Answers

Fundamentals Level – Skills Module, Paper F9
Financial Management

Section A

1   A

They should not accept less than NRV: (30m + 18m + 4m – 2m – 12m – 10m)/2m = $14 per share

2   B

Convertible loan notes are long-term finance and are not traded on a money market.

3   D

Working capital management may have an impact on dividend policy, but the other areas will be more significant.

4   C

Basis risk is the possibility that movements in the currency futures price and spot price will be different. It is one of the reasons for an imperfect currency futures hedge.

5   A

$200m x 30/360 x 0·6 = $10m

6   A

As risk rises, the market value of the security will fall to ensure that investors receive an increased yield.

7   B

Pop Co is moving to an aggressive funding strategy which will increase refinancing risk.

8   D

Under an operating lease, the lessor is responsible for repairs and maintenance of the leased asset.

9   D

Theoretical value = 2m/0·08 = $25m

10   C

Advising on investments in non-current assets is a key role of financial management.

11   A

Conversion value = 3·60 x $1·05^5$ x 25 = $114·87
Discounting at 10%, loan note value = (3 x 3·791) + (114·87 x 0·621) = $82·71

12   B

1: (1·04 x 1·05/1·02) – 1 = 7·06%
2: 1·5 dinar x 1·02/1·05 = 1·4571 dinar/$

13   C

Decreasing taxation and increasing government expenditure would lead to increased aggregate demand. Decreasing interest rates reduces the incentive to save and so would lead to an increase in aggregate demand.

14 C

Operating profit/(D + E) = 100 x 2,500/(10,000 + 2,500) = 20%

15 B

Value of a right = ((5m x $8 + 1·25m x $6)/6·25 m − $6)/4 shares = $0·4 per share

16 C

Forward rate = 1·543 x (1·025/1·01) = €1·566 per $1

17 A

The euro receipt is subject to transaction risk.

18 D

A currency swap is not a suitable method for hedging a one-off transaction.

19 B

If the dollar nominal interest rate is less than the euro nominal interest rate, interest rate parity indicates that the euro will depreciate against the dollar.
If the dollar inflation rate is less than the euro inflation rate, purchasing power parity indicates that the euro will appreciate against the dollar.

20 A

In exchange for a premium, Herd Co could hedge its interest rate risk by buying interest rate options is correct.

21 C

Historical dividend growth rate = 100 x ((0·450/0·370)$^{0.25}$ − 1) = 5%
Share price = (0·450 x 1·05)/(0·1 − 0·05) = $9·45

22 B

Market value = (6 x 6·002) + (100 x 0·760) = 36·01 + 76·0 = $112·01

23 C

Non-current assets plus current assets less total liabilities is the correct formula.

24 C

The dividend valuation model makes the unreasonable assumption that average dividend growth is constant is correct.

25 B

Insider information cannot be used to make abnormal gains in a strong form efficient capital market and Ring Co's share price reacts quickly and accurately to newly-released information in a semi-strong form efficient capital market are correct.

26 A

Payback period = 2 + (1,200/1,600) = 2·75 years

27 B

Average annual accounting profit = (5,880 – 3,800)/4 = $520,000 per year
Average investment = (3,900 + 100)/2 = $2,000,000
ROCE = 100 x 520/2,000 = 26%

28 D

Payback period ignores the timing of cash flows within the payback period is correct.

29 D

All the statements are correct.

30 C

Introducing a share option scheme would help bring directors' objectives in line with shareholders' objectives and linking financial rewards to a target return on capital employed will encourage short-term profitability and discourage capital investment are correct.

31 (a) Relevant trade payables before discount = 1,500,000 x 60/360 = $250,000
Relevant trade payables after discount = 1,500,000 x 30/360 = $125,000
Reduction in trade payables = 250,000 – 125,000 = $125,000

More quickly, reduction in trade payables = 1,500,000 x (60 – 30)/360 = $125,000

The finance needed to reduce the trade payables will increase the overdraft.
Increase in finance cost = 125,000 x 0·04 = $5,000

Administration cost increase = $500

Discount from supplier = $1,500,000 x 0·005 = $7,500
Net benefit of discount = 7,500 – 5,000 – 500= $2,000 per year

On financial grounds, Nesud Co should accept the supplier's early settlement discount offer.

