Ch 1: Cost Concepts

Introduction to Management Accounting

Lecturer: Mary Jane Webberley

Introduction to Management Accounting

Question 1 (From Past exam paper: 2014/15)

Write brief notes explaining the following terms. Your answer should include diagrams where appropriate and examples of each type of cost from everyday life

(a) Fixed/variable costs **(9 marks)**
(b) Semi-fixed/semi-variable costs **(9 marks)**
(c) Relevant/non-relevant costs **(6 marks)**

Question 2

D Ltd produces wooden patio sets. The following costs are predicted for the coming:

Required:

(1) Create a table as shown below. Enter each cost above under the appropriate headings. Each costs is classified in two ways, (1) by behaviour (2) as a period cost ie selling/administrative or product cost ie manufacturing cost.
(2) Total each column and compute the cost of producing one patio set

Cost item	Total	Cost behaviour		Selling or Admin	Product cost	
		Variable	Fixed		Direct	Indirect
Factory labour	118,000	*118,000*			*118,000*	
Advertising	50,000		*50,000*	*50,000*		
Factory supervisor	40,000					
Property taxes on factory	3,500					
Sales commission	80,000					
Factory insurance	2,500					
Office equipment depreciation	4,000					
Leasing of factory equipment	12,000					
Indirect material	6,000					
Depreciation of factory	10,000					
Customer delivery cost (charged by weight)	3,000					
Office salaries	60,000					
Raw material-wood	94,000					
Power costs of machines	20,000					

Question 3:

A company manufactures mobile phone covers. For each of the costs below, state if each is direct or indirect and whether each is also fixed or variable, period or product

(i) Managing Director's salary
(ii) Insurance on HQ
(iii) Factory supervisor
(iv) Production worker if they are paid for each item made
(v) Postage
(vi) Annual cleaning contract fee- on the factory
(vii) Petrol for delivery vehicles
(viii) Raw materials
(ix) Audit fees
(x) Accountant's salary

Jan 19

Question 4:

Write a brief note explaining each of the following terms:

a)	Fixed and variable costs	**(6 marks)**
b)	Avoidable and unavoidable costs	**(6 marks)**
c)	Sunk Cost	**(3 marks)**
d)	Opportunity Cost	**(3 marks)**
e)	Relevant and Irrelevant	**(6 marks)**
f)	Marginal and Incremental	**(6 marks)**

You should include Diagrams where appropriate and give examples of each.

Total 30 marks

Question 4:

Write a brief note explaining each of the following terms:

a) Fixed and variable costs **(9 marks)**
b) Semi-fixed and semi-variable costs **(9 marks)**
c) Avoidable and unavoidable costs **(6 marks)**
d) Sunk Cost **(3 marks)**
e) Opportunity Cost **(3 marks)**

You should include Diagrams where appropriate and give examples of each.

Total:30 Marks

Aug 19.

d) Define what a Plant Overhead Rate is. (Your answer should include any disadvantage associated with it) **(3 Marks)**

e) Outline 3 reasons why companies calculate pre-determined overhead rates. **(3 Marks)**

Total 30 Marks

Question 4

Write a brief note explaining each of the following terms:

a) Fixed and variable costs **(6 marks)**
b) Semi-fixed and semi-variable costs **(6 marks)**
c) Relevant and Irrelevant **(6 marks)**
d) Direct and Indirect Costs **(6 marks)**
e) Sunk Cost **(3 marks)**
f) Opportunity Cost **(3 marks)**

You should include Diagrams where appropriate and give examples of each.

Total 30 marks

Question 4:

Jan 18

Good Morning Foods Co. (GMF) sell breakfast cereal to the Irish & UK market. As sales are declining, they have decided to run a once off promotional offer. For every sale of their regular cereal brands, each customer will get a free box of a new product called Honey Pops. GMF have estimated that 300,000 boxes of Honey Pops will be needed for the promotion.

GMF can produce Honey Pops in-house or outsource its production. As GMF's new management accountant, they have requested your help in making this decision.

You have been given the following estimate of the cost of in-house production for Honey Pops:

Cost Estimates	**€ '000**
Direct Materials - Corn, sugar, honey, nuts	450
Direct Materials - Card board boxes & glue	60
Direct Labour - Skilled 1,000 hours at €25 per hour	25
Direct Labour - Unskilled 4,000 hours at €15.50 per hour	62
Variable Overheads	113
Fixed Overheads Absorbed	200
Cost of Estimating Job Costs	5
Total Estimated Cost	915

The managing director of GMF is concerned that not all relevant costing principles were applied and has provided you with the following additional information:

1. 30% of the ingredients needed is already in stock from a previous job that was cancelled and will go out of date & need to be disposed of if not used producing the new product. The remaining 70% will have to be purchased if the production takes place.
2. The card board boxes were in stock and cost €50,000 however have reduced in value since and can be replaced for €30,000. The glue cost €10,000 and will need to be purchased if production takes place.
3. Due to the recent cancellation of an order, the company expects to have 500 idle skilled hours available to work on the job. The remaining 500 hours will need to be made up of overtime hours which would be paid at time plus one half.
4. Unskilled labour of 4,000 hours at a rate of €15.50 per hour is required. These unskilled workers would need to be hired on temporary contracts especially for this promotion.
5. The hiring of a new supervisor is required to oversee this production and will be paid €15,000.
6. The factory space that is required for production could be leased out to a small production business giving income of €40,000 to GMF.
7. Variable overheads accurately represent variable costs relating to the production of Honey Pops.
8. Central Fixed Overheads represent €60,000. The remaining overheads of €140,000 are specifically attributable to the production of Honey Pops.
9. The cost of estimating time is the time it took to analysis the cost of production detailed above.

Quote from Outsourcing Co:

The outsourcing company have quoted €3.15 per box for up to 100,000 boxes. The price reduces to €3 per box thereafter.

Jan 18.

Required:

a) Prepare a revised estimated cost of in-house production for GMF if relevant costing principles were applied. Your answer should explain why items have been included or excluded. **(18 marks)**

b) Considering your answer to part (a) above, would you advise GMF to produce in-house or outsource the production of their new product. **(3 marks)**

c) Write a brief explanation of the following terms giving examples where appropriate:
   i) Sunk Cost
   ii) Opportunity Cost
   iii) Incremental Cost **(9 marks)**

Total: 30 marks

Aug 18.

Question 4:

Lilly Green's Potted Plants Co., a recently established company, has approached you for your assistance with budgets. They have never used a budgeting system before and the managing director has no budget experience.

a) Explain the purpose of budgeting. **(6 marks)**

b) Describe clearly each stage of the budgeting process. **(24 marks)**

Total: 30 marks

Question 4:

In anticipation for the European Championships in Summer 2020, Energy Drinks Co. ("ENERGY") are designing a new energy drink called Euro Energy. ENERGY have estimated that 400,000 bottles of the new promotional bottle will be required to meet demand.

