

Programme Code: TU814
Shared with: N/A
Module Code: TECN 2105
CRN: 36056

TECHNOLOGICAL UNIVERSITY DUBLIN
BOLTON STREET CAMPUS

TU814 – Sustainable Transport Management

Year 2

SEMESTER 1
EXAMINATIONS 2024/25

Financial Management 1

**Internal Examiner(s): Professor Stephen J Wright BSc PGCE PhD
Brendan Meehan, B.Comm FCCA AITI**

**External Examiner(s): Dr. Darron Dixon-Hardy BSc PGCert PGDip PhD
Mr Jarlath Sweeney**

Exam Duration: 2 HOURS

***Instructions: Answer Question 1 and any 3 other questions.
All questions carry equal marks.***

Special Instructions/Handouts: N/A

Friday

17th January 2025

14.00 – 16.00

QUESTION 1:

Duffy Trading Limited have extracted from its financial records the following trial balance as at 31st October 2024:

	Debit	Credit
	€	€
Sales		643,200
Stock (01.11.2023)	28,650	
Purchases	376,500	
Accountancy	2,760	
Bank Interest & Charges	7,300	
Insurances	9,050	
Light & Heat	1,925	
Motor Expenses	15,005	
Phones and Fax	5,800	
Rent & Rates	51,400	
Repairs	10,000	
Wages	88,260	
Ordinary Shares of €1.00 each		1,000
Balance on Profit and Loss (01.11.2023)		95,430
Creditors		38,700
Debtors	28,500	
Bank	5,600	
Equipment at cost	-167,160	
Cumulative Depreciation on Equipment		36,000
Machinery at cost	-160,000	
Cumulative Depreciation on Machinery		20,000
Term Loan		123,580
<i>depreciation</i>	<u>957,910</u>	<u>957,910</u>

- Notes:
1. Stock at 31/10/2024 €42,000
 2. Wages to be accrued €2,000
 3. Insurances Prepaid 3,500
 4. Provide for depreciation on equipment at 10% of cost and on machinery at 20% of cost.

Required: Prepare a Trading and Profit and Loss Account for the year ended 31st October 2024 and a Balance Sheet as on that date.

Total 25 Marks.

QUESTION 2.

The following are the summarised results for Archive Distributors Limited for the years ended 30th April 2024 and 2023:

<u>PROFIT AND LOSS ACCOUNT</u>	2024	2023
	€	€
Sales	850,000	640,000
Cost of Sales	591,000	420,000
	-----	-----
Gross Profit	259,000	220,000
Overhead Expenses	114,000	112,000
	-----	-----
Net Profit	145,000	108,000
Balance On Profit & Loss brought fwd.	124,300	16,300
	-----	-----
Bal. on Profit & Loss carried fwd.	269,300	124,300
	=====	=====

<u>BALANCE SHEET</u>					
	2024	2023		2024	2023
	€	€		€	€
SHARE CAPITAL	10,000	10,000	FIXED ASSETS	200,000	70,000
BAL ON P&L A/C	269,300	124,300			
CURRENT LIABILITIES:			CURRENT ASSETS:		
Creditors	53,700	54,000	Stocks	68,000	32,000
Bank Overdraft	55,000	-	Debtors	120,000	73,300
			Bank	-	13,000
	-----	-----		-----	-----
	388,000	188,300		388,000	188,300
	=====	=====		=====	=====

a. Compute for each year:-

- I. Current Ratio
- II. Acid Test Ratio
- III. Period of Credit Allowed
- IV. Period of Credit Taken
- V. Stock Turnover
- VI. Gross Margin
- VII. Net Margin
- VIII. Average Monthly Overhead

(16 MARKS)

b. Using your calculations at a., comment on the changes in solvency and profitability of the company during the year. (9 MARKS)

TOTAL 25 MARKS.

QUESTION 3.

