

Applied Skills

Financial Management

Mock Exam 1 – Questions

Time allowed: 3 hours

This examination is divided into three sections:

Section A

- 15 objective test (OT) questions, each worth 2 marks
- 30 marks in total

Section B

- Three OT cases, containing a scenario which relates to five OT questions, each worth 2 marks
- 30 marks in total

Section C

- Two constructed response questions, each containing a scenario which relates to one or more requirement(s)
- Each constructed response question is worth 20 marks in total
- 40 marks in total

Formulae Sheet, Present Value and Annuity Tables are on pages 11–13.

FEM MOCK 1

Section A

This section of the exam contains **15 objective test (OT) questions**.

Each question is worth **2 marks** and is compulsory.

This exam section is worth **30 marks** in total.

1 Which TWO of the following money market instruments would usually be issued at a discount to nominal value?

- Certificates of deposit
- Treasury bills
- Commercial paper
- Repurchase agreements

2 Indicate, by clicking on the relevant boxes in the table below, whether each of the following is permitted under Islamic financing principles.

The receipt or payment of interest	PERMITTED	NOT PERMITTED
The issue of debt	PERMITTED	NOT PERMITTED
Using derivatives for speculation	PERMITTED	NOT PERMITTED
Selling something that is not owned	PERMITTED	NOT PERMITTED

3 The target capital structure of Traggles Co is 50% debt, 10% preference shares and 40% ordinary shares. The interest rate on the debt is 6%, the dividend yield on the preference shares is 7%, the cost of ordinary shares is 11.5% and the tax rate is 40%.

What is Traggles Co's weighted average cost of capital?

- 6.5%
- 6.8%
- 7.1%
- 8.3%

4 Which of the following actions would be MOST likely to cause agency costs to fall?

- Removing independent non-executives from the board of directors
- Introducing long-term incentive plans for the executives
- Reducing the level of internal controls
- Granting executive share options exercisable within one year

5 The following information relates to the 31 December replacement of a machine:

	\$
Tax written down value of old machine	20,000
Cost of new machine	180,000
Sale proceeds of old machine	30,000
Tax rate (tax is paid without delay)	30%

What is the net relevant cost of replacing the machine on 31 December?

\$

- 6** Quick Grow Co uses its bank to factor the company's trade receivables. Annual sales are \$1,200,000 and the receivables collection period is 30 days. The bank immediately advances Quick Grow 90% of the receivables at an annual interest rate of 18%, and charges a fee of 1% on sales. As a result of the factoring arrangement, Quick Grow is able to save \$10,000 per year in administration costs.

Assuming a 360-day year, what is the net annual cost of factoring?

- \$20,000
- \$19,000
- \$18,200
- \$18,000

- 7** Which of the following would NOT usually be considered within corporate financial management?

Select..	▼
Hedging foreign currency risk	
Following "pecking order theory"	
Setting the firm's mission statement	
Achieving value for money	

- 8** If a profitable company increases the proportion of debt in its capital structure, which of the following would definitely increase?

- The volatility of net income
- The risk of default
- The level of operating gearing
- The level of business risk

- 9** Under frost-free conditions, Sweet Co expects its strawberry crop to have a \$60,000 market value. An unprotected crop damaged by frost has an expected market value of \$40,000. If Sweet Co protects the strawberries against frost, the market value of the crop is still expected to be \$60,000 under frost-free conditions and \$90,000 if there is a frost.

What must be the probability of a frost for Sweet to be indifferent to spending \$10,000 for frost protection?

- 0.167
- 0.200
- 0.250
- 0.333

- 10** A retailing company has annual sales of \$36m and a gross profit margin of 20%. All sales and purchases are on credit. The following balances are maintained throughout the 365-day year:

Inventory	\$6m
Trade receivables	\$8m
Trade payables	\$3m

What is the company's operating cycle (to the nearest day)?

<input type="text"/>	days
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11 Match the level of capital market efficiency to each of the following statements.