(b) Annual demand = 2,400,000/5 = 480,000 units per year
Each month, Nesud Co orders 480,000/12 = 40,000 units
Current ordering cost = 12 x 248·44 = $2,981 per year

Average inventory of Component K = 40,000/2 = 20,000 units
Current holding cost = 20,000 x 1·06 = $21,200 per year
Total cost of current ordering policy = 2,981 + 21,200 = $24,181

Economic order quantity = (2 x 248·44 x 480,000/1·06)$^{0·5}$ = 15,000 units per order
Number of orders per year = 480,000/15,000 = 32 orders per year
Ordering cost = 32 x 248·44 = $7,950 per year
Average inventory of Component K = 15,000/2 = 7,500 units
Holding cost = 7,500 x 1·06 = $7,950 per year
Total cost of EOQ ordering policy = 7,950 + 7,950 = $15,900

On financial grounds, Nesud Co should adopt an EOQ approach to ordering Component K as there is a reduction in cost of $8,281.

(c) Management of trade receivables can be improved by considering credit analysis, credit control and collection of amounts owing. Management of trade receivables can also be outsourced to a factoring company, rather than being managed in-house.

Credit analysis
Offering credit to customers exposes a company to the risk of bad debts and this should be minimised through credit analysis or assessing creditworthiness. This can be done through collecting and analysing information about potential credit customers. Relevant information includes bank references, trade references, reports from credit reference agencies, records of previous transactions with potential customers, annual reports, and so on. A company might set up its own credit scoring system in order to assess the creditworthiness of potential customers. Where the expected volume of trade justifies it, a visit to a company can be made to gain a better understanding of its business and prospects.

Credit control
The accounts of customers who have been granted credit must be monitored regularly to ensure that agreed trade terms are being followed and that accounts are not getting into arrears. An important monitoring device here is an aged trade receivables analysis, identifying accounts and amounts in arrears, and the extent to which amounts are overdue. A credit utilisation report can assist management in understanding the extent to which credit is being used, identifying customers who may benefit from increased credit, and assessing the extent and nature of a company's exposure to trade receivables.

Collection of amounts owed
A company should ensure that its trade receivables are kept informed about their accounts, amounts outstanding and amounts becoming due, and the terms of trade they have accepted. An invoice should be raised when a sale is made. Regular statements should be sent, for example, on a monthly basis. Customers should be encouraged to settle their accounts on time and not become overdue. Offering a discount for early settlement could help to achieve this.

Overdue accounts should be chased using procedures contained within a company's trade receivables management policy. Reminders of payment due should be sent, leading to a final demand if necessary. Telephone calls or personal visits could be made to a contact within the company. Taking legal action or employing a specialised debt collection agency could be considered as a last resort. A clear understanding of the costs involved is important here, as the costs incurred should never exceed the benefit of collecting the overdue amount.

Factoring of trade receivables
Some companies choose to outsource management of trade receivables to a factoring company, which can bring expertise and specialist knowledge to the tasks of credit analysis, credit control, and collection of amounts owed. In exchange, the factoring company will charge a fee, typically a percentage of annual credit sales. The factoring company can also offer an advance of up to 80% of trade receivables, in exchange for interest.

32 (a)

Year	1	2	3	4
	$000	$000	$000	$000
Sales revenue	3,120	15,576	22,275	10,296
Variable cost	(1,890)	(7,936)	(9,378)	(4,376)
Contribution	1,230	7,640	12,897	5,920
Fixed cost	(540)	(583)	(630)	(680)
Taxable cash flow	690	7,057	12,267	5,240
Taxation	(138)	(1,411)	(2,453)	(1,048)
TAD tax benefits	125	94	70	186
After-tax cash flow	677	5,740	9,884	4,378
Scrap value				125
Working capital	(90)	(95)	(102)	1,787
Net cash flows	587	5,645	9,782	6,290
Discount at 12%	0·893	0·797	0·712	0·636
Present values	524	4,499	6,965	4,000

	$000	
PV of future cash flows	15,988	
Initial investment	4,000	(2·5m + 1·5m)
NPV	11,988	

The NPV is strongly positive and so the project is financially acceptable.