- a. Explain any 3 long term sources of finance that businesses in Ireland can avail of making reference to cost and security. (9 marks)
- b. Distinguish between FIXED CHARGE and FLOATING CHARGE as means of securing Bank debt. (12 marks)
- c. What do you understand by the term "Preferred Creditors"? (4 marks)

TOTAL 25 MARKS.

QUESTION 4:

PART A:

The directors of Norbert Components Limited are somewhat confused at the accounts that have been prepared for the company. During the year under review, the company made a profit of €57,700. Despite this, at the year end, the bank balance had moved into an overdraft position. The Balance Sheet figures for the last 2 years are set out below:

BALANCE SHEET					
	2023	2022		2023	2022
	Euro	Euro		Euro	Euro
SHARE CAPITAL	100	100	FIXED ASSETS	232,000	24,000
BAL. ON P&L A/C	240,600	182,900			
TERM LOAN	120,300	25,000			
CURRENT LIABILITIES:			CURRENT ASSETS:		
Creditors	32,000	13,000	Stocks	140,000	123,000
Bank Overdraft	51,000	-	Debtors	72,000	58,000
			Bank	-	16,000
	-----	-----		-----	-----
	444,000	221,000		444,000	221,000
	=====	=====		=====	=====

In order to explain the adverse cash position at the end of the financial year, you are requested to prepare a Cash Flow Statement. (16 marks)

- B. List any five items of information that should be supplied to a bank in support of a commercial loan application. (9 marks)

TOTAL 25 MARKS.

QUESTION 5:

Russell Limited and Black Limited are two companies that operate in the same commercial sector. An examination of the companies' most recent financial results have revealed the following:

	Russell	Black
Net Assets	840,000	1,240,000
	=====	=====
Financed by:		
Ordinary Share Capital (€1.00 each)	100,000	100,000
Retained Earnings	420,000	280,000
Long Term Borrowings	<u>320,000</u>	<u>860,000</u>
	<u>840,000</u>	<u>1,240,000</u>
Profit before financial charges	168,000	228,000
Financial charges - Loan Interest	<u>25,600</u>	<u>66,400</u>
Profit before taxation	142,400	161,600
Taxation	<u>21,360</u>	<u>24,240</u>
Profit after taxation	<u>121,040</u>	<u>137,360</u>

a. Compute for each company:

- The Gearing Ratio (3 marks)
- Times Interest Covered (3 marks)
- Earnings per share. (3 marks)
- Return on Capital Employed (3 marks)
- Average cost of debt (3 marks)

b. Comment on the risk-return factor in high gearing making reference to your calculations at (a). (10 marks)

TOTAL 25 MARKS.

QUESTION 6.

- What do you understand by the term "LIMITED LIABILITY"? (3 marks)
- What are the principle features of Limited Liability Companies? (8 marks)
- Distinguish between the Memorandum of Association and the Articles of Association. (8 marks)
- What are the 3 conditions that must be met in order to qualify to be a "Private" company and what exemptions from the Company Law can small private companies avail of? (6 marks)

TOTAL 25 MARKS.

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OUTLINE SOLUTIONS

QUESTION 1: FINAL ACCOUNTS

TRADING PROFIT AND LOSS ACCOUNT FOR YEAR ENDED 31ST OCTOBER 2024.

	€	€	€
SALES			643200
LESS COST OF SALES			
Opening Stock		28650	
Add Purchases		376500	
Less closing stock		-42000	363150
GROSS PROFIT			280050
LESS EXPENSES:			
Accountancy		2760	
Bank Interest		7300	
Insurances	9050	0	
Less prepaid	-3500	5550	
Light Heat		1925	
Motor Expenses		15005	
Phones and Fax		5800	
Rent & Rates		51400	
Repairs		10000	
Wages	88260	0	
+ amount due	2000	90260	
Depreciation Equipment		16716	
Depreciation Machinery		32000	238716
NET PROFIT			41334
ADD BALANCE ON P&L b/fwd			95430
BALANCE ON P&L c/fwd			136764

(13 Marks)

BALANCE SHEET AS AT 31ST OCTOBER 2024.

