

TU814/4

9339 TMGT 4002

TECHNOLOGICAL UNIVERSITY DUBLIN
BOLTON STREET CAMPUS

BACHELOR OF SCIENCE (HONOURS) IN TRANSPORT
OPERATIONS AND TECHNOLOGY

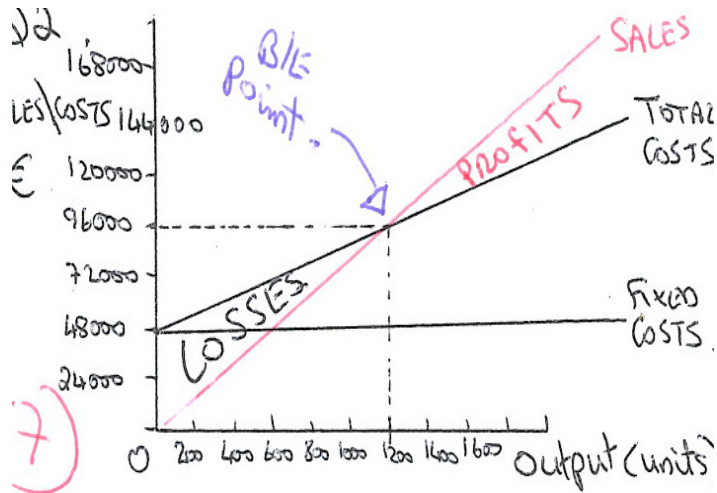
FOURTH YEAR: SEMESTER 2 – MAY 2023

MANAGEMENT 4 (FINANCIAL MANAGEMENT)

OUTLINE SOLUTIONS

QUESTION 1: BREAKEVEN ANALYSIS:

a. Breakeven Chart: B/E point – output 1200 units, Sales €9600.



7 marks

b. (i) Formula:

$$Q = \frac{FC + P}{S - V}$$

Set P = €240000

$$Q = \frac{48000 + 240000}{80 - 40}$$

$$Q = \frac{288000}{40}$$

$$Q = 7200 \text{ units}$$

4 marks

(ii) Formula:

$$Q = \frac{FC + P}{S - V}$$

Set P = -€8,000

$$Q = \frac{48000 - 8000}{80 - 40}$$

$$Q = \frac{40000}{40}$$

$$Q = 1000 \text{ units}$$

4 marks

c. Formula

$$Q = \frac{FC + P}{S - V}$$

Set FC = €88000; P = 0

$$Q = \frac{88000 + 0}{80 - 40}$$

$$Q = \frac{88000}{40}$$

$$Q = 2200 \text{ units}$$

5 marks

d. Contribution: is the amount of fixed costs recovered by producing and selling one unit of output. It is the difference between selling price and unit variable cost.

5 marks

QUESTION 2 BUDGETARY CONTROL

A: OBJECTIVES OF BUDGETARY CONTROL:

- to plan and control income and expenditure
 - to direct capital expenditure in most profitable direction
 - to provide a yardstick against which actual results are compared
 - to determine the impact on the budget when unforeseen events occur
 - to motivate staff by setting achievable targets.
 - to identify adverse trends and make corrections (“management by exception” principle).
- (10 Marks)

B. MATERIAL PURCHASES BUDGET

Month	June	July	August	September
Material Cost of Production	960,000	1,200,000	880,000	1,120,000
Less opening Stock	-290,000	-360,000	-264,000	
	670,000	840,000	616,000	
add Target ending stock	360,000	264,000	336,000	TOTAL
Required Production	1,030,000	1,104,000	952,000	3,086,000

15 Marks

QUESTION 3: WORKSHOP EFFICIENCY COMPUTATION / MEASUREMENT

Part A:

ASSIGNED GENERAL OVERHEAD:

Insurances	9000 x 40% =	3600
Rent	36000 x 40% =	14400
Rates	3000 x 40% =	1200
Administration	24000 x 40% =	9600

SPECIFIC WORKSHOP COSTS

Manager's Salary	40000
Light & Heat	3200
Parts & Spares	30000
Advertising	2000
Mechanics' Wages 4 @ 30000 =	<u>120000</u>

TOTAL WORKSHOP COSTS	224000
REQUIRED PROFIT AT 20%	44800
REQUIRED WORKSHOP SALES	<u>268800</u>

- Required no. of chargeable labour hours = $268800 / €52 = 5169$ hours
- No. of labour hours available = $4 \text{ mechanics} \times 39 \text{ hours} \times [52 - 4 - 2] \text{ weeks} = 7176$ hours
- Required workshop efficiency = $(5169 / 7176) \times 100 = 72\%$ (rounded).

20 marks

Part B: General Overheads:

These are overheads that are incurred on behalf of the whole of the enterprise and are not directly traceable to any single department or profit centre. They are therefore not avoided by closing down the operations of a department or sub unit.

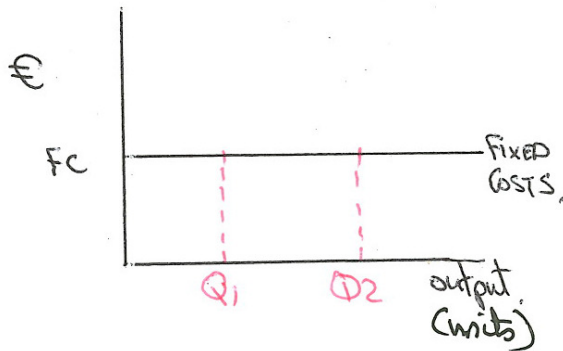
It is normal to apportion these overheads on a predetermined basis to the user departments on a reasonable and fair manner e.g. as % of floor area occupied or as % of employees engaged.

