

REVISION MOCK B SCRIPT SUBMISSION FORM

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ACCA – Paper F9 Financial Management December 2017 Revision Mock B

Instructions

- Please complete your personal details above.
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Marking Report

Notice to Markers

- 1 When commenting about the script performance, please ensure on individual questions and on overall assessment your comments cover areas of examination technique including:

• Time management	• Handwriting	• Presentation and layout	• Use of English
• Points clearly and concisely made	• Relevance of answers to question	• Coverage and depth of answer	• Accuracy of calculations
• Calculations cross-referenced to workings	• All parts of the requirement attempted	• Length of answers equates to marks available	• Read the question carefully

- 2 Please provide suitable constructive comments for both sections A and B, and for each question in section C.

Section / Qn no.	General Comments	Exam Technique Comments

ACCA REVISION MOCK B

Financial Management

December 2017

Time allowed

3 hours and 15 minutes

This paper is divided into three sections:

Section A - All 15 questions are compulsory and **MUST** be attempted

Section B - All 15 questions are compulsory and **MUST** be attempted

Section C - **BOTH** questions are compulsory and **MUST** be attempted

Formulae sheet, present value and annuity tables are on pages 3, 4 and 5

Do not open this paper until instructed by the supervisor. During reading and planning time only the question paper may be annotated. You must NOT write in your answer booklet until instructed by the supervisor. Do NOT record any of your answers on the question paper. This question paper must not be removed from the examination hall.

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Paper F9



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FORMULAE SHEET

Economic order quantity

$$= \sqrt{\frac{2C_oD}{C_H}}$$

Miller-Orr model

$$\text{Return point} = \text{Lower limit} + \left(\frac{1}{3} \times \text{spread}\right)$$

$$\text{Spread} = 3 \left(\frac{\frac{3}{4} \times \text{Transaction cost} \times \text{Variance of cash flows}}{\text{Interest rate}} \right)^{\frac{1}{3}}$$

The capital asset pricing model

$$E(r)_j = R_f + \beta_j (E(r_m) - R_f)$$

The asset beta formula

$$\beta_a = \left(\frac{V_e}{(V_e + V_d(1-T))} \beta_e \right) + \left(\frac{V_d(1-T)}{(V_e + V_d(1-T))} \beta_d \right)$$

The growth model

$$P_0 = \frac{D_0(1+g)}{(r_e - g)} \quad r_e = \frac{D_0(1+g)}{(P_0)} + g$$

Gordon's growth approximation

$$g = br_e$$

The weighted average cost of capital

$$\text{WACC} = \left(\frac{V_e}{V_e + V_d} \right) k_e + \left(\frac{V_d}{V_e + V_d} \right) k_d(1-T)$$

The Fisher formula

$$(1+i) = (1+r)(1+h)$$

Purchasing power parity and interest rate parity

$$S_1 = S_0 \times \frac{(1+h_c)}{(1+h_b)} \quad F_0 = S_0 \times \frac{(1+i_c)}{(1+i_b)}$$

Present value table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate

n = number of periods until payment

Periods Discount rates (r)

(n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	2
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	3
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	4
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	5
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	6
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	7
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	8
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	9
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	10
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	11
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	12
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	13
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	14
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	15
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	1
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694	2
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579	3
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482	4
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402	5
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335	6
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279	7
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233	8
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194	9
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162	10
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135	11
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112	12
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093	13
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078	14
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065	15

Annuity table

Present value of an annuity of 1 i.e. $\frac{1-(1+r)^{-n}}{r}$

Where r = discount rate

n = number of periods

Periods Discount rates (r)

(n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	2
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	3
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	4
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	5
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	6
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	7
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	8
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	9
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	10
11	10.37	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	11
12	11.26	10.58	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	12
13	12.13	11.35	10.63	9.986	9.394	8.853	8.358	7.904	7.487	7.103	13
14	13.00	12.11	11.30	10.56	9.899	9.295	8.745	8.244	7.786	7.367	14
15	13.87	12.85	11.94	11.12	10.38	9.712	9.108	8.559	8.061	7.606	15
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	1
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528	2
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106	3
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589	4
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991	5
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326	6
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605	7
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837	8
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031	9
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192	10
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327	11
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439	12
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533	13
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611	14
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675	15

SECTION A

ALL 15 questions are compulsory and MUST be attempted. Each question is worth two marks.