Efficiency	Statement
Not efficient at all	No gain can be made by using inside information
Weak form efficient	Share price movements can be predicted by analysing financial statements
Semi-strong form efficient	Share price movements can be predicted by analysing historic price charts
Strong form efficient	Share prices quickly respond to new publicly available information

12 Identify, by clicking on the relevant box, whether each of the following statements concerning the traditional view of capital structure is true or false.

If a company's capital structure is below the optimal level of gearing, then an increase in equity will, all other things being equal, increase the weighted average cost of capital	TRUE	FALSE
The same optimal capital structure exists for every company	TRUE	FALSE
There is a linear relationship between financial risk and the cost of equity	TRUE	FALSE

13 Which of the following is MOST likely to increase shareholder wealth?

- Redemption of all corporate debt
- Paying a large dividend
- Using discounted payback period for project selection
- Shortening the operating cycle

14 The following data relates to a company:

Total dividend (just paid)	\$180,000
Payout ratio	60%
Expected return on reinvested profits	20%
Cost of equity	15%

What is the total market value of the company's equity (to the nearest \$000)?

- \$1,200,000
- \$2,120,000
- \$2,777,000
- \$6,720,000

15 A company plans to issue a 10-year 7% redeemable loan note at its nominal value. Investors expect an annual return of 10% on loan notes of this level of risk.

What is the minimum redemption premium (to the nearest \$) that the company must offer on each \$100 nominal value loan note?

- \$25
- \$48
- \$50
- \$96

Section B

This section of the exam contains **three OT cases**.
 Each OT case contains a scenario which relates to **five OT questions**.
 Each question is worth **2 marks** and is compulsory.
 This exam section is worth **30 marks** in total.

The following scenario relates to questions 16–20.

AQR Co has 100 million ordinary shares in issue and the current ex-div market price per share is \$2.50.

The recent dividends per share of the company are as follows.

Year	20X2	20X3	20X4	20X5	20X6
Dividend per share	\$0.1938	\$0.2020	\$0.2041	\$0.2102	\$0.2180

To finance an expansion of existing operations AQR Co plans to issue \$40m of loan notes at their nominal value of \$100 per loan note. These loan notes would pay annual interest of 8% and would be redeemed at a 5% premium to nominal value after 10 years. The tax rate is 30%.

16 What is AQR Co's existing cost of equity?

- 11.7%
- 8.7%
- 12.0%
- 12.1%

17 Which of the following statements about the impact of the proposed loan note issue on the cost of equity is correct?

Select...	▼
The cost of equity will rise due to default risk	
The cost of equity will remain unchanged as there will be no change in business risk	
The cost of equity will fall as the share price will rise	
The cost of equity will rise due to an increase in financial risk	

18 What is the after-tax cost of debt of the loan notes?

- 6.0%
- 5.6%
- 8.0%
- 11.2%

19 AQR Co's bankers advise that, for the loan note issue to be fully subscribed, the company's quick ratio needs to be at least 1. AQR Co's existing quick ratio is 0.8.

Which of the following actions would increase AQR Co's quick ratio?

- Purchasing inventory through the issuance of a long-term loan note
- Implementing procedures to collect trade receivables at a faster rate
- Paying an existing trade payable
- Selling obsolete inventory at a loss

20 AQR Co's finance director is considering the use of peer-to-peer (P2P) lending as an alternative to the planned loan note issue.

Identify, by clicking on the relevant box, whether each of the following statements concerning peer-to-peer lending is true or false.

It is an example of financial disintermediation	TRUE	FALSE
It represents debt-based crowdfunding	TRUE	FALSE
The amounts loaned are usually insured by the government	TRUE	FALSE
The interest rate for borrowers is usually higher than on bank loans	TRUE	FALSE

The following scenario relates to questions 21–25.

