MANUFACTURING ENGINEERING TRIPOS PART II

Thursday 28 April 2011 9 to 12

PAPER 2

Answer not more than ***four*** *questions.*

Answer ***each*** *question in a separate booklet.*

All questions carry the same number of marks.

The ***approximate*** *number of marks allocated to each part of a question is indicated in the right margin.*

There are no attachments.

STATIONERY REQUIREMENTS	SPECIAL REQUIREMENTS
8 page answer booklet x 4	Engineering Data Book
Rough work pad	CUED approved calculator allowed

You may not start to read the questions printed on the subsequent pages of this question paper until instructed that you may do so by the Invigilator

1 What advice would you give to a manager tasked with implementing a major organisational change programme? Your answer should address the nature of change, the process of implementing change, and common obstacles to change, along with suggestions to overcome them. [100%]

2 (a) Swann plc has 20 million £0·50 ordinary shares and irredeemable loan capital with a nominal value of £40 million in issue. The ordinary shares have a current market value of £2·40 per share and the loan capital is quoted at £80 per £100 nominal value. The cost of ordinary shares is estimated at 11% and the cost of loan capital is calculated to be 8%. The rate of corporation tax is 25%. What is the weighted average cost of capital for the company? [8%]

(b) Anderson plc has ordinary shares in issue with a par value of £0·50 and a price earnings ratio of 10 times. The dividend per share is £0·15 and the dividend cover ratio is 2·0 times. What is the dividend yield of a share in the company? (Ignore taxation). [8%]

(c) Strauss plc has warrants in issue that can be used to subscribe for ordinary shares in the company on a one-for-one basis in six months' time at an exercise price of £4·50. The warrants are currently quoted at £1·20 and the current share price is £5·40. What are the warrant conversion premium and the intrinsic value of the warrant? [9%]

(d) Trott Electronics plc has issued nominal share capital of £10 million, made up of £0·25 ordinary shares, and a market capitalisation of £20 million. The company expects post-tax profits for the forthcoming year to be £8 million and wishes to maintain a constant dividend payout ratio of 25%. Dividends are expected to increase by 3% per year for the foreseeable future. What is the expected rate of return from the ordinary shares? [8%]

(e) Which one of the following statements concerning financing is correct?

(i) Warrant holders receive a dividend on the warrants held.

(ii) A share repurchase will reduce distributable reserves.

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(iii) Securitisation involves converting assets that provide a future stream of income into equity.

(iv) Preference share capital may be secured on the assets of the company. [8%]

(f) Prior plc has ordinary shares in issue that pay a constant dividend per share of £0.25 and have a beta of 1·2. The current market rate of return is 8% and the risk-free rate of return is 2%. What is the predicted market value of each share of the company (to the nearest £0.01)? [8%]

(g) Consider the following two statements:

(i) One form of hedging is where an investor buys shares in one market and sells them immediately in another to profit from price differences between the two markets.

(ii) One form of financial derivative is a preference share of a business.

Which one of the following combinations (true/false) relating to the above statements is correct?

	Statement (i)	Statement (ii)
A	True	True
B	True	False
C	False	True
D	False	False

[8%]

(h) An investor has a call option on 10,000 ordinary shares in Finn plc. The option premium was £0.40 per share and the strike price is £6.50 per share. At the expiry date of the option the share price was £6.80. Should the option be exercised and what is the net gain (loss) for the investor? [9%]

(i) Collingwood plc has a £50 million fixed-rate loan on which it pays interest at the rate of 7·8% per year. The company would like to undertake a swap agreement with a bank to exchange the fixed-rate commitment for a floating-rate commitment. A swap bank is prepared to pay a fixed-rate of interest of 7·5% per year and to receive LIBOR in return. LIBOR during the first year was 7·1%. What is the effective interest rate for the company for the first year of the swap agreement? [9%]

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(j) The cost of equity capital for an ungeared company is 10%. A similar but geared company in the same risk class is financed by 60% equity and 40% loan capital. The rate of corporation tax is 20%. Using Modigliani and Miller (including taxation), what is the weighted average cost of capital of the geared company? [9%]

(k) Bresnan plc, which is financed entirely by equity, earns a constant return of 10% on its investments. The company has a constant dividend payout ratio of 40% and the earnings per share of the company is expected to be £0.50 at the end of the forthcoming year. What is the predicted market value of each share of the company? [8%]

(l) Consider the following statements concerning derivatives:

(i) Futures contracts may not be traded on an organised exchange.
(ii) Forward contracts may be traded on an organised exchange.

Which one of the following combinations (true/false) concerning the above statements is correct?

	Statement (i)	Statement (ii)
A	True	True
B	True	False
C	False	True
D	False	False

[8%]

3 (a) Briefly describe 3 different product pricing strategies and give examples where these strategies would be appropriate. [30%]

(b) In his book 'Competitive Strategy', Michael Porter argues that companies should adopt one of two main strategies: *low cost* or *differentiation*. Compare the effect these two strategies have on a company's value chain (R&D, Design, Supply Management, Production, Distribution/Routes to Market and After Sales Service). [30%]

(c) Corporate Valuation needs to take account of the intangible assets of the business. What are the main intangible assets that allow companies to build strong brands? Illustrate your answer using a well known brand. [40%]

4 Discuss the different learning outcomes that can be gained from industrial project work, illustrating your answer with examples from your MET2 project experience. [100%]

5 (a) Describe, illustrating your answer with examples, what is meant by the following two terms:

(i) Market uncertainty;
(ii) Technological uncertainty. [20%]

(b) Explain how firms can use the process of Technology Roadmapping (TRM), and associated tools and techniques, to mitigate market and technological uncertainty when introducing new products or services to market. [30%]

(c) Discuss how the outputs from a TRM process could provide input for the 'Make versus Buy' (MvB) decision. [25%]

(d) The effective management of Intellectual Property Rights (IPR) has been identified as a critical factor in successful partnerships between firms. Discuss, using examples, some of the reasons why IPR management is challenging when forming and managing partnerships, and what strategies firms can use to overcome these challenges. [25%]

6 Successful new businesses are frequently faced with the challenge of rapid scale-up of manufacturing.

(a) What potential problems would you envisage in the structure, operations and supply chain of a rapidly growing manufacturing business? [50%]

(b) What steps might you take to mitigate these problems? [50%]

Illustrate your answer with examples.

END OF PAPER

Final version