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CRN: 36056

**TECHNOLOGICAL UNIVERSITY DUBLIN**  
CITY CAMPUS - BOLTON STREET

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**TU814 – Sustainable Transport Management**

Year 2

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SEMESTER 1  
EXAMINATIONS 2023/24

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**Financial Management 1**

Internal Examiner: Brendan Meehan, B.Comm, FCCA, AITI MIRTE

External Examiners: Prof. Washington Yotto Ochieng  
Mr. Jarlath Sweeney

**Exam Duration: 2 HOURS**

**Instructions: Answer QUESTION 1 AND ANY 3 OTHER QUESTIONS**

Special Instructions/Handouts: ~~N/A~~

Friday  
12th January 2024  
14:00 – 16:00

### QUESTION 1

The following is the trial balance extracted from the books of Macron Trading Limited at 31<sup>st</sup> October 2023:

	€	€
	Debit	Credit
Ordinary Shares of €1.00 each		1,000
Fixtures & Fittings at Cost	108,000	
Cumulative Depreciation Fixtures and Fittings		22,000
Motor Vehicles at cost	180,000	
Cumulative Depreciation Motor Vehicles		40,000
Sales		1,606,000
Debtors	205,000	0
Purchases	760,000	
Creditors		78,000
Advertising	6,800	
Motor Expenses	28,000	
Accountancy	7,000	
Insurances	46,200	
Light & Heat	28,000	
Travel and Accomodation Costs	27,100	
Rent & Rates	162,000	
Computer Maintenance	34,200	
Telephone & Broadband	40,700	
Long Term Loan		148,000
Wages & Salaries	269,000	
Balance on Profit & Loss Account (01/11/2022)		90,000
Bank Balance	31,700	
Stock at 01/11/2022	51,300	
	<u>1,985,000</u>	<u>1,985,000</u>

Notes:

- (1) Stock at 31<sup>st</sup> October 2023 was valued at €82,000.
- (2) Insurance paid in advance €8,000.
- (3) Wages due and payable €15,000.
- (4) Provide for depreciation on fixed assets as follows:
  - on Fixtures and Fittings - 25% of Cost
  - on Motor Vehicles - 20% of Cost

REQUIRED:

Prepare a Trading Profit and Loss Account for the year ended 31<sup>st</sup> October 2023 and a Balance Sheet as at that date.

TOTAL 25 MARKS.

QUESTION 2:

- a. Explain any 3 long term sources of finance that businesses in Ireland can avail of making reference to interest cost and security aspects. (12 marks)
- b. Distinguish between FIXED CHARGE and FLOATING CHARGE in relation to debt security. (8 marks)
- c. What do you understand by the term "Preferred Creditors"? (5 marks)

TOTAL 25 MARKS.

QUESTION 3.

LIMITED COMPANIES:

- a) Give four characteristics of the Limited Liability Company form of organisation (8 marks).
- b) Distinguish between the Memorandum of Association and the Articles of Association of a Limited Liability Company (6 marks)
- c) What are the three conditions which a company must satisfy to qualify to be a Private Limited Company? What exemptions can small Private Companies avail of? (6 marks)
- d) What advantages do companies enjoy over other forms of business organization? (5 marks)

TOTAL 25 MARKS.

#### QUESTION 4.

Watts Auto Components Limited is a company that distributes materials and parts to the motor services sector. The following are the summarised results for the company for the years ended 31st December 2022 and 2021:

#### PROFIT AND LOSS ACCOUNT:

	2022	2021
	€	€
Sales	1,460,000	1,200,000
Cost of Sales	920,000	720,000
Gross Profit	540,000	480,000
Overhead Expenses	228,000	224,000
Net Profit	312,000	256,000
Bal. On Profit & Loss b/fwd	268,600	12,600
Bal. on Profit & Loss c/fwd	580,600	268,600

