method of valuing equities.

(i) What is the assumption of the model? [1]

(ii) Define the formula of the model. [3]

(c) Assuming all other things are equal, indicate whether the following will result in a **higher** or **lower** price/earnings (P/E) ratio?

(i) Higher dividend pay-out ratio [1]

(ii) Lower expected growth rate [1]

(iii) Higher required rate of return [1]

(iv) Rising interest rates [1]

(d) Briefly explain the **two** primary approaches to security analysis. [4]

(Total:20 marks)

4. (a) You are given the following information for ABC Sdn Bhd:

Sales for 1999	RM5million
Net profit margin for 1999	8%
Dividend per share for 1999	5%
Expected sales growth for 2000	16%
Expected common shares outstanding (RM1 each) for 2000	2million shares
Risk-free rate	7%

(i) Assuming you are an analyst and you expect the net profit margin for 2000 to be only 85% of the net profit margin for 1999, what would be ABC Sdn Bhd's earnings per share for 2000? [4]

(ii) If you expect the dividend growth rate to be 5% and the risk premium for the stock of ABC Sdn Bhd to be 3%, what do you expect the price of the stock to be for 2000? [4]

(iii) Calculate the price/earnings (P/E) ratio of ABC Sdn Bhd for 2000. [2]

(b) Describe the weaknesses of using the "Net Asset Value" method to value equities. [6]

(c) The purpose of a spread is to reduce risk in an option position when an investor thinks the market will move, but is uncertain about the extent of the move. Briefly explain the **two** basic spreads. [4]

(Total:20 marks)

5. (a) Describe the **three** ways in which an option may be disposed once it has been purchased. [4]

(b) Assuming you are a fund manager and you expect the domestic economy to slow down, would you invest in a highly geared company? Give reasons for your answer. [5]

(c) Explain the main objectives of "Malaysian Central Depository Sdn Bhd". [5]

(d) When does "buying-in" take place? [4]

(e) A client can place **two** categories of orders in the Kuala Lumpur Stock Exchange (KLSE)'s automated trading system. What are these **two** categories? [2]

(Total:20 marks)

OUTLINE ANSWER

PART A

Question 1

Although a straight-forward question which merely required listing the answers and briefly explaining various investment terms, yet only a few candidates passed this question. Many lost marks when they were unable to explain terms like: false trading, stock market manipulation, private placements and rights issue.

1. (a) ***Page 114 of Manual***

False trading creates a misleading impression of active trading, by buying and selling securities which does not involve any change in beneficial ownership or by an offer to sell and purchase any securities at a price which is substantially the same as the first-mentioned price.

Stock market manipulation is an offer intended to induce another person to sell or purchase any securities with the effect of artificially raising the price of the security or stabilising the price of the security.

(b) ***Page 119 of manual***

The rules of Kuala Lumpur Options and Financial Futures Exchange (KLOFFE) govern the following areas:

(i) membership to KLOFFE
(ii) the administration of KLOFFE
(iii) member-customer relationship
(iv) trading practices
(v) definition of the products that will be traded and the contract specifications of these products

(c) ***Page 18 & 19 of manual***

(i) Private Placements are new securities issues or debt securities of a company that are sold directly to a group of large institutional investors, such as life insurance companies, pension funds and investment companies, thus bypassing the open market. The buyers are pre-determined.

(ii) A rights issue is an issue of new shares to the company's existing shareholders. This is a method of raising funds from the public and the new capital is raised for the purpose of new investments, new business ventures, expansion of existing businesses, acquisitions, purchase of properties, etc. The rights issues are usually made to existing shareholders in proportion to their shareholding in the company. The shareholders may either take up the new rights shares offered or dispose their rights entitlements to other people. The rights entitlements are traded on the Kuala Lumpur Stock Exchange (KLSE).

(iii) The equity of a company may be increased by conversion of debt equities, warrants, transferable subscription rights, etc. to ordinary shares. Therefore, these conversions will be potential addition of shares to the company. The date of conversion and rate of conversion into ordinary shares is determined by the company and stated in the trust deed.

PART B

Question 2

Another poorly attempted question was on options and warrants. Candidates were unable to briefly explain the determinants of a warrant premium and, when and why an investor would buy a call and/or put option.

2. (a) ***Page 5, 7, 19 & 20 of manual***

The Malaysian capital market plays a major role in the mobilisation of savings for the purpose of financing capital formation for economic growth and development. In line with the Malaysian government's Vision 2020 to achieve an industrialised economy by the year 2020, and its aim to establish Kuala Lumpur as a premier financial centre in the Asia Pacific region, KLOFFE commenced operations in December 1995.