ENERGY can produce the bottles in-house or outsource their production. As ENERGY's new management accountant, your help is needed in making this decision.

The outsourcing company have quoted ENERGY €1.05 per bottle for the first 150,000 bottles and €0.95 per bottle thereafter. The estimate of the cost of in-house production for Euro Energy has been provided in the table below:

Cost Estimate	€
Direct Materials Ingredients – Carbonated water, sweeteners, preservatives	150,000
Direct Material – Bottles, advertising wrap	68,000
Direct Labour – Skilled 500 hours at €22 per hour	11,000
Direct Labour – Unskilled 750 hours at €15 per hour	11,250
Variable Overheads	86,000
Fixed Overheads Absorbed	85,000
Cost of Estimating Job Costs	2,500
Total Estimated Cost	**413,750**

The managing director of ENERGY is concerned that not all relevant costing principles were applied when the above cost estimate was calculated and has provided you with the following additional information:

1. 50% of the ingredients needed are already in stock and will go out of date if not used in this job. The remaining 50% of ingredients will have to be purchased specially for this job.
2. The bottles were in stock at a cost of €60,000 however can be replaced for €40,000. The advertising wrap must be customised with the European Championship logo on it costing €28,000.
3. The factory space needed for Euro Energy production could be leased out during the period giving income of €42,000.
4. A temporary security employee would need to be hired to monitor the new space for production. The cost of this is estimated at €25,000.
5. Due to a recent cancellation of an order, there are 250 idle skilled hours available for the production. The remaining skilled hours will have to paid at an overtime rate of time plus a half.
6. Unskilled workers are employed in ENERGY on a full time basis. 20 employees would need to be reallocated from another job. The other job will be pushed out by 3months and ENERGY would have to reimburse €10,000 to the customer as a late penalty.
7. Central Fixed Overheads represent €30,000. The remaining fixed overhead specially relate to the promotion.
8. Variable overheads accurately represent variable costs relating to the promotion.

Required

a) Briefly explain what a Relevant **and** Irrelevant cost is; **(4 marks)**

b) If relevant costing principles were applied, calculate the cost for the one-off job above if it was to be completed in-house. Your answer should explain why items have been included or excluded; **(22 marks)**

c) Considering your answer in part (b) above, advise ENERGY if they should produce in-house or outsource the production of the promotional product Euro Energy, giving reasons for your answer. **(4 marks)**

Total: 30 Marks

May 15

Question 3

Candor Ltd, is a specialist engineering firm which has recently tendered for a major, one-off contract not expected to be repeated. A summary of the cost estimates used for the purposes of arriving at the tender price is as follows:

Cost Estimates – Grain Silo	€000s
Direct Materials – Steel	600
Direct Materials – Wiring and ancillaries etc.	100
Direct Labour-Engineering-3,000 hours@€100 per hr.	300
Direct Labour - Unskilled 10,000 hours @ €40 per hr.	400
Variable Overheads	150
Fixed Overheads Absorbed	150
Total Estimated Cost	1,700

Candor tendered at a price of €2.04 million by adding on a mark-up of 20% to the above costs. It has just been informed that its tender was unsuccessful. Candor's Managing Director has asked your opinion as to whether the cost estimates on which the tender price was based were correct.

You have reviewed the working files and have discerned that: engineering hours were in short supply and earn a contribution per hour of €10. Due to the recent cancellation of an order the company expects to have available 6,000 idle unskilled hours available to work on the job. Any additional unskilled labour required is employed on a casual basis. The wiring was already in stock for the previous job that was cancelled. The wiring has no other use and was to be scrapped at a cost of €10,000. Fixed overheads represent an allocation of Candor's central fixed overhead. The proposed tender would have incurred specific fixed costs of €20,000. Steel was in stock and cost €600,000. It is regularly used and would be replaced at a cost of €250,000. Variable overheads accurately represent light and heat costs.

Required
Prepare a revised tender price for Candor's Managing Director if relevant costing principles were applied and the same percentage mark-up was to be added. Your answer should explain why items have been included or excluded.

Total 30 Marks

May 14

Question 3

Easton plc was formed three years ago by a group of research scientists to market a new medicine that they had invented. The technology involved in the medicine's manufacture is both complex and expensive. Because of this, the company is faced with a high level of fixed costs. This is of particular concern to Dr Harper, the company's chief executive. She recently arranged a conference of all management staff to discuss company profitability. Dr Harper showed the managers how average unit cost fell as production volume increased and explained that this was due to the company's heavy fixed cost base. 'It is clear,' she said, 'that as we produce closer to the plant's maximum capacity of 70 000 packs the average cost per pack falls. Producing and selling as close to that limit as possible must be good for company profitability.' The data she used are reproduced below:

Production vol.	40,000	50,000	60,000	70,000
Average cost per unit €	430	388	360	340

Average cost is defined as the total of fixed and variable costs, divided by the production volume.
Current sales and production volume: 65 000 packs
Selling price per pack: €420
You are a member of Easton plc's management accounting team and shortly after the conference you are called to a meeting with Ben Cooper, the company's marketing director. He is interested in knowing how profitability changes with production

Required

Calculate

(a) The amount of Easton plc's fixed costs; **(3 marks)**
(b) The profit of the company at its current sales volume of 65 000 packs; **(3 marks)**
(c) The break-even point in units; **(3 marks)**
(d) The margin of safety expressed as a percentage **(3 marks)**

Ben Cooper now tells you of a discussion he has recently had with Dr Harper. Dr Harper had once more emphasized the need to produce as close as possible to the maximum capacity of 70 000 packs. Ben Cooper has the possibility of obtaining an export order for an extra 5000 packs but, because the competition is strong, the selling price would only be €330. Dr Harper has suggested that this order should be rejected as it is below cost and so will reduce company profitability. However, she would be prepared, on this occasion, to sell the packs on a cost basis for €340 each, provided the order was increased to 15 000 packs.