1 The 'agency problem' refers to which one of the following situations?

- A Shareholders acting in their own short-term interests rather than the long-term interests of the company
- B A vocal minority of shareholders expecting the directors to act as their agents and pay substantial dividends
- C Companies reliant upon substantial government contracts such that they are effectively agents of the government
- D The directors acting in their own interests rather than the shareholders' interests

2 The following information has been calculated for D Co:

Raw material inventory turnover period	19 days
Work in progress inventory turnover period	14 days
Trade payables payment period	40 days
Finished goods inventory turnover period	31 days
Trade receivables collection period	52 days

What is the length of the working capital cycle?

- A 52 days
- B 76 days
- C 118 days
- D 128 days

3 The purchase price of an inventory item is \$42 per unit. In each three-month period the usage of the item is 2,000 units. The annual holding cost associated with one unit is 5% of its purchase price. The EOQ is 185 units.

What is the cost of placing an order (to 2 decimal places)?

- A \$3.37
- B \$4.49
- C \$5.14
- D \$5.66

- 4 A company is planning to open a new store in a new geographic location. An initial site evaluation has taken place at a cost of \$7,000 and a store location has been found. The new store can be rented for \$7,500 per annum. It will require refurbishment at a cost of \$310,000.

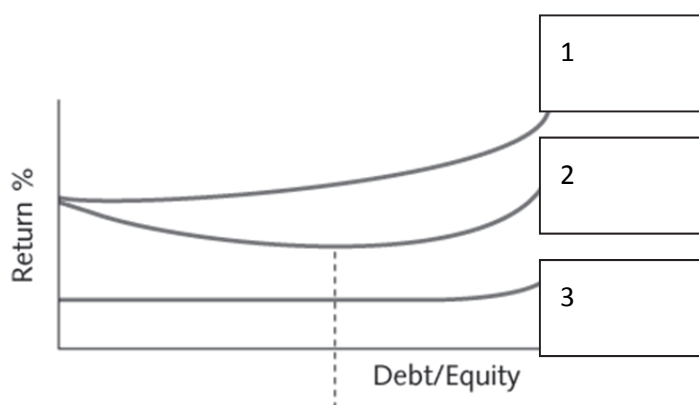
Which of the following costs are relevant for an NPV calculation?

- (i) \$7,000
 - (ii) \$7,500
 - (iii) \$310,000
- A (i) only
 - B (i) and (ii)
 - C (ii) and (iii)
 - D All of the above

- 5 **Which of the following ratios would be used to assess the liquidity of a company?**

- (i) Return on capital employed
 - (ii) Gross profit percentage
 - (iii) Acid test ratio
 - (iv) Gearing ratio
- A (i) and (ii) only
 - B (iii) only
 - C (iv) only
 - D (iii) and (iv) only

6



Which one of the following correctly labels the lines on the above graph?

- A 1 = K_e , 2 = WACC, 3 = K_d
- B 1 = WACC, 2 = K_e , 3 = K_d
- C 1 = WACC, 2 = K_d , 3 = K_e
- D 1 = K_e , 2 = K_d , 3 = WACC

- 7 A government is looking at assessing hospitals by reference to a range of both financial and non-financial factors, one of which is survival rates for heart by-pass operation.

Which of the three E's best describes the above measure?

- A Economy
- B Effectiveness
- C Efficiency
- D Externality

- 8 The government in a country is following an expansionary fiscal policy.

How might this affect many businesses?