Workings

Sales revenue

Year	1	2	3	4
Selling price ($/unit)	15	18	22	22
Inflated at 4% per year	15·60	19·47	24·75	25·74
Sales volume (000 units/year)	200	800	900	400
Sales revenue ($000/year)	3,120	15,576	22,275	10,296

Variable cost

Year	1	2	3	4
Variable cost ($/unit)	9	9	9	9
Inflated at 5% per year	9·45	9·92	10·42	10·94
Sales volume (000 units/year)	200	800	900	400
Variable cost ($000/year)	1,890	7,936	9,378	4,376

Tax benefits of tax-allowable depreciation

Year	1	2	3	4
	$000	$000	$000	$000
Tax-allowable depreciation	625	469	352	929
Tax benefit	125	94	70	186*

*((2,500 – 125) x 0·2) – 125 – 94 – 70 = $186,000

Working capital

Year	0	1	2	3	4
	$000	$000	$000	$000	$000
Working capital	1,500				
Inflated at 6%		1,590	1,685	1,787	
Incremental		90	95	102	1,787

Alternative calculation of after-tax cash flow

Year	1	2	3	4
	$000	$000	$000	$000
Taxable cash flow	690	7,057	12,267	5,240
Tax-allowable depreciation	(625)	(469)	(352)	(929)
Taxable profit	65	6,588	11,915	4,311
Taxation	(13)	(1,318)	(2,383)	(862)
After-tax profit	52	5,270	9,532	3,449
Add back TAD	625	469	352	929
After-tax cash flow	677	5,739	9,884	4,378

(b) A company can use its weighted average cost of capital (WACC) as the discount rate in appraising an investment project as long as the project's business risk and financial risk are similar to the business and financial risk of existing business operations. Where the business risk of the investment project differs significantly from the business risk of existing business operations, a project-specific discount rate is needed.

The capital asset pricing model (CAPM) can provide a project-specific discount rate. The equity beta of a company whose business operations are similar to those of the investment project (a proxy company) will reflect the systematic business risk of the project. If the proxy company is geared, the proxy equity beta will additionally reflect the systematic financial risk of the proxy company.

The proxy equity beta is ungeared to remove the effect of the proxy company's systematic financial risk to give an asset beta which solely reflects the business risk of the investment project.

This asset beta is regeared to give an equity beta which reflects the systematic financial risk of the investing company.

The regeared equity beta can then be inserted into the CAPM formula to provide a project-specific cost of equity. If this cost of capital is used as the discount rate for the investment project, it will indicate the minimum return required to compensate shareholders for the systematic risk of the project. The project-specific cost of equity can also be included in a project-specific WACC. Using the project-specific WACC in appraising an investment project will lead to a better investment decision than using the current WACC as the discount rate, as the current WACC does not reflect the risk of the investment project.

Fundamentals Level – Skills Module, Paper F9
Financial Management

September 2016 Marking Scheme

			Marks	*Marks*

Section A

1–15 Two marks per question — — — **30**

Section B

16–30 Two marks per question — — — **30**

Section C

31 **(a)** Change in trade payables — 1
Increase in finance cost — 1
Administration cost increase — 0·5
Early settlement discount — 0·5
Comment on financial acceptability — 1
— — — 4

(b) Annual demand — 1
Current ordering cost — 1
Current holding cost — 1
Economic order quantity — 1
EOQ ordering cost — 0·5
EOQ holding cost — 0·5
Comment on adopting EOQ approach to ordering — 1
— — — 6

(c) Credit analysis — 2
Credit control — 2
Collection of amounts owed — 2
Factoring of trade receivables — 2
Other relevant discussion — 2
— — — 10
— — — **20**

32 **(a)** Inflated selling price per unit — 1
Sales revenue — 1
Inflated variable cost — 1
Inflated fixed costs — 1
Tax liabilities — 1
Tax-allowable depreciation benefits years 1–3 — 1
Tax allowable depreciation benefits year 4 — 1
Incremental working capital and recovery — 2
Calculation of present values — 1
Correct initial investment — 1
Comment on financial acceptability — 1
— — — 12

(b) Business risk, financial risk and WACC — 2
Using a proxy company — 1
Systematic risk, business risk and financial risk — 1
Ungearing the equity beta — 1
Regearing the asset beta — 1
Project-specific cost of equity and WACC — 2
— — — 8
— — — **20**