Required

Write a memo to Ben Cooper. Your memo should

(a) Calculate the change in profits from accepting the order for 5000 packs at €330; **(5 marks)**
(b) Calculate the change in profits from accepting an order for 15 000 packs at €340; **(5 marks)**

QBoard. May 14

(c) Briefly explain and justify which proposal, if either, should be accepted; **(5 marks)**
(d) Identify *two* non-financial factors which should be taken into account before making a final decision **(3 marks)**

Total 30 marks

Question 4

Zargon Ltd. expects to have 2,000 direct labour hours of manufacturing capacity (in normal time) available over the next two months after completion of current regular orders. It is considering two options in order to utilize the spare capacity. If the available hours are not utilized direct labour costs would not be incurred. The first option involves the early manufacture of a firm future order which would as a result reduce the currently anticipated need for overtime working in a few months' time. The premium for overtime working is 30% of the basic rate of €14.00 per hour, and is charged to production as a direct labour cost. Overheads are charged at €16.00 per direct labour hour. 40% of overhead costs are variable with hours worked. Alternatively, Zargon has just been asked to quote for a one-off job to be completed over the next two months and which would require the following resources:

1. *Raw materials:*

(i) 960 kg of Material X which has a current weighted average cost in stock of €3.02 per kg and a replacement cost of €3.10 per kg. Material X is used continuously by Zargon.
(ii) 570 kg of Material Y which is in stock at €5.26 per kg. It has a current replacement cost of €5.85 per kg. If used, Material Y would not be replaced. It has no other anticipated use, other than disposal for €2.30 per kg.
(iii) Other materials costing €3,360.

2. *Direct labour:* 2,200 hours.

Required:

(a) Establish the minimum quote that could be tendered for the one-off job such that it would increase Zargon's profit, compared with the alternative use of spare capacity **(24 marks)**
(b) Explain, and provide examples from the text above, the following terms:
(i) Sunk cost, **(2 marks)**
(ii) Opportunity cost, **(2 marks)**
(iii) Incremental cost. **(2 marks)**

(Total 30 marks)

Aug 13

Section A

Question 1

You have received a request from EXE plc. to provide a quotation for the manufacture of a specialized piece of equipment. This would be a one-off order, in excess of normal budgeted production. The following cost estimate has already been prepared:

Direct materials		Note	€
Steel	10 m2 at €10 per sq. metre	1	100
Brass fittings		2	40
Direct Labour			
Skilled	25 hours at €16 per hour	3	400
Semi-skilled	10 hours at €10 per hour	4	100
Overhead	35 hours at €20 per hour	5	700
Estimating time		6	200
			1,540
Administrative overhead at 20% of production cost		7	308
			1,848
Profit at 25% of total cost		8	462
Selling price			2,310

Notes

1. The steel is regularly used, and has a current stock value of €5.00 per sq. metre. There are currently 100 sq. metres in stock. The steel is readily available at a price of €5.50 per sq. metre.
2. The brass fittings would have to be bought specifically for this job: a supplier has quoted the price of €40 for the fittings required.
3. The skilled labour is currently employed by your company and paid at a rate of €16.00 per hour. If this job were undertaken it would be necessary either to work 25 hours overtime which would be paid at time plus one half *or* to reduce production of another product which earns a contribution of €26.00 per hour.
4. The semi-skilled labour currently has sufficient paid idle time to be able to complete this work.
5. The overhead absorption rate includes power costs which are directly related to machine usage. If this job were undertaken, it is estimated that the machine time required would be ten hours. The machines incur power costs of €1.50 per hour. There are no other overhead costs which can be specifically identified with this job.

Aug 13

6. The cost of the estimating time is that attributed to the four hours taken by the engineers to analyse the drawings and determine the cost estimate given above.
7. It is company policy to add 20% on to the production cost as an allowance against administration costs associated with the jobs accepted.
8. This is the standard profit added by your company as part of its pricing policy.

Required:

(a) Prepare, on a relevant cost basis, the lowest cost estimate that could be used as the basis for a quotation. Explain briefly your reasons for using *each* of the values in your estimate. **(30 marks)**

(b) There may be a possibility of repeat orders from EXE plc. which would occupy part of normal production capacity. What factors need to be considered before quoting for this order? **(10 marks)**

Total 40 marks

Ch 3: Cost Assignments

Introduction to Management Accounting

Lecturer: Mary Jane Webberley

Topic 3 Product costing: Tutorial 2

The production department of DIGIT Ltd. has four separate production departments, each with a separate dedicated group of machines. The budget for the year ended 31st March 2010 shows the following information:

	Production Dpt A	Production DptB	Production Dpt C	Production Dpt D	Total
Indirect Materials	500	2,000	1,000	5,500	9,000
Maintenance	1,000	5,000	3,000	10,000	19,000
Rent & rates					20,000
Building Insurance					12,000
Insurance of Machinery					15,000
Electricity					30,000
Supervision costs					40,000
Total					145,000

The following operational information is also available:

	Area Occupied Sq.metres	Machine working hours	Book Value of machinery
Production Group A	500	1,200	5,000
Production Group B	1,500	2,500	20,000
Production Group C	800	1,800	15,000
Production Group D	2,200	2,500	40,000
Total	5,000	8,000	80,000

The product "ENG240" has a raw material cost of € 240, is sold at a 30% margin of sales and requires production processing as follows:

A..... 3 machine hours
B..... *7 machine* hours
C..... 2 machine hours
D..... 4 machine hours

Requirement:

a) Calculate the total production cost of the product ENG 240 on the basis that the company used a plant wide rate with machine hours as the overhead driver. **(10 marks)**

b) Calculate a machine hour overhead absorption rate for each Production Group. **(15 marks)**

b) Calculate the total production cost of the product ' ENG240'. **(8 marks)**

c) Calculate the selling price of the product 'ENG240'. **(2 marks)**

[Total 35 marks]

Product Costing / Cost Assignment - Class Example:

Wooden Pieces Co. manufacture wooden tables and chairs. There are two production departments in the factory and two service centres in an office next door to the factory.

Production Centres	Cutting	Wood is cut to size in the cutting centre.
	Assembly	Assembly Centre is where the wood is assembled into tables and chairs.
Service Centres	Stores	This is where the wood is stored. The wood is issued to factory when requested.
	Maintenance	This centre looks after the maintenance of all the equipment in the Cutting & Assembly departments.

Wooden Pieces are trying to calculate the cost of making **one table**. The wood (direct material) and the direct labour used for each table is easy to trace however there are more costs that are incurred when making the table; rent of factory, machine costs and supervisors salaries. Wooden Pieces are unsure how to allocate these costs and have asked for your help. You have been provided with the following information:
Indirect Expenses/Overheads:

Overheads	€
Rent & rates	128,000
Machine Cost	50,000
Prod/n supervisor salaries	200,000
Total Over heads	**378,000**

Additional Information:

			Production Centres		Service Centres	
		Total	Cutting	Assembly	Stores	Maintenance
Floor area	Sq meters	6,000	3,000	1,800	600	600
Machine value	€	400	240	100	40	20
Direct labour hours	Hours	5,000	3,200	1,800		
Materials Issued	€	4,000	2,500	1,500		
Maintenance Hrs	Hours	125	75	50		

Required:

a) Prepare an overhead analysis sheet based on the above information. You must clearly state the basis used for any apportionments.

b) Re-apportion the service departments costs and calculate the overhead rate using direct labour hours for each production department.

c) Using the Overhead rates calculated in Part B of the question combined with the raw material cost, calculate the full production cost of the following product and the selling price if the company requires a margin of 25%.