- A Higher taxes, less government contracts being offered, less subsidies, lower demand
- B Lower interest rates, increased availability of credit from banks, higher demand
- C Lower taxes, increased government subsidies and contracts being offered, higher demand
- D Higher interest rates, less availability of credit from banks, lower demand

- 9 **Which one of the following is false regarding simulations?**

- A They can consider several variables changing simultaneously
- B They have a clear decision rule
- C They give a better understanding of risk
- D They describe a range and probability of possible outcomes

- 10 **Which of the following is the correct statement of the conclusion of Modigliani and Miller on the relevance of dividend policy?**

- A Increase in retentions result in a higher growth rate
- B All shareholders are indifferent between receiving dividend income and capital gains
- C The value of the shareholders' equity is determined solely by the firm's investment selection criteria
- D Discounting the dividends is not an appropriate way to value the firm's equity

- 11** Inflation in the UK is 5% p.a. and in the US is 6% p.a. Given that the spot rate is currently GBP 1 = USD 1.5000, what will a UK company have to pay in Sterling, in 12 months, to buy a commodity costing \$10,000 (assuming Purchasing Power Parity)? (Answer to the nearest GBP.)
- A £6,604
B £4,166
C £9,906
D £6,250
- 12** Which of the following best describes Murabaha as a source of finance within the Islamic banking model?
- A A form of trade credit or loan
B The equivalent of lease finance
C A special kind of partnership where one partner gives money to another for investing it in a commercial enterprise
D A relationship between two or more parties, who contribute capital to a business, and divide the net profit and loss pro-rata
- 13** Comment on the validity of the following statements, in relation to the Efficient Market Hypothesis.

Statement 1: An inefficient market is one in which the value of securities is not always an accurate reflection of the available information.

Statement 2: In a semi-strong form market the share price incorporates all past information and all publicly-available information.

- | | <i>Statement 1</i> | <i>Statement 2</i> |
|---|--------------------|--------------------|
| A | True | True |
| B | True | False |
| C | False | True |
| D | False | False |

- 14** D plc is considering whether to make product X or product Y. The production of the products is mutually exclusive as they use the same machinery. The estimated sales demand for each product is uncertain and the following probability distribution of the Net Present Values for each product has been identified.

Product X NPV \$	Probability (%)
3,000	10
3,500	20
4,000	40
4,500	20
5,000	10

Product Y NPV \$	Probability (%)
2,000	5
3,000	10
4,000	40
5,000	25
6,000	20

Using expected values, which one of the following would you recommend for D plc?

- A Accept Product X
 - B Accept Product Y
 - C Accept both Product X and Y
 - D Accept neither product X nor Y
- 15 All of the following are variables that can be manipulated to affect monetary policy except**
- A credit restrictions achieved via the banking system
 - B government expenditure on goods and services
 - C the volume of money in circulation
 - D the rate of interest

SECTION B

ALL 15 questions are compulsory and MUST be attempted. Each question is worth two marks.

The following scenario relates to questions 16 – 20

Jayco Ltd has decided that it needs to improve its cash position. The finance manager has targeted a reduction in the time taken for customers to pay and is considering various options.

It currently has a \$4.5m balance on receivables and an 82 day average time period for receipt of cash from customers. Its annual sales are \$20m and the business has an overdraft currently charging a rate of 8%.

An invoice discounter offers to help Jayco collect cash faster for a fee. They promise that with their help, 60% of the sales will be collected in 30 days and the remainder in 60 days.

Jayco is also considering using the offer of a settlement discount to customers to encourage them to pay more quickly. Customers would receive the discount if they paid in 30 days.

Jayco's other option under consideration is to use a debt factor agency.