#### BALANCE SHEET

	2022	2021		2022	2021
	€	€		€	€
SHARE CAPITAL	60,000	60,000	FIXED ASSETS	610,000	256,000
BAL ON P&L A/C	580,600	268,600			
TERM LOANS	70,000	50,000			
CURRENT LIABILITIES:			CURRENT ASSETS:		
Creditors	84,000	88,000	Stocks	74,000	48,000
Bank Overdraft	21,400	-	Debtors	132,000	120,000
			Bank	-	42,600
	<u>816,000</u>	<u>466,600</u>		<u>816,000</u>	<u>466,600</u>

- a. Compute for each year:-
- Current Ratio
  - Acid Test Ratio
  - Period of Credit Allowed
  - Period of Credit Taken
  - Gross Margin
  - Net Margin
  - Monthly Overhead
  - Stock Turnover

(16 MARKS)

- b. Using your computations at a. above, comment on the change in the solvency and profitability of the company.

(9 MARKS)

TOTAL 25 MARKS.

QUESTION 5:

PART A .

Set out below is the most recent Balance Sheet of Marco Distributors Limited, a company that has traded successfully for many years. You are advised that the company made a profit for 2022 of €56,000. The directors are puzzled as to why the company has an overdraft at the end of a year in which it actually recorded a profit. To assist them, you have been requested to lay before the Board a Cash Flow Statement to help reconcile the profit for the year to the adverse movement on the bank account as reflected in the figures below.

BALANCE SHEET AT 31 DECEMBER:

	2022	2021		2022	2021
	€	€		€	€
SHARE CAPITAL	1,000	1,000	FIXED ASSETS	120,000	70,000
BALANCE ON PROFIT & LOSS ACCOUNT	239,000	183,000			
TERM LOANS	30,000	10,000			
<b>CURRENT LIABILITIES:</b>			<b>CURRENT ASSETS:</b>		
Creditors	52,000	40,000	Stocks	150,000	90,000
Bank Overdraft	22,000	-	Debtors	74,000	44,000
			Bank	-	30,000
	<u>344,000</u>	<u>234,000</u>		<u>344,000</u>	<u>234,000</u>

REQUIRED: Prepare a Cash Flow Statement for the year ended 31<sup>st</sup> December 2022.

(13 marks)

PART B:

What are the essential elements of an effective system of credit control.

(12 marks)

TOTAL 25 MARKS.

QUESTION 6.

Dodd Limited and Cooper Limited are companies engaged in the same business sector. The scale of operations for both companies is similar but the financial structure of each company is different with Cooper Limited preferring to avail of debt finance rather than equity to fund operations. The most recent summarised results for both companies are set out below:

PROFIT AND LOSS ACCOUNT:

	Dodd Limited	Cooper Limited
	€	€
Profit before interest and tax	360,000	516,000
Interest on borrowings	33,600	95,000
Profit before taxation	326,400	421,000
Tax for year	45,600	52,000
Profit after tax	280,800	369,000

BALANCE SHEET:

Net Assets	6,000,000	6,400,000
Financed by:		
Ordinary Share Capital (Euro 1.00 each)	2,000,000	500,000
Balance on Profit and Loss Account	3,000,000	3,100,000
Borrowings		
	1,000,000	2,800,000
	6,000,000	6,400,000

A. Compute for each company:

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

B. Using your computations at A. comment on the “risk-return” factor arising for highly geared companies. (10 marks)

TOTAL 25 MARKS

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TECN 2105

**TECHNOLOGICAL UNIVERSITY DUBLIN**  
BOLTON STREET CAMPUS

BACHELOR OF SCIENCE (HONOURS) IN TRANSPORT  
OPERATIONS AND TECHNOLOGY

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**SECOND YEAR: SEMESTER 1 – 2023/2024**

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FINANCIAL MANAGEMENT 1

OUTLINE SOLUTIONS

QUESTION 1: FINAL ACCOUNTS

MACRON TRADING LIMITED: TRADING PROFIT AND LOSS ACCOUNT FOR YEAR ENDED 31<sup>ST</sup> OCTOBER 2023.