	€	€	€
FIXED ASSETS:			
Equipment at cost	167160		
Less Cumul Depreciation	-52716	114444	
Machinery at Cost	160000		
Less Cumul Depreciation	-52000	108000	222444
CURRENT ASSETS:			
Stocks		42000	
Debtors		28500	
Bank		5600	
Prepaid Insurances		3500	79600
			302044
Financed by:			
ORDINARY SHARES (1€ EACH)			1000
BALANCE ON P&L ACCOUNT			136764
TERM LOAN			123580
			0
CURRENT LIABILITIES			0
Creditors		38700	0
Wages Due		2000	40700
			302044

(12 marks)

QUESTION 2 – INTERPRETATION OF ACCOUNTS

a. Computation of ratios:

	2024	2023
Current Ratio: Current assets / current liabilities (ideal 2)	$188000 / 108700 = 1.7$	$118300 / 54000 = 2.2$
Acid Test Ratio: (Current Assets less Stock) / current liabilities (ideal 1)	$120000 / 108700 = 1.10$	$86300 / 54000 = 1.6$
Debtors Days: (debtors / sales) x 365 = days	$(120000 / 850000) \times 365 = 52 \text{ days}$	$(73300 / 640000) \times 365 = 42 \text{ days}$
Creditors Days (creditors / COS) x 365 = days	$(53700 / 591000) \times 365 = 33 \text{ days}$	$(54000 / 420000) \times 365 = 47 \text{ days}$
Stock turnover: CSO / closing stock = times	$591000 / 68000 = 8.7 \text{ times}$	$420000 / 32000 = 13 \text{ times}$
Gross Margin: Gross profit as % sales	$259000 / 850000 \times 100 = 30.4\%$	$220000 / 640000 \times 100 = 34.4\%$
Net Margin: Net Profit as % sales	$145000 / 850000 \times 100 = 17\%$	$108000 / 640000 \times 100 = 17\%$
Overheads per month: o/h's divided by 12	$114000 / 12 = 9500 \text{ p m}$	$112000 / 12 = 9333 \text{ p m}$

(16 marks)

b. Comments: (to include some or all of the following):

- Increase in fixed assets of €130,000. No long term borrowing introduced to finance this.
- Decline in current and acid test ratios indicate possible solvency issues though acid test does exceed 1.
- Increase in Debtors Days suggests that credit control procedures should be reviewed.
- Stock turnover has declined significantly and may indicate the existence of slow moving or obsolete stock.
- Fall in Gross Margin indicates that the sector is more competitive and margins and prices were dropped to generate more sales.
- Despite significant increase in sales, monthly overhead is consistent with 2018 and company appears to be reaping economies of scale.

(9 marks)

QUESTION 3: SOURCES OF FINANCE

- a) Three long term sources:
 Share Capital – Retained Earnings – Term Loans – Debenture Mortgage – Hire Purchase finance – Lease finance.
(For each sources of finance reference to: Description / Interest Cost / Security given to lender, (if any) / Capital Allowances where source used to finance qualifying assets / Transfer of title to the asset under the arrangement) (9 marks)
- b. Fixed Charge: a charge on a specific asset or group or assets – the company is not free to deal or alter the asset pledged – the charge must be registered in Companies Office by the bank – in the event of default, the bank may appoint a receiver to seize the asset and recover the debt – fixed charge creditors rank first in order of repayment in a liquidation. (6 marks)
- Floating Charge: a general charge on all assets of the company both present and future – used where company has no substantial assets aside from trading assets – the company is free to deal in the assets pledged – the charge must similarly be registered in the Companies Office by the bank – in a liquidation, creditors secured by a floating charges rank after fixed charge creditors and also after another category Preferred Creditors. (6 marks)
- c. Preferred Creditors: are creditors that are set out in the Companies Act that include – Unpaid Wages and holiday pay – unpaid taxes (Vat, Paye etc) – redundancy payments – unpaid rates. Preferred creditors rank ahead of other creditors for repayment in a liquidation except for those creditors secured by a fixed charge who rank ahead of them. (4 marks)