GBP Co, whose home currency is sterling (£), has a fixed-interest peso bank loan and must pay interest of 2 million pesos in six months' time. The following information is available:

	Pesos per £1
Spot rate:	22.500 – 22.582
Six-month forward rate:	22.805 – 22.889

Annual interest rates available to GBP Co:

	<i>Borrowing</i>	<i>Deposit</i>
Peso	10.0%	7.5%
Sterling	4.5%	3.5%

21 Which TWO of the following statements relating to interest rate parity theory are correct?

- It prevents gains from covered interest rate arbitrage
- It operates using nominal interest rates rather than real interest rates
- It is reliable for forecasting the long-term exchange rate trend
- It suggests that an increase in interest rate will lead to an increase in the value of the currency

22 What is the cost in six months' time of using a forward contract to buy the 2 million pesos (to the nearest £)?

£

23 What are the appropriate six-month interest rates for GBP Co to use if the company hedges the peso payment using a money market hedge?

Interest rate options		Interest rate to be used for	
2.25%	1.75 %	Borrowing rate	Deposit rate
3.5%	3.75%		
4.5%	7.5%		
5.0%	10.0%		

24 Which of the following derivatives would be MOST appropriate for hedging currency economic risk?

- Forward rate agreements
- Currency options
- Currency futures
- Currency swaps

25 GBP Co's finance director is considering an issue of new debt and has analysed the term structure of interest rates to assist in the decision.

Which of the following would best explain an inverted yield curve?

- Investors "preferred habitat" is in long-dated loan notes
- Inflation is expected to rise in future
- Investors have a preference for liquidity
- The central bank has lowered short-term interest rates on a temporary basis to stimulate the economy

The following scenario relates to questions 26–30.

Terrier Co makes annual purchases of \$342,000 for a key component. It places one order per month for 5,000 components. The current terms are payment in full within 90 days, which Terrier Co meets, and the cost per component is \$5.70. The cost of ordering is \$100 per order, while the cost of holding components in inventory is \$0.50 per component per year. Terrier Co does not use the Economic Order Quantity (EOQ) model for inventory.

The supplier has offered either a discount of 0.8% for payment in full within 30 days, or a discount of 3% on orders of 15,000 or more components. If the bulk purchase discount is taken, the cost of holding components in inventory would increase to \$1 per component per year due to a scarcity of warehousing space in the city.

Assume that there are 365 days in the year and that Terrier Co finances working capital using an overdraft costing 4.5% per year.

26 Which of the following factors influence the formulation of a company's working capital policy?

- (1) The operating cycle
 - (2) The terms of trade
 - (3) Management's attitude to risk
- 3 only
 1 and 3 only
 1 and 2 only
 1, 2 and 3

27 What is the net benefit per year if Terrier Co accepts the early settlement discount?

- \$206
 \$1,471
 \$2,713
 \$2,736

28 Identify, by clicking on the relevant box, the effect on Terrier Co's operating cycle and the current ratio if it accepts the early settlement discount.

Operating cycle	LONGER	SHORTER	NO CHANGE
Current ratio	RISE	FALL	NO CHANGE

29 What is the net benefit per year if Terrier Co accepts the bulk purchase discount?

- \$10,260
 \$8,560
 \$1,440
 \$4,810

30 Terrier Co is considering a rights issue to finance working capital and business expansion.

Is each of the following statements about the effect of a rights issue true or false?

Following a rights issue, a company's share price is likely to fall	TRUE	FALSE
Following a rights issue, the total value of the company's ordinary shares is likely to fall	TRUE	FALSE
A rights issue cannot affect the company's control structure	TRUE	FALSE

Section C

This section of the exam contains **two constructed response questions**.

Each question contains a scenario which relates to one or more requirement(s).

Each question is worth **20 marks** and is compulsory.

This exam section is worth **40 marks** in total.

31 This scenario relates to two requirements.

BRT Co has developed a new confectionery line that can be sold for \$5.00 per box (in current price terms). The finance director has proposed that investment in the new product should be evaluated over a four-year time-horizon. The variable and fixed costs (both in current price terms) will depend on sales volume, as follows.