	€	€	€
SALES			1,606,000
LESS COST OF SALES			
Opening Stock		51,300	
Add Purchases		<u>760,000</u>	
		811,300	
Less closing stock		<u>-82,000</u>	729,300
GROSS PROFIT			876,700
LESS EXPENSES:			
Advertising		6,800	
Motor Expenses		28,000	
Accountancy		7,000	
Insurances	46,200		
Less prepaid	<u>-8,000</u>	38,200	
Light & Heat		28,000	
Travel & Accomodation		27,100	
Rent & Rates		162,000	
Computer Maintenance		34,200	
Telephone and Broadband		40,700	
Wages & Salaries	269,000		
+ amount due	<u>15,000</u>	284,000	
Depreciation – fixtures		27,000	
Depreciation – vehicles		<u>36,000</u>	719,000
		719,000	
NET PROFIT			157,700
ADD BALANCE ON P&L b/fwd			<u>90,000</u>
BALANCE ON P&L c/fwd			<u>247,700</u>

(13 Marks)

BALANCE SHEET AS AT 31<sup>ST</sup> OCTOBER 2023.

	€	€	€
FIXED ASSETS:			
Fixtures & Fittgs at Cost	108,000		
Less Cumul Deprec'n	<u>-49,000</u>	59,000	
Vehicles at cost	180,000		
Less Cumul Deprec'n	<u>-76,000</u>	104,000	163,000
CURRENT ASSETS:			
Stocks		82,000	
Debtors		205,000	
Bank		31,700	
Prepaid Insurances		<u>8,000</u>	326,700
			<u>489,700</u>
Financed by:			
ORDINARY SHARES (€1 EACH)			1,000
BALANCE ON P&L ACCOUNT			247,700
TERM LOAN			148,000
CURRENT LIABILITIES			
Creditors		78,000	
Wages Due		<u>15,000</u>	93,000
			<u>489,700</u>

(12 marks)

## QUESTION 2: SOURCES OF FINANCE

- a) Three long term sources from:  
Share Capital – Retained Earnings – Term Loans – Debenture Mortgage – Hire Purchase finance – Lease finance.  
*(For each source of finance referred to, require: Description / Interest Cost / Security given to lender, (if any) / Capital Allowances where source used to finance qualifying assets / Title to the assets under the arrangement)* (12 marks)

- b. Fixed Charge: a charge on a specific asset or group of 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. (4 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 charge rank after fixed charge creditors and also after another category Preferred Creditors. (4 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. (5 marks)

## QUESTION 3: LIMITED COMPANIES:

- a. Principle 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)
- b. 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. (6marks)
- c. 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. Exemptions: From filing full financial statements and, if meets size criteria, exemption from full statutory audit. (6 marks)
- d. Greater access to capital – decision making more effective given composition of the Board – shareholders enjoy limited liability – shareholders control the composition of the board – better management information systems etc. (5 marks)

#### QUESTION 4 – INTERPRETATION OF ACCOUNTS

a. Computation of ratios:

FORMULA	2022	2021
Current Ratio: Current assets / current liabilities (ideal 2)	$(206,000 \div 105,400) = 1.95$	$(210600 \div 88,000) = 2.39$
Acid Test Ratio: (Current Assets less Stock) / current liabilities (ideal 1)	$((206,000 - 74,000) \div 105400) = 1.25$	$((210600 - 48,000) \div 88,000) = 1.85$
Debtors Days: (debtors / sales) x 365 = days	$(132000 \div 1460000) \times 365 = 33$ days	$(120000 \div 1200000) \times 365 = 37$ days
Creditors Days (creditors / COS) x 365 = days	$(84000 \div 920000) \times 365 = 33$ days	$(88000 \div 720000) \times 365 = 45$ days
Gross Margin: Gross profit as % sales	$(540000 \div 1460000) \times 100 = 37\%$	$(480000 \div 1200000) \times 100 = 40\%$
Net Margin: Net Profit as % sales	$(312000 \div 1460000) \times 100 = 21\%$	$(256000 \div 1200000) \times 100 = 21\%$
Overheads per month: o/h's divided by 12	$(228000 \div 12) = 19000$	$(224000 \div 12) = 18700$
Stock turnover: COS / closing stock = times	$(920000 \div 74000) = 12$ times	$(720000 \div 48000) = 15$ times