Direct Material Required: € 100
Labour Hours Required:

Cutting Dept	4 Hours @ rate of €14
Assembly	2 Hours @ rate of €15.50

Question 2

Alphachem Ltd manufactures plastic containers for the pharmaceutical industry. The factory, in which the company undertakes all of its production, has two production departments – 'Cutting' and 'Shaping', and two service departments –'Stores' and 'Maintenance'. The information provided below has been extracted from the company's budget for the next financial year which ends on 31 March 2015:

Expense	**Total €**	**Cutting €**	**Shaping €**	**Stores €**	**Maintenance €**
Consumable materials	36,300	14,000	16,000	3,500	2,800
Rent	525,000				
Building insurance	70,000				
Machinery insurance	39,000				
Machinery depreciation	58,500				
Canteen subsidy	150,000				

The following additional information is also provided:

	Total	**Cutting**	**Shaping**	**Stores**	**Maintenance**
Floor area occupied	35,000	18,000	12,000	3,000	2,000
Machine value €	390,000	300,000	50,000	25,000	15,000
Direct labour hours budgeted	24,000	9,000	15,000		
Machine hours	14,200	12,000	2,200		
Labour rates per hour €		16	14		
No. of stores requisitions	1,500	1,000	500		
Maintenance hours required	5,000	2,700	2,000	300	
No. of employees	100	34	60	4	2

Required

(a) Prepare an overhead analysis sheet based on the above information. You must clearly state the basis used for any apportionments. **(10 marks)**

(b) Re-apportion the service department costs and calculate the most appropriate overhead rate for each department. (Rate should be calculated to two decimal places). **(6 marks)**

(c) Using the rates calculated in part (b) calculate the full production costs of the following job and the selling price if the company requires a margin of 20%:

Direct Materials €100

Direct Labour

Cutting Department 10 hours at €16 per hour

Shaping Department 15 hours at €14 per hour

Machine hours required

Cutting Department 20 hours

Shaping Department 12 hours **(6 marks)**

(d) During the year ended 31 March 2015, the following hours were actually worked and the following actual costs actually incurred:

Department	Labour hours	Machine hours	Overhead costs incurred
Cutting	8,000	14,000	€531,500
Shaping	16,000	3,000	€405,500

Calculate the over/under absorbed overhead for each of the two departments for the year ended 31 March 2015. (Your answer must clearly indicate whether the company has over/under absorbed in each instance) **(8 marks)**

(e) Explain what is meant by the term "blanket overhead rate". **(5 marks)**

(f) State three reasons why companies calculate pre-determined overhead absorption rates. **(5 marks)**

Total 40 Marks

Introduction to management accounting
Topic 3 Product costing: Class questions

Question 1:

Furniture Ltd manufactures home furniture and uses a traditional job costing system.
The company has three production departments; machining (M), assembly (A) and finishing (F) and one service department (S). The following cost data has been extracted from the accounts for the cost centres.

	M €	A €	F €	S €	Total €
Indirect materials	3,000	1,800	2,100	-	6,900
Indirect labour	1,100	1,500	2,300	3,400	8,300
Total	4,100	3,300	4,400	3,400	15,200

The following indirect expenses were also incurred by the factory in the period.

Rent and rates	€9,000
Depreciation of machinery	€7,500
Canteen costs	€1,200
Repairs and maintenance	€9,500
Light and heat	€4,500
	€31,700

The following other relevant information is available:

Department	M	A	F	S	Total
Area (Sq. metres)	120	150	80	100	450
No. of employees	15	35	20	5	75
Book value of machinery	€600,000	€250,000	€120,000	€30,000	€1,000,000
No. of breakdowns	120	50	25	5	200
Direct Labour hours	1,500	3,500	2,000	-	7,000

It is estimated that 65% of Department S's services are used by Department M, 25% by Department A and 10% by Department F. Manufacturing Overhead will be recovered by reference to the number of direct labour hours used.
Furniture Ltd is considering introducing a new recliner chair onto the market. The following production information in relation to this desk is available:

Direct materials	€180
Direct Labour	
Department M	1 hour
Department A	4 hours
Department F	4 hours

This new desk will be sold at a mark up of 15% on cost. All direct workers are paid €18 per hour.

Requirements:

a) Calculate a plant wide production overhead absorption rate for the period, using direct labour hours as the absorption base.
b) Allocate the service centre costs to the production departments and calculate departmental overhead absorption rates for department M, department A and department F for the period.
c) Calculate the selling price of the new recliner chair, using the departmental overhead absorption rates.

Section A

Question 1: (Compulsory)

The Garden Seat ("GARDEN") manufacture outdoor garden furniture. There are two production departments in their factory, Cutting and Assembly, and two service centres, Stores and Maintenance.

GARDEN is unsure how to allocate overhead costs to cost objects and have asked for your help. You have been provided with the following budgeted information for the upcoming year:

Budgeted Overheads:

Overheads	€
Rent	225,000
Light & Heat	45,000
Machine Depreciation	62,000
Building Insurance	23,000
Production supervisor salaries	80,000

Additional Information:

			Production Centres		Service Centres	
		Total	Cutting	Assembly	Stores	Maintenance
Floor area	Sq meters	1,000	500	300	100	100
Machine value	€	200,000	120,000	50,000	20,000	10,000
Direct labour hours	Hours	21,750	13,050	8,700	-	-
Light & Heat	€	45,000	22,500	11,200	7,500	3,800
Materials Issued	€	40,000	26,667	13,333	-	-
Maintenance hours	Hours	160	100	20	40	-
Direct Labour Rate per Hour	€	-	€12.50	€14	-	-

The new Rattan Furniture set has a raw material cost of €140, is sold at a 30% margin of sales and requires production processing as follows:

Department	Process Time Required
Cutting Department	4 hours
Assembly Department	5 hours

Required:

a) Calculate the "blanket overhead rate" with direct labour hours as the overhead driver **and** explain your understanding of what a blanket overhead rate is. Your answer should outline any disadvantages that maybe associated with its use;

(6 marks)

b) Prepare an overhead analysis sheet based on the above information. You must clearly state the basis used for any apportionments;

(10 marks)

Question 1: (Compulsory) continued

c) Re-apportion the service department costs and calculate the overhead rate for each production department to 2 decimal places;

(7 marks)

d) Using the overhead rates calculated in part c, calculate the full production cost **and** selling price of the Rattan Furniture set;

(6 marks)

e) Actual overhead incurred for the year were €500,000 and actual labour hours worked are shown below. Calculate the over/under absorbed overhead for the year ended **and** state how this should be treated by GARDEN;

Department	Actual Labour Hours
Cutting Department	15,000
Assembly Department	7,000

(5 marks)

f) State 3 reasons why it is important for GARDEN to know the cost of the products they are manufacturing.