Futures and options provide hedging and asset allocation facilities that allow investors to hold larger debt and equity positions and, as a result, enhance the liquidity of the underlying markets. Liquidity in the capital market is essential. An active derivative market that complements the capital market will enable investors to hedge or adjust their positions and thus make them more willing to take larger holdings thereby fuelling Malaysia's economic development.

(b) ***Page 24 of Manual***

The three distinctive differences between call options and warrants are:

(i) Warrants are issued by companies, whereas puts and calls are created by investors.

(ii) Warrants typically have maturities of at least several years, whereas listed calls expire within several months.

(iii) Warrant terms are not standardised – each warrant is unique.

(c) ***Page 26 & 27 of Manual***

(i) Remaining warrant life

The larger the remaining life of the warrant, the more valuable it is. Even if the security attached to the warrant is not attractive today, its market price may rise over time, and the warrant may become more attractive over time.

(ii) Leverage value

Leverage value measures the number of times the share price exceed the warrant price, i.e. the cheapness of a warrant relative to the share price. Warrant prices rise and decline faster, in percentage terms, than the price of a stock. Some warrants have greater leverage possibilities than others and therefore command lager premiums.

(iii) Price Volatility

The greater the price volatility of the underlying shares, the more likely is the warrant to increase in intrinsic value during a given time period. Investors are willing to pay larger premiums for such a warrant, resulting in a greater value of the warrant.

(iv) Dividend Yield

Since warrant holders do not receive dividends, there is an inverse relationship between the warrant premium and the expected dividend of the shares that the warrant is attached to. Although a warrant contains covenants which protect holders in event of stock splits, bonus and/or rights issues, warrant holders are not protected against regular payments of dividend. Assets paid out in dividends are not available when warrant holders convert their warrants. The higher the dividend, the lower the value of the warrant as warrant holders is not entitled to dividend.

(v) Interest Rates

High interest rates imply larger warrant premiums because in times of high interest rates, the leverage provided by warrants is more valuable to investors as they pay less to buy warrants than shares.

(vi) Dilution

The more warrants a company issues, the bigger the potential the existing shares will be diluted, if all the warrant holders exercise at once to convert the warrants into shares. The exercise would increase the amount of issued share capital and reduce the value of each share. The greater the dilution, the less attractive the warrant and the lower the premium.

(d) ***Page 103 & 104 of Manual***

(i) Investors buy call options because they are bullish or optimistic about the price of the underlying stock. The use of calls minimises the initial investment, specifies the maximum loss that can be suffered and provides for maximum leverage (the ratio of profit to Ringgit invested). The investors' loss is limited to the premium, no matter how much the price of the stock declines. As the stock price rises, the price of the call will keep pace, regardless of how high the price of the stock rises.

(ii) Investors buy put options when they are bearish about the price of the underlying common stock. Since a put gives the owner the right to sell the underlying stock at the specified price, a decline in price will allow the put owner to purchase the stock at the lower price and deliver it to the writer of the put at the higher exercise price.

Question 3

The questions on ratios were reasonably well-answered by most of the candidates. Candidates were familiar with the accounting ratios and were able to explain and apply it to the case provided.

3. (a) (i) ***Page 82 of Manual***

Return on total assets = $\frac{\text{Pre-tax profit + interest}}{\text{Average total capital}}$

Return on total assets measures the overall efficiency of the company in managing its investments in the total assets.

Return on Equity

= $\frac{\text{Net income - dividend in preference shares - minority interest}}{\text{Average total capital}}$

Return on equity measures the rate of return that management has earned on the capital provided by the owner (ordinary shareholders) after meeting all the financial obligations of all the other capital providers. It is an indication of the company's efficiency in generating income to shareholders. It measures the return on the ordinary shareholders' investment in the company. As it reflects the rate of return on the equity capital provided by the owners, it corresponds to a company's overall business risk.

Page 60 - 65 of Manual

Current ratio = $\frac{\text{Current assets}}{\text{Current Liabilities}}$

Current ratio measures a company's ability to pay its debts as they are due.

Quick ratio = $\frac{\text{Cash + Receivables}}{\text{Current Liabilities}}$

Inventories are usually illiquid. Investors therefore, usually use quick ratio to measure the amount of liquid assets available to pay near term liabilities.

(ii) The quick ratio for Company B is very much lower than its current ratio because most of its current assets are held in stock/inventories.