- 16 What would be the annual saving in the cost of financing if the business could reduce its receivables by half and at the same time move to a better overdraft with a rate of 6%?**
- A \$135,000
B \$450,000
C \$225,000
D \$20,000
- 17 What would Jayco's new average receivables balance be to the nearest \$000 if it used the invoice discounter and cash came in at 30 and 60 days as promised?**
- A \$2,466,000
B \$1,644,000
C \$3,288,000
D \$2,301,000
- 18 What would be the effective annualised cost of Jayco offering a 1% discount to their customers and all customers took up the offer?**
- A 10.4%
B 12%
C 1%
D 7.3%

19 Which one of the following statements is untrue about debt factoring?

- A Debt factors can take over the credit control function
- B Customers will be unaware that their supplier uses a debt factor
- C Factors can take responsibility for unpaid debts under a 'non-recourse' arrangement
- D Factors can offer credit insurance to their client

20 Which of these is not a key aspect of a credit policy?

- A Set credit limits for customers
- B Invoice promptly and collect overdue debts
- C Offer discounts to speed up cash receipts
- D Assess creditworthiness

The following scenario relates to questions 21 – 25

AJP Co is an unlisted company. The owner and manager of the business is approaching retirement and is considering the sale of his business. Financial information is as follows:

Number of ordinary shares	5,000
Latest earnings per share	\$7
Estimated equity beta	1.5
Latest free cash flow available to the owner	\$33,000 (after salary payment)

The owner and manager pays himself an annual salary of \$200,000 which is \$60,000 more than could be reasonably expected for such a role.

Other relevant information:

Range of listed company price/earnings ratios for companies in the sector	7 – 11
Dividend just paid	\$2.10 per share
Next year's planned dividend	\$2.205 per share
Corporation tax rate	30%
WACC	9%
Cost of equity finance	12%

- 21 What would be a suitable earnings figure to use for a business valuation based on the P/E ratio?**
- A \$33,000
 B \$75,000
 C \$77,000
 D \$95,000
- 22 If after taking other factors into consideration a suitable earnings figure of \$50,000 is determined and unlisted companies are generally to be considered 20% less valuable than listed ones in this industry, estimate the total value of AJP using the P/E method.**
- A \$350,000
 B \$360,000
 C \$450,000
 D \$687,500
- 23 If valuing a business using asset values, when would a valuation using net realisable values NOT be appropriate?**
- A For the seller to use as a maximum price
 B When the business is not a going concern
 C For a purchaser who wishes to immediately break up the business after purchase
 D If the business is a property investment company

24 Calculate a price per share using the dividend valuation model.

- A \$30.00
- B \$31.50
- C \$33.08
- D \$55.13

25 Which of the following would not be deducted in a calculation of free cash flows?

- A Annual investment in non-current assets
- B Ongoing directors' salaries
- C Dividends
- D Tax

The following scenario relates to questions 26 – 30

Zigzag Co operates in a country where the home currency is \$. It has recently begun exporting to a European country and expects to receive €500,000 in six months' time. The company plans to take action to hedge the exchange rate risk arising from its European exports.

Zigzag could put cash on deposit in the European country at an annual interest rate of 3% per year, and borrow at 5% per year. The company could put cash on deposit in its home country at an annual interest rate of 4% per year, and borrow at 6% per year. Inflation in the European country is 3% per year, while inflation in the home country of Zigzag is 4.5% per year.

The following exchange rates are currently available to Zigzag:

Current spot exchange rate	2.000 euro per \$
Six-month forward exchange rate	1.890 – 1.990 euro per \$
One-year forward exchange rate	1.883 – 1.981 euro per \$

Zigzag is also considering the use of futures or options contracts but the finance director doesn't feel that she knows enough about them to make an informed decision.

- 26 Calculate the \$ value received if Zigzag Co uses the forward exchange contract.**
- A \$251,256
 - B \$264,550
 - C \$945,000
 - D \$995,000
- 27 If Zigzag uses a money market hedge, what values will need to be borrowed and deposited today in setting up the hedge?**
- A €492,610 deposited, \$246,305 borrowed
 - B €492,610 borrowed, \$246,305 deposited
 - C €487,805 deposited, \$243,903 borrowed
 - D €487,805 borrowed, \$243,903 deposited
- 28 Calculate the one-year expected (future) spot rate predicted by purchasing power parity theory.**
- A €1.971/\$
 - B €1.981/\$
 - C €2.019/\$
 - D €2.029/\$

29 Which of the following statements about the use of a futures contract for Zigzag's hedging requirement is true?

- A Zigzag should buy € futures and sell them on close out.
- B Zigzag should sell € futures now and buy them back on close out.
- C Zigzag should buy € futures now and also on close out.
- D Zigzag should sell € futures now and also on close out.