(6 marks)

Total: 40 marks

Section A

Question 1: (Compulsory)

Build Better Co. ("BUILD") have been manufacturing dining tables in Ireland for more than 30 years. You have recently started a management accountant role with the company. Your first task is to prepare a Cost Volume Analysis for the managing director.

You have been given the following budgeted information for the next financial year for two of BUILDS new products, the Oak and Walnut Tables:

	Oak Table	Walnut Table
Sales price	€550.00	€350.00
Direct Labour Cost	€60.50	€48.00
Direct Material Cost	€248.00	€230.00
Fixed Costs	€269,997	€225,504

Budgeted sales for the Oak and Walnut table are 4,500 units & 5,500 units respectively. Fixed Costs can be directly associated with each product.

Management are contemplating a new strategy for the two products. They are considering modifying the products quality which would lead to an expected decrease in all variable costs by 8%. These changes would decrease the selling price by 5% and increase expected budged sales by 5%.

Required:

a) Briefly explain what CVP is and state 3 assumptions of CVP; **(5 marks)**

b) Calculate the Contribution of each product; **(5 marks)**

c) Calculate the Profit / Loss budgeted for each of the products; **(2 marks)**

d) Briefly explain what is meant by the Breakeven Point; **(4 marks)**

e) Calculate the break-even point for each product in units **and** in monetary amounts; **(8 marks)**

f) Calculate the percentage margin of safety in units for each product; **(4 marks)**

g) Calculate the effect on profit **and** on the breakeven point on both products if the new strategy was implemented; **(10 marks)**

h) From your findings in part g) above, advice management if they should adopt this new strategy, giving reasons for your answer. **(2 marks)**

Total: 40 marks

Section A

Question 1: (Compulsory)

A furniture-making business manufactures quality furniture to customer's orders. It has 2 production departments and 2 service departments. Production Departments are Tables and Chairs and the respective services departments are Procurement and Maintenance. Budget Overheads for the upcoming year are detailed below.

Expenses:	Total €
Rent & Rates	180,000
Factory Insurance	60,000
Machine Insurance	45,000
Machine Depreciation	68,000
Production Supervisors Salary	195,000
Heat & Light	54,000
Total	602,000

The following additional information is also provided:

	Total	Tables	Chairs	Procurement	Maintenance
Floor Area Occupied (sq. meters)	1500	600	500	250	150
Number of employees	45	15	12	10	8
Direct Labour Hours	5500	3000	2500		
Materials Issued	€ 750,000	€ 480,000	€ 270,000		
Machine Value	€ 850,000	€ 450,000	€ 300,000	€ 70,000	€ 30,000
Machine Insurance	€ 45,000	€ 20,000	€ 12,500	€ 7,500	€ 5,000
Maintenance Hours	15000	8500	6500		

Requirement

a) Prepare an overhead analysis sheet based on the above information. You must clearly state the basis used for any apportionments **(10marks)**

b) Re - apportion the service departments costs and calculate the overhead rate for each department **(7 marks)**

c) Using the Overhead rates calculated in Part B of the question combined with the information below, calculate the full production cost of the following product and the selling price if the company requires a margin of 30%: **(7marks)**

Direct Material Required €165

Direct Labour Required

Tables	9 hours at €15 per hour
Chairs	12hours at €17per hour

Machine Hours Required

Tables	13 Hours
Chairs	15 Hours

d) If actual hours worked were as follows:

Department	Actual Labour Hours
Tables	3500
Chairs	2650

Assuming actual overheads were as budgeted, calculate the over or under absorption and advise how this should be treated in the accounts **(6marks)**

e) Explain what is meant by "Direct" and "Indirect" costs **(4marks)**

f) Explain what is meant by the term "blanket overhead rate" your answer should outline any disadvantages that maybe associated with its use. **(6 Marks)**

Total: 40 marks

Aug19

Question 3

A kitchen manufacturing business specialises in bespoke kitchen units. It has 2 production departments and 2 service departments. Production Departments are Kitchen Units and Kitchen Islands and the respective services departments are Procurement and Maintenance. Budget Overheads for the upcoming year are detailed below.

Expenses:	Total €
Rent & Rates	200,000
Factory Insurance	80,000
Machine Insurance	50,000
Machine Depreciation	55,000
Production Supervisors Salary	200,000
Heat & Light	60,000
Total	**645,000**

The following additional information is also provided:

	Total	Kitchen Units	Kitchen Islands	Procurement	Maintenance
Floor Area Occupied (sq. meters)	2000	800	600	400	200
Number of employees	60	20	16	15	9
Direct Labour Hours	6500	4000	2500		
Materials Issued	€ 850,000	€ 500,000	€ 350,000		
Machine Value	€ 600,000	€ 300,000	€ 230,000	€ 50,000	€ 20,000
Machine Insurance	€ 50,000	€ 30,000	€ 12,500	€ 5,500	€ 2,000
Maintenance Hours	20000	12000	8000		

Requirement

a) Prepare an overhead analysis sheet based on the above information. You must clearly state the basis used for any apportionments **(10marks)**

b) Re - apportion the service departments costs and calculate the over rate for each department **(7 marks)**

c) Using the Overhead rates calculated in Part B of the question combined with the information below, calculate the full production cost of the following product and the selling price if the company requires a margin of 40%: **(7marks)**

Direct Material Required €200

Direct Labour Required

Kitchen Islands	10 hours at €20 per hour
Kitchen Islands	12hours at €22per hour

Machine Hours Required

Kitchen Units	14 Hours
Kitchen Islands	16 Hours

d) Define what a Plant Overhead Rate is. (Your answer should include any disadvantage associated with it) **(3 Marks)**

e) Outline 3 reasons why companies calculate pre-determined overhead rates. **(3 Marks)**

Total 30 Marks

Question 4

Write a brief note explaining each of the following terms:

a) Fixed and variable costs **(6 marks)**
b) Semi-fixed and semi-variable costs **(6 marks)**
c) Relevant and Irrelevant **(6 marks)**
d) Direct and Indirect Costs **(6 marks)**
e) Sunk Cost **(3 marks)**
f) Opportunity Cost **(3 marks)**

You should include Diagrams where appropriate and give examples of each.

Total 30 marks

Aug 18

Section A

Question 1: (Compulsory)

Cake Bake Co. produce a variety of wedding cakes for the UK & Irish market. There are two production departments within the company, Mixing & Baking and two service departments Stores & Maintenance.