QUESTION 4:

Part A: CASH FLOW STATEMENT

PROFIT FOR YEAR	57700
Adjust for change in working capital items:	
Increase in Stocks	-17000
Increase in Debtors	-14000
Increase in Creditors	19000
Source / - Use from operations	<u>45700</u>
OTHER SOURCES	
Increase in Loans	95300
OTHER USES	
Increase in Fixed Assets	<u>-208000</u>
NET SOURCE / -USE OF FUNDS	<u>-67000</u>
Represented by:	
Opening Bank and Cash balances	+16000
Closing Bank and Cash balances	<u>-51000</u>
Adverse movement on Bank and Cash	<u>-67000</u>

(16 Marks)

- d. Part B: Information to support a loan application – to include:
- Most recent financial statements
 - History of the firm
 - Description of the products or services offered
 - Background of the principles – CV, work experience, education etc
 - Market segment targeted and advantages over other competitors
 - Existing competitors
 - Financial Projections for next 12 months and assumptions adopted.
 - Likely future developments in the sector.

(9marks)

QUESTION 5 – CAPITAL GEARING

a. Computation of ratios:

	Russell Ltd	Black Ltd
Gearing Ratio: (debt / debt + equity) x 100	$(320000 / 840000) \times 100 = 38\%$	$(860000 / 1240000) \times 100 = 69\%$
Interest cover: (PBIT / Interest) = times	$168000 / 25600 = 6.6$ times	$228000 / 66400 = 3.4$ times
Earnings Per Share: (Profit after tax / no. of shares)	$121040 / 100000 =$ €1.21	$137360 / 100000 =$ €1.37
Return on Capital Employed (ROCE): PBIT / (Debt + Equity) x 100	$(168000 / 840000) \times 100 = 20\%$	$(228000 / 1240000) \times 100 = 18.3\%$
Average cost of debt = (interest / debt) * 100	$(25600 / 320000) \times 100 = 8\%$	$(66400 / 860000) \times 100 = 7.7\%$

(15 marks)

b. Risk Return Factor:

Black is more highly geared. As a result, interest cover is lower and EPS is higher. This is because the funds borrowed have been used to earn a return well in excess of interest cost.

Should ROCE significantly fall and / or Loan Interest rates rise, then Black will have low or negative Interest Cover and poor EPS because any profit will be used to pay off higher Debt Costs. This is the “risk return” factor of high gearings. (10 marks)

QUESTION 6: LIMITED COMPANIES:

- a. Limited Liability: The liability of shareholders is limited or restricted to the amount of funds invested to acquire the shares. Their personal assets are not available to the creditors in the event of a claim made against the company or in the event of a winding up of the company's affairs. (3 marks)
- b. Features: Separate legal entity – can sue and be sued in own name – shareholders liability to creditors is limited to their paid up capital – regulated by Companies Act 2014 – must prepare and file financial statements each year with Companies Registrations Office – in small companies, directors and shareholders are the same individuals – in large companies, Board of Directors are separate but must act in the interests of all shareholders. (8 marks)
- c. Memorandum: sets out information for those not directly involved in the company. 5 clauses: Name Clause – Objects Clause – Limited Liability clause – situation of registered office – Directors written consent to act. Articles: the set of rules which bind the members together including: When meetings should be convened – how resolutions are submitted and tabled - what is a “quorum” – borrowing limits on directors – rights of minority shareholders in voting. (8 marks)
- d. Private Companies: - must limit number of members to no more than 50 – prohibit the invitation to the public to subscribe for shares – shares cannot be freely transferable among the members. Exemptions: exempt from statutory audit if meets size criteria – exemption from filing full financial statements, most often just an abridged balance sheet is filed. (6 marks)