Sales volume (boxes)	less than 1m	1–1.9m	2–2.9m	3–3.9m
Variable cost (\$ per box)	2.80	3.00	3.00	3.05
Total fixed costs (\$)	1m	1.8m	2.8m	3.8m

Forecast sales volumes are as follows:

Year	1	2	3	4
Demand (boxes)	0.7m	1.6m	2.1m	3.0m

The production equipment for the new confectionery line would cost \$2m (payable immediately) and an initial investment of \$750,000 would be required for working capital. The equipment would have no scrap value. Tax-allowable depreciation is available on a 25% reducing balance basis. Profit tax of 30% per year will be payable one year in arrears. A balancing allowance would be claimed in the fourth year of operation.

The general level of inflation is expected to be 3% per year and the selling price, variable cost per box, total fixed costs and the level of working capital would all experience inflation of this level. BRT Co uses a nominal after-tax discount rate of 12% to appraise new investment projects.

Required:

- (a) **Using a nominal terms approach, calculate the net present value of investing in the new product and advise on its financial acceptability (work to the nearest \$1,000).** (15 marks)
- (b) **Explain the link between net present value and the assumed key financial objective of maximising shareholder wealth.** (5 marks)

(20 marks)

32 This scenario relates to four requirements.

The following financial information relates to YNM Co, which has a cost of equity of 12%. Assume that it is now 31 March 20X6 and that the ordinary share price of YNM Co is \$4.17 per share. YNM Co has been experiencing trading difficulties due to a continuing depressed level of economic activity.

Statement of profit or loss for the three years ending 31 March 20X6

	20X4	20X5	20X6
	\$m	\$m	\$m
Profit before interest and tax	29.3	26.6	25.3
Finance charges (interest)	4.8	5.3	5.5
	<hr/>	<hr/>	<hr/>
Profit before tax	24.5	21.3	19.8
Taxation expense	7.3	6.4	5.9
	<hr/>	<hr/>	<hr/>
Profit for the period	17.2	14.9	13.9

Statement of financial position information as at 31 March 20X6

	\$m	\$m
Ordinary shares (nominal value \$1 per share)	19.0	
Retained earnings	88.5	
	<hr/>	
Total equity		107.5
8% loan notes, redeemable in two years' time		50.0
		<hr/>
Total equity and non-current liabilities		157.5

Note: There has been no change in share capital since 20X3.

Dividend and share price information

	20X3	20X4	20X5
Total cash dividend paid (\$m)	nil	9.5	9.5
Share price at end of year (\$ per share)	5.94	5.10	4.59

Average data on companies similar to YNM Co

Interest coverage ratio	10 times
Long-term debt/equity (book value basis)	40%

Financial objective of YNM Co

YNM Co has a declared objective of maximising shareholder wealth.

Dividend decision

YNM Co is considering two alternative dividend choices for the year ending 31 March 20X6:

- (1) To pay the same total cash dividend as in 20X5
- (2) To pay no dividend at all for the year ending 31 March 20X6

Financing decision

YNM Co is also considering raising \$50m of new debt finance to support existing business operations.

Required:

- (a) Assess the recent financial performance and current financial position of YNM Co.** (6 marks)
 - (b) Briefly discuss the achievement of the objective of maximising shareholder wealth.** (2 marks)
 - (c) Evaluate the two dividend choices.** (6 marks)
 - (d) Discuss the proposal to raise \$50m of new debt finance.** (6 marks)
- (20 marks)**

Formula Sheet

Economic order quantity

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

Miller – Orr Model

Return point = Lower limit + ($1/3 \times$ spread)

$$\text{Spread} = 3 \left[\frac{\frac{3}{4} \times \text{transaction cost} \times \text{variance of cash flows}}{\text{interest rate}} \right]^{1/3}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i(E(r_m) - R_f)$$

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

		<i>Discount rate (r)</i>										
<i>Periods</i>												
<i>(n)</i>	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	
<i>(n)</i>	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

		<i>Discount rate (r)</i>										
<i>Periods</i>		1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
(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	4.586	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

End of Question Paper