Budgeted Overheads for the upcoming year are detailed in the table below:

Expenses	**€**
Rent & Rates	39,000
Factory Insurance	9,750
Machine Insurance	~~22,000~~ 9750
Machine Depreciation	90,000
Production Supervisors Salary	55,000
Heat & Light	28,000
Total	~~**243,750**~~ 231,500

The following additional information is also provided:

	Total	**Mixing**	**Baking**	**Stores**	**Maintenance**
Floor Area Occupied (sq. meters)	2,000	735	850	250	165
Direct Labour Hours	9,300	5,580	3,720		
Materials Issued	€ 200,000	€ 120,000	€ 80,000		
Machine Value	€ 195,000	€ 90,000	€ 65,000	€ 25,000	€ 15,000
Machine Insurance	€ 9,750	€ 4,500	€ 3,250	€ 1,250	€ 750
Maintenance Hours	600	300	250	50	

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Required:

a) Prepare an overhead analysis sheet based on the above information. You must clearly state the basis used for any apportionments **(10 marks)**

b) Re - apportion the service departments costs and calculate the overhead rate for each department. **(8 marks)**

c) Using the overhead rates calculated in Part b) of this question, combined with the information below, calculate the full production cost of the following product and the selling price if the company requires a margin of 25%: **(7 marks)**

Direct Material Required € 160

Direct Labour Required:

Mixing Department	2 hours at €13 per hour
Baking Department	3 hours at €12 per hour

d) If actual hours worked were as follows:

Department	Actual Labour Hours
Mixing Department	5,600
Baking Department	3,900

Assuming actual overheads were as budgeted, calculate the over or under absorption and advise how this should be treated in the accounts. **(7 marks)**

e) State three reasons why companies calculate pre-determined overhead absorption rates? **(3 marks)**

f) Explain what is meant by the term 'blanket overhead rate'. **(5 marks)**

Total: 40 marks

Aug 17

Section A

Question 1: (Compulsory)

Cake Bake Co. produce a variety of wedding cakes for the UK & Irish market. There are two production departments within the company, Mixing & Baking and two service departments Stores & Maintenance.

Budgeted Overheads for the upcoming year are detailed in the table below:

Expenses	**€**
Rent & Rates	39,000
Factory Insurance	9,750
Machine Insurance	22,000
Machine Depreciation	90,000
Production Supervisors Salary	55,000
Heat & Light	28,000
Total	**243,750**

The following additional information is also provided:

	Total	**Mixing**	**Baking**	**Stores**	**Maintenance**
Floor Area Occupied (sq. meters)	2,000	735	850	250	165
Direct Labour Hours	9,300	5,580	3,720		
Materials Issued	€ 200,000	€ 120,000	€ 80,000		
Machine Value	€ 195,000	€ 90,000	€ 65,000	€ 25,000	€ 15,000
Machine Insurance	€ 9,750	€ 4,500	€ 3,250	€ 1,250	€ 750
Maintenance Hours	600	300	250	50	

Aug 17

Required:

a) Prepare an overhead analysis sheet based on the above information. You must clearly state the basis used for any apportionments **(10 marks)**

b) Re - apportion the service departments costs and calculate the overhead rate for each department. **(8 marks)**

c) Using the overhead rates calculated in Part b) of this question, combined with the information below, calculate the full production cost of the following product and the selling price if the company requires a margin of 25%: **(7 marks)**

Direct Material Required € 160

Direct Labour Required:

Mixing Department	2 hours at €13 per hour
Baking Department	3 hours at €12 per hour

d) If actual hours worked were as follows:

Department	Actual Labour Hours
Mixing Department	5,600
Baking Department	3,900

Assuming actual overheads were as budgeted, calculate the over or under absorption and advise how this should be treated in the accounts. **(7 marks)**

e) State three reasons why companies calculate pre-determined overhead absorption rates? **(3 marks)**

f) Explain what is meant by the term 'blanket overhead rate'. **(5 marks)**

Total: 40 marks

Jan17

Section B
Answer any TWO questions

Question 2:

A manufacturer, Paint IT produces paint. It has 2 production departments - *Formulating & Mixing* and two service departments - *Material Stores & Maintenance.*

Budgeted Overheads for the upcoming year are detailed in the table below:

Expenses:	Total €
Machine Depreciation	45,900
Machine Insurance	37,600
Factory Insurance	40,500
Rent & Rates	250,000
Production Supervisors Salary	150,000
Heat & Light	68,000
Total	592,000

The following additional information is also provided:

	Total	Formulating	Mixing	Stores	Maintenance
Floor Area Occupied (sq. meters)	1500	635	545	175	145
Number of employees	46	18	15	7	6
Direct Labour Hours	4500	2010	2490		
Materials Issued	€ 460,000	€ 249,000	€ 211,000		
Machine Value	€ 755,000	€ 390,000	€ 235,000	€ 70,000	€ 60,000
Machine Insurance	€ 37,600	€ 21,000	€ 8,100	€ 5,500	€ 3,000
Maintenance Hours	5000	1250	3250	500	

a) Prepare an overhead analysis sheet based on the above information. You must clearly state the basis used for any apportionments. **(10 marks)**

b) Re-apportion the service departments costs and calculate the overhead rate for each department. **(8 marks)**

Jan 17

c) Using the Overhead rates calculated in Part B of the question combined with the information below, calculate the full production cost of the following product and the selling price if the company requires a margin of 25%. **(7 marks)**

Direct Material Required: € 95

Labour Hours Required:

Formulating Dept.	4 Hours @ rate of €14
Mixing Dept.	2 Hours @ rate of €15.50

d) State three reasons why companies calculate pre-determined overhead absorption rates? **(5 marks)**

Total: 30 marks

Ch 7: Marginal / Variable Costing

"Income Effects of Alternative Cost Accumulation Systems"

Introduction to Management Accounting

Lecturer: Mary Jane Webberley

Question 3:

100 degrees is a well-established company that manufacture kettles. The company have been operating for 5 years. New management have recently been appointed and are looking to investigate how absorption and variable (marginal) costing would affect the company profits. They have little experience in this area and are seeking your help.

The finance team have provided you with the below information in respect of the months November & December:

	November	December
Sales (units)	40,000	35,000
Production (units)	45,000	30,000
Direct Material	€67,500	€45,000
Direct Labour	€90,000	€60,000
Variable Production Overheads	€135,900	€90,600
Finance & Admin expenses	€35,000	€45,000

Additional Information:
Normal Production Capacity is 30,000 units per month.
Fixed Production overheads are €345,000 per month.
Selling Price per unit is €30.
There was no stock at the end of October.

a) Prepare the operating statement for each month based on Variable Costing Principles; **(12marks)**

b) Prepare the operating statement for each month based on Absorption Costing principles; **(12marks)**

c) Reconcile the profit calculated using Variable Costing (part a) and Absorption Costing (part b); **(3marks)**

d) Provide an explanation of the effect on profit of using each of the product costing methods. **(3marks)**

Total:30 Marks

Question 3:

Silicon Valley Ltd manufactures computers. New management has recently been appointed and are looking to investigate how absorption and variable (marginal) costing would affect the company profits. The finance team has provided you with the below information in respect of the months November & December:

	Nov	Dec
Sales (units)	9,000	13,000
Production (units)	10,000	12,000
Direct Material	€26,500	€31,800
Direct Labour	€18,200	€21,840
Variable Production Overheads	€4,400	€5,280
Finance & Admin expenses (variable)	€35,650	€42,780

Additional Information:

- ✓ Normal Production Capacity is 12,000units
- ✓ Fixed Production overheads are €36,000 per month
- ✓ Selling Price per unit is €20
- ✓ There was no stock at the end of October.