5 marks

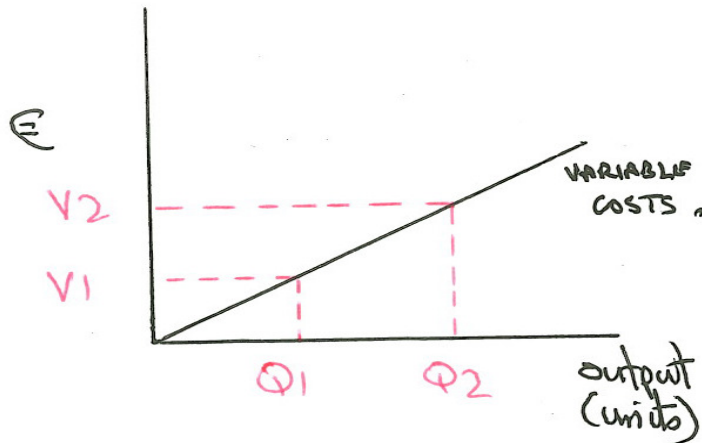
QUESTION 4:

- a) Features of Credit Control to include:
- Good documentation flow over each stage of a sales transactions to avoid disputes with customers
 - Formal assessment of potential customers for credit worthiness by means of credit rating agency report, review of most recent accounts filed in Companies Office, provide trade references.
 - Maintenance of a timely and reliable Sales Ledger system.
 - Regular review of age listing of balances for correctness and identification of non compliance with credit terms.
 - Revise regularly credit terms and limits based on customer performance.
 - Review of accounts for consistency in Debtors Days and Bad Debts % ratios as means of benchmarking performance of credit control department. (8 marks)

- b) **FIXED COSTS:** are costs which tend not to be affected by variations in the level of output. Known as “period Costs”. Examples are monthly lease payments, annual insurances, annual rates, quarterly rents. When graphed:



VARIABLE COSTS: are costs that directly vary with fluctuations in the level of output. Examples include materials, distribution, packaging etc. When graphed:



(6 marks)

- c. **MARKETING MIX** – elements are known as the “4 P’s” of Marketing: Product Demand – Pricing Policy – Promotion Methods – Place of Consumption (brief description of each giving examples). (6 marks)
- c. **WORKSHOP EFFICIENCY:** a measure of the extent to which labour hours employed in a workshop are billed out on jobs to customers. Typically, this computes at around 70% which means that for every 100 hours of time worked by employees, 70 is traceable and billable to jobs. (5 marks)

QUESTION 5: BUSINESS PURCHASE DECISION:

PART A: **GROSS MARGIN:** for trading companies, profit is arrived at in 2 stages. First stage is to determine the Gross or Trading Profit. When Gross Profit is expressed as a % of sales, this figure is known as “Gross Margin”. This can then be compared with previous years or with known industry norms. Any deviation should be investigated and explained.

Known margins in key sectors are:

- Motor Factors 50% - 60%
- Forecourt Sales (fuels) 5%
- Freight Forwarding 15%
- Travel Agency 10% to 12%

Competitive factors can cause a decline in gross margin. But also, a decline that is not expected can be due to theft or other defalcations due to poor controls especially over custody of stocks and recording of sales in a cash business. (10 marks)

PART B: DECISION:

DETERMINE GROSS MARGIN NECESSARY FROM CONDUCT OF THE BUSINESS:

ANNUAL COSTS TO RECOVER:

Light & Heat	7200
Telephone and Postage	2200
Printing Stationery	2600
Insurances	7000
Wages (2 persons)	76000
Repairs & Maintenance	2000
Rent and Rates	60000
TOTAL	157000

LOAN COMMITMENTS PER ANNUM

12 payments @ €4000 per month = **€48000**

REQUIRED PERSONAL INCOME PER ANNUM **€60000**

TOTAL GROSS MARGIN REQUIRED = 157000 + 48000 + 60000 =	265000
GROSS MARGIN FOR THE SECTOR	40%
REQUIRED ANNUAL SALES = 265000 / .40 =	662500
SALES CERTIFIED BY ESTATE AGENT	720000

As the certified sales exceed the required sales, then Paul should proceed to purchase the business.

(15 marks)

QUESTION 6 – VALUATION OF AN UNQUOTED / PRIVATE LIMITED COMPANY

a. COMPUTATION OF RATIOS:

FORMULA	COMPUTATION
Gearing Ratio: $(\text{debt} / \text{debt} + \text{equity}) \times 100$	$(180000 / 610000) \times 100 = 29.5\%$
ROCE: $(\text{PBIT} / \text{debt} + \text{equity}) \times 100$	$(300000 / 610000) \times 100 = 49\%$
Interest cover: $(\text{PBIT} / \text{Interest}) = \text{times}$	$320000 / 20000 = 16 \text{ times}$
Earnings Per Share: $(\text{Profit after tax} / \text{no. of shares})$	$260000 / 1000 = \text{€}260 \text{ per share}$

(12 marks)

b. VALUATION OF COMPANY:

VALUE OF THE TRADE / BUSINESS:	
EPS x Price/Earnings x No. Shares in issue	
€260 x 5.2 x 1000 shares =	1,352,000
NON TRADE ASSETS	
Property etc	400,000
Less loans on property	<u>-180,000</u>
Equity	220,000
+ Undistributed Bank and Cash	<u>260,000</u>
Value of non trade assets	480,000
TOTAL VALUE OF COMPANY	<u>1,832,000</u>
VALUE OF 50% INTEREST	1,832,000 X 50% = 916,000

As the value of the shares well exceeds the offer price of €800,000, Robert should accept George's offer to purchases his shares.

(13 marks)