(16 marks)

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

- Increase in fixed assets of €354,000. Long term borrowing only increased by €20000 to finance this. So much of the overdraft was used to fund the balance which in an inappropriate use of short term funds. Company should increase borrowings to replenish the bank account using the fixed assets as security.
- Declines in current ratio and the acid test ratio indicate a decline in solvency and possible solvency issues.
- Increase in Debtors Days suggests that credit control procedures should be reviewed and the age list examined for the existence of possible bad debts.
- Stock turnover has decreased. The stocks should be reviewed and any slow moving or obsolete items identified and further orders stopped.
- Creditor Days have fallen and suggests that the company is not getting credit facilities from suppliers as in 2021.
- Fall in Gross Margin indicates that the sector is more competitive and margins and prices were dropped to generate more sales (have increased 20%).
- Despite increase in sales, monthly overhead have not significantly increased and therefore the company appears to be reaping economies of scale.

(9 marks)

QUESTION 5:

Part A: MARCO DISTRIBUTORS LIMITED - CASH FLOW STATEMENT

PROFIT FOR YEAR	56000
Adjust for change in working capital items:	
Increase in Stocks	-60000
Increase in Debtors	-30000
Increase in Creditors	<u>12000</u>
Source / - Use from operations	-22000
OTHER SOURCES	
Increase in Loans	20000
OTHER USES	
Increase in Fixed Assets	<u>-50000</u>
NET SOURCE / -USE OF FUNDS	<u>-52000</u>
Represented by:	
Opening Bank and Cash balances	30000
Closing Bank and Cash balances	<u>-22000</u>
Adverse movement on Bank and Cash	<u>-52000</u>

(13 Marks)

Part B: Credit Control:

Essential elements – good documentation flow – formal system of evaluation of new customers – proper maintenance of sales ledger – sending monthly statements – review of age list for slow payers – orders referred to credit controller where credit limit exceeded.

(12 marks)

QUESTION 6 – DODD LIMITED AND COOPER LIMITED - CAPITAL GEARING:

a. Computation of ratios:

	DODD	COOPER
Gearing Ratio: (debt / debt + equity) x100	$(1000k/6000k) \times 100 = 17\%$	$(2800k /6400k) \times 100 = 44\%$
Interest cover: (PBIT / Interest) = times	$360000 /33600 = 11 \text{ times}$	$516000/95000 = 5 \text{ times}$
Return on Capital Employed (ROCE): PBIT / (Debt + Equity) x 100	$(360k /6000k) \times 100 = 6\%$	$(516k/6400k) \times 100 = 8\%$
Average cost of debt = (interest / debt) *100	$(33.6K/1000k) \times 100 = 3.4\%$	$(95/ 2800k) \times 100 = 3.4\%$
Earnings Per Share: (Profit after tax / no. of shares)	$280.8k /2000k = \text{€}0.14 \text{ per share}$	$369k /500k = \text{€}0.74 \text{ per share}$

(5 @ 3 marks = 15 marks)

b. Risk Return Factor:

- Cooper is more highly geared
- Both companies are using funds borrowed at 3.4% to earn returns of 6% and 8% per annum.
- Dodd is lowly geared and has more shares in issue. So it has lower Earnings Per Share.
- Cooper, as a consequence of higher debt and less shares in issue, has much lower Interest Cover.
- Risk to Cooper arises if interest rates rise and there is also a sudden decrease in profitability, is that interest cover will be small or negative and there will be no return to shareholders viz little or negative EPS.
- In general, high gearing is only attractive when the funds borrowed are used to earn a return in excess of the interest cost – as is the case for Cooper. (10 marks)