Requirement:

a) Prepare the operating statement for each month based on Variable Costing Principles **(12 Marks)**

b) Prepare the operating statement for each month based on Absorption Costing principles **(12 Marks)**

c) Reconcile the profit calculated using Variable Costing (part a) and Absorption Costing (part b) **(6 Marks)**

Total: 30 Marks

Jan 18

Section B

Answer any TWO questions

Question 2:

Frame It Co. manufactures wooden frames. They are a well-established company that have been operating for 5 years. Frame It have recently appointed a new managing director (MD). The MD wants to see the effect on company profits if absorption and variable (marginal) costing principles are applied. As you are the management accountant for Frame It, you have been asked to assist in the investigation.

You have been provided with the below budgeted figures for the months of November & December:

	November	**December**
Sales (units)	15,000	30,000
Production (units)	20,000	25,000
Direct Material	€51,000	€63,750
Direct Labour	€78,000	€97,500
Variable Production Overheads	€36,000	€45,000
Finance & Admin expenses (Variable)	€35,000	€45,000

Additional Information

Normal Production Capacity is 25,000units

Fixed Production overheads are €34,100 per month

Selling Price per unit is €20

There was no stock at the end of November.

Required:

a) Prepare the operating statement for each month based on Variable Costing principles **(12marks)**

b) Prepare the operating statement for each month based on Absorption Costing principles **(12marks)**

c) Reconcile the profit calculated using Variable Costing (part a) and Absorption Costing (part b) **(3marks)**

d) Provide an explanation of the effect on profit of using each of the product costing methods. **(3marks)**

Total:30 Marks

Ch 4: Stock valuation - LIFO FIFO WA

"Accounting Entries for a Job Costing System"

Introduction to Management Accounting

Lecturer: Mary Jane Webberley

Section B

Answer any TWO questions

Question 2:

The Craft House Co. ("CRAFT") are a start-up business that manufacture wooden doll houses for children. The stores department issue wood in pallets to the factory floor for manufacture when requested by the production manager. The stores manager is keen to build up as much pallets as possible, so the stores are full with inventory.

The following transactions were made in the stores for the last 6 months of trading:

Date	Number of pallets Purchase	Number of pallets Issued	Total cost of Purchases €
03-June	300		6,600
25-June	300		6,000
06-July		350	
02-September	200		4,600
31-October		300	
16-November	250		6,000
11-December		300	

As the management accountant of CRAFT, you have been asked to conduct a review of the inventory valuation.

Required:

a) Calculate the value of the material issues during the six month period, **and** the value of the closing stock at the end of December using the following methods of costing;

i. first in, first out; (FIFO)
ii. last in, first out; (LIFO)
iii. weighted average (calculations to two decimal places) **(23 marks)**

b) Calculate the effect of the three methods of material costing on the reported profit of the business during the six - month period. Sales revenue for the period to December is €33,000; **(3 marks)**

c) Briefly discuss the "Inventory trade off" between having low or high levels of inventory. **(4 marks)**

Total: 30 marks

Section B
(Attempt any 2 questions)

Question 2:

On 1st January Mr. Smith started a business selling fridges. The following transactions were made during the first 6 months of trading:

Date	Purchase - Boxes	Issued - boxes	Total cost of Purchases €
3rd January	250		8,500
7th January	400		14,000
3rd February		250	
4th March	500		10,500
10th April	300		19,500
10th May		850	
5th June	500		13,500
15th June		400	

a)
Calculate the value of the material issues during the six month period, and the value of the closing stock at the end of June using the following methods of costing:

i. first in, first out; (FIFO) **(12Marks)**
ii. last in, last out; (LIFO) **(6 Marks)**
iii. Weighted average (calculations to two decimal places) **(12Marks)**

Total 30 marks

Aug 19

Section A

Question 1 – Compulsory

On 1st January Mr. Jelly Ltd started a business selling kettles. The following transactions were made during the first 6 months of trading:

Date	Purchase - Boxes	Issued - boxes	Total cost of Purchases €
3rd January	150		6,000
7th January	350		15,400
3rd February		250	
4th March	400		20,000
10th April	500		19,500
10th May		750	
5th June	300		13,500
15th June		400	

a) Calculate the value of the material issues during the six month period, and the value of the closing stock at the end of June using the following methods of costing:

i. first in, first out; (FIFO) **(12)**
ii. last in, last out; (LIFO) **(6 Marks)**
iii. Weighted average (calculations to two decimal places) **(12 Marks)**

b) Calculate the effect of the three methods of material costing on the reported profit of the business during the six - month period. Sales revenue for the period to June is €75,000. **(10 Marks)**

Total 40 marks

Jan 18

Question 3:

On 1st January, Mrs. Brady started a small business selling wooden clocks. The following transactions were made during the first 6 months of trading:

Date	Quantity Purchased	Quantity Issued	Total cost of Purchases €
1st January	300		12,600
25th January	150		7,500
15th February		200	
15th March	50		2,750
11th April	200		9,000
21st May		250	
9th June	150		7,350
30th June		300	

Required:

a) Calculate the value of the material issues during the six month period, and the value of the closing stock at the end of June using the following methods of costing:

iv. first in, first out; (FIFO)
v. last in, first out; (LIFO)
vi. weighted average (calculations to two decimal places) **(21 marks)**

b) Calculate the effect of the three methods of material costing on the reported profit of the business during the six month period. Sales revenue for the period to June is €52,000.

(9 marks)

Total: 30 marks

Aug 18

Question 3:

On 1st June Mrs. O 'Doherty started a small business selling wooden frames. The following transactions were made during the first 6 months of trading:

Date	Quantity Purchased	Quantity Issued	Total cost of Purchases €
1st June	350		12,600
15th June	200		7,400
4th July		250	
29th July	100		2,800
6th August	250		8,500
7th September		300	
26th October	200		7,000
9th December		350	

Required:

a) Calculate the value of the material issues during the six month period, and the value of the closing stock at the end of December using the following methods of costing:

i. first in, first out; (FIFO)
ii. last in, first out; (LIFO)
iii. weighted average (calculations to two decimal places) **(21 marks)**

b) Calculate the effect of the three methods of material costing on the reported profit of the business during the six - month period. Sales revenue for the period to December is €49,000.