30 Which of the following statements about the use of a currency option for Zigzag's hedging requirement is true?

- A Zigzag should use a call option on Euros as it gives the right to sell Euros at a fixed rate at a point in the future.
- B Zigzag should use a call option on Euros as it gives the right to buy Euros at a fixed rate at a point in the future.
- C Zigzag should use a put option on Euros as it gives the right to sell Euros at a fixed rate at a point in the future.
- D Zigzag should use a put option on Euros as it gives the right to buy Euros at a fixed rate at a point in the future.

SECTION C

BOTH questions are compulsory and MUST be attempted

- 31** Goliath Co is a listed company which plans to meet increased demand for its products by buying new machinery costing \$5 million. The machinery would last for four years, at the end of which it would be replaced. The scrap value of the machinery is expected to be 5% of the initial cost. Tax-allowable depreciation would be available on the cost of the machinery on a 25% reducing balance basis, with a balancing allowance or balancing charge claimed in the final year of operation.

This investment will increase production capacity by 9,000 units per year and all of these units are expected to be sold as they are produced. Relevant financial information in current price terms is as follows:

		Forecast inflation
Selling price	\$650 per unit	4.0%
Variable cost	\$250 per unit	5.5%
Incremental fixed costs	\$250,000	5.0%

In addition to the initial cost of the new machinery, initial investment in working capital of \$500,000 will be required. Investment in working capital will be subject to the general rate of inflation, which is expected to be 4.7% per year.

Goliath pays tax on profits at the rate of 20% per year, one year in arrears. The company has a nominal (money terms) after-tax cost of capital of 12% per year.

Required:

- (a) Calculate the net present value of the planned purchase of the new machinery using a nominal (money terms) approach and comment on its financial acceptability. **(11 marks)**
- (b) Discuss the difference between a nominal (money terms) approach and a real terms approach to calculating net present value. **(4 marks)**

Goliath has been given the option to lease the asset instead of purchasing it. The lease payments would comprise four annual payments of \$1.35 million, paid in advance, with the first payment being at the start of Goliath's accounting period. The present cost of purchasing the asset is \$4,097,000. The post-tax cost of borrowing is 8%

- (c) Calculate the present cost of leasing the asset and recommend whether Goliath should lease or buy the asset. **(5 marks)**

(Total: 20 marks)

- 32** Oxfield Co, a listed industrial company, is considering a major investment. The company's investment projects team needs an appropriate rate at which to discount the estimated after-tax cash flows for the investment. Following the company's normal practice this is to be based on the weighted average cost of capital (WACC).

Figures relating to long-term financing are as follows.

	\$m
160 million ordinary shares of \$0.50 each	80
Share premium account	27
Revaluation reserve	26
Retained earnings	9
8% preference shares of \$1 each	12
7.2% loan notes	67

The loan note interest for the current year has just been paid. Interest is payable at the end of each of the next three years, and all of the loan notes are to be redeemed in cash at a 5% premium at the end of three years.

The most recent dividend has just been paid. Dividends over the past four years have been as follows.

	<i>Oldest</i>			<i>Most recent</i>
Total dividend (\$m)	23.5	25.6	26.9	28.8

The current share price is \$2.10, the loan notes have a market value of \$97 (per \$100 nominal) and the preference shares are currently worth \$0.85 per share (ex-div).

The corporation tax rate is expected to be 21% for the foreseeable future.

Required:

- (a) Calculate the company's WACC. Explain your workings and any assumptions which you have made. Justify the basis of the weightings which you have used. (11 marks)
- (b) Explain how the capital asset pricing model (CAPM) could be used as an alternative means of determining a suitable discount rate for the assessment of the investment, assuming this is a new direction for the business. (4 marks)
- (c) Briefly explain Modigliani and Miller's theories on how the gearing level impacts the value of a business. (5 marks)

(Total: 20 marks)