(b) ***page 68 & 69 of manual***

(i) The Earnings Multiplier is also referred to as Price/Earnings (P/E) ratio. The Earnings Multiplier Model assumes that the value of any investment is the present value of future returns. These returns are net earnings of the company.

(ii) The formula is as follows: P/E = (D/E)/ (k-g)
D/E = expected dividend payout ratio
k = required rate of return for the stock
g = expected growth rate in dividend

(c) (i) higher P/E ratio
(ii) lower P/E ratio
(iii) lower P/E ratio
(iv) lower P/E ratio

(d) ***page 60 & 63 of manual***
The two primary approaches to security analysis are fundamental analysis and technical analysis.

Fundamental analysis aims to arrive at the real intrinsic value of a stock. It involves the analysis of both positive and negative factors, which have an impact on a company's future values. Therefore, a fundamental analysis typically includes the following analysis in a 'top-down' order with a three-step approach:
(i) aggregate stock market
(ii) industries
(iii) individual companies

Technical analysis involves the examination of past market data such as price and volume, which leads to an estimate of future prices. Unlike fundamental analysis, a technical analyst ignores the fundamental factors almost completely and is only concerned with the forces of demand and supply for the stock which is believed to be reflected in the market data patterns.

Question 4

The most poorly attempted question was on the case study question on equity valuation. Although reiterated frequently in the Examiner's Comments in the past-year questions and answers on the importance of equities valuation, candidates again failed to pay particular attention to the equity valuation techniques.

4. (a) (i) 2000 expected sales = RM5 million x 1.16 = RM5.8 million
2000 net profit margin = 8% x 0.85 = 6.8%
2000 net profit = RM5.8 million x 6.8% = RM394,400
Earnings per share = RM394,400/2,000,000 = **RM0.1972**

(ii) P = D/(k-g) = (0.05 x 1.05)/(0.07 + 0.03 – 0.05) = RM1.05

(iii) P/E ratio = RM1.05/RM0.1972 = **5.32**

(b) ***page 71 of manual***
The weaknesses of using the Net Asset Value per share valuation method includes:
- It is calculated based on historical accounting data and thus, may not truly reflect the current value of the company's assets
- This method does not take into consideration the quality of the company's assets, which may be overstated in the balance sheet
- This method does not reflect any contingent liabilities that may have been incurred.

(c) ***page 105 of manual***
The two basic spreads are:
(i) Money spread
A money spread involves the purchase of a call option at one exercise price and the sale of the same maturity option, but with a different exercise price.

(ii) Time spread
A time spread involves the purchase and sale of options that are identical except for expiration dates.

Question 5

The final question, which covered areas such as options, objectives of Malaysian Central Depository Sdn Bhd and categories of orders in the KLSE's automated trading system, was also poorly answered. These questions were straight-forward with an answers to the questions found in the study manual (Chapter 5, Pages 126, 128 and 129). Yet, only a few candidates passed this question.

5. (a) ***page 103 of manual***
The 3 ways in which an option may be disposed are:
- the buyer may exercise the option.
- the buyer may allow the option to expire unexercised.
- the option may be offset, i.e. the buyer may subsequently sell the option or the seller may subsequently buy the option back.

(b) When the domestic economy slows down, businesses which depend on the domestic economy and which are not export-oriented will suffer most. Likewise, seasonal businesses will also suffer. When the business suffers, cashflow is weak due to several reasons, including the inability of customers to pay and the inability to obtain further financing for working capital purposes. The situation is made worst if liquidity is tight and interest rates are high. With a weak cashflow and rising interest rates, the company will face difficulty servicing its debt. The company may also face problems paying its creditors. As such, the company's creditors and lenders can then force the company into liquidation. Therefore, the major risk of investing in a highly geared company when the economy is slowing down is the company's ability to meet its fixed obligation.

(c) ***page 129 of manual***
The main objectives of the Malaysian Central Depository Sdn Bhd are as follows:
- to establish and operate a system for the central handling of securities.
- 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.

(d) ***page 128 of manual***
Under the Central Depository System, if a seller fails to have his shares in his account settled on T+5, his trade fails and a buying in will be instituted against him the next market day.

Buying-in takes place every market day from 2pm to 5pm. If uncompleted, the buying-in will be continued on the following market day at the same time. The buying-in price is fixed by adding 10 bids to the last recorded sale or last buying-in offer at the close of the business on the previous day.

(e) ***page 126 of manual***
The two categories of orders are:
- limit order – to be executed at the entered price or better.
- market order – to be executed at any price within the upper and lower price.