(9 marks)

Total: 30 marks

Aug 17

Question 3:

On 1st June Mrs. O 'Doherty started a small business selling wooden frames. The following transactions were made during the first 6 months of trading:

Date	Quantity Purchased	Quantity Issued	Total cost of Purchases €
1st June	350		12,600
15th June	200		7,400
4th July		250	
29th July	100		2,800
6th August	250		8,500
7th September		300	
26th October	200		7,000
9th December		350	

Required:

a) Calculate the value of the material issues during the six month period, and the value of the closing stock at the end of December using the following methods of costing:

i. first in, first out; (FIFO)
ii. last in, first out; (LIFO)
iii. weighted average (calculations to two decimal places) **(21 marks)**

b) Calculate the effect of the three methods of material costing on the reported profit of the business during the six - month period. Sales revenue for the period to December is €49,000.

(9 marks)

Total: 30 marks

Jan 17

Section A

Question 1: (Compulsory)

a) FIFO LIFO

On 1st March, Mrs. Quinn started a small business selling T-shirts. The following transactions were made during the first six months of trading:

Date	Purchase - Boxes	Issued - boxes	Total cost of Purchases €
5th March	300		6,000
31st April	500		18,500
5th May		400	
15th May	300		11,400
3rd June	600		20400
1st July		500	
1st August	400		11,200
20th September		300	

a) Calculate the value of the material issues during the six month period, and the value of the closing stock at the end of June using the following methods of costing:

(i) first in, first out; (FIFO)
(ii) last in, last out; (LIFO)
(iii) weighted average (calculations to two decimal places)

(31 marks)

b) Calculate the effect of the three methods of material costing on the reported profit of the business during the six month period. Sales revenue for the period to June is €51,000.

(9 marks)

Total: 40 marks

Ch 15: The Budget Process

Introduction to Management Accounting

Lecturer: Mary Jane Webberley

Question 3 :

Sparkles Co. ("SPARKLES") are a recently established handmade jewellery company. SPARKLES are planning for the year ahead and have approached you for advice on the budgetary process.

Required:

a) Briefly explain the purpose of budgeting. **(6 marks)**

b) Describe clearly each stage of the budgeting process. **(16 marks)**

c) Outline 4 criticisms of traditional budgets. **(8 marks)**

Total: 30 marks

Aug 17

Question 4:

Lilly Green's Potted Plants Co., a recently established company, has approached you for your assistance with budgets. They have never used a budgeting system before and the managing director has no budget experience.

a) Explain the purpose of budgeting. **(6 marks)**

b) Describe clearly each stage of the budgeting process. **(24 marks)**

Total: 30 marks

Jan 17

Question 4:

'Smiles', a recently established photography company, has approached you for your assistance with budgets. 'Smiles' has never used a budgeting system before and the managing director has no budget experience.

a) Explain the purpose of budgeting. **(6 marks)**

b) Describe clearly each stage of the budgeting process. **(24 marks)**

Total: 30 marks

Ch 8: Cost- Volume- Profit Analysis

Introduction to Management Accounting

Lecturer: Mary Jane Webberley

Aug 19

Section B
(Attempt any 2 questions)

Question 2

Creamy Cheese manufactures two types of cheese "Soft" and "Hard". Creamy Cheese have prepared the below budget for the upcoming financial period:

	Soft	Hard
	€	€
Sales Price	55.00	75.00
Direct Labour Cost	17.50	24.00
Direct Material Cost	12.50	18.00
Fixed Costs	77,500	125,540

	units	units
Annual Sales	4,000	5000

Fixed Costs can be directly associated with the product.

The management of Creamy Cheese have requested the following information:

a) Calculate the Profit / Loss budgeted for the each of the products. **(7 marks)**

b) The break-even point for each product in:
- **(i)** units
- **(ii)** monetary values **(8 marks)**

c) The percentage margin of safety in percentage terms. **(5 marks)**

d) Management are now considering the below alternative options to improve profit;

Option 1: Decreasing the selling price of each product by 20%. It is expected that this would increase sales by 40%.

Option 2: Decreasing all variable costs by 12% and decreasing fixed costs by 12%. These changes would not be expected to have an impact on sales.

e) For the two options detailed above, calculate;
- **(i)** The effect on profit **(5 marks)**
- **(ii)** The breakeven point in units **(5 marks)**

Total: 30 marks

Section B

Answer any TWO questions

Question 2:

You have started a job as a newly qualified management accountant with a well-established company called Paint Pot Co. ("PAINT"). PAINT produce high quality paint in matt and satin finishes.

The managing director is keen to learn about Cost Volume Analysis and has asked for your assistance. You have been given a folder with the following budgeted information for the next financial year:

Cost Analysis	Matt	Satin
Sales price per unit	€62	€72
Direct labour cost per hour	€13.50	€14.00
Number of labour hours per unit	2	1
Direct Material Cost per unit	€15	€18
Fixed Costs	€140,000	€192,000
Budgeted Annual Sales (units)	12,000	8,000

The managing director also provides you with the details of a new strategy for the two products, Matt and Satin, to improve profit. A selling price decrease of 5% is being considered. It is expected that this would increase sales by 10%.

Required:

a) Briefly explain what CVP analysis is and how it could help with decision making in PAINT; **(3 marks)**

b) Calculate the Contribution of each product; **(4 marks)**

c) Calculate the Profit / Loss budgeted for each of the products; **(2 marks)**

d) Calculate the break-even point for each product in units; **(3 marks)**

e) Calculate the percentage margin of safety in percentage terms for each product **and** briefly explain your results; **(5 marks)**

f) Calculate the units required for each product to achieve a target profit of €150,000; **(3 marks)**

g) For the new strategy detailed above, calculate the effect on;

(i) Profit;
(ii) Breakeven point and;
(iii) Advise management if this strategy should be adopted. **(10 marks)**

Total: 30 marks

Jan 18

Section A

Question 1: (Compulsory)

In anticipation for the World Cup 2018, Nolan Sports Co. have decided to manufacture a new leather World Cup soccer ball. Sales are expected to be 105,000 balls per month with a selling price of €14 each however the actual quantity could be significantly different. Two methods of producing the soccer ball are being considered. The estimated production cost for each of the methods of manufacture, together with the additional marketing and distribution costs of selling the new ball, are detailed below:

	Method A	**Method B**
Variable Costs	€10.00 per ball	€9.50 per ball
Specific Fixed Costs	€190,000 per month	€230,000 per month
Semi-variable Costs: 100,000 soccer balls 150,000 soccer balls 200,000 soccer balls	 €80,000 per month €85,000 per month €90,000 per month	 €60,000 per month €70,000 per month €80,000 per month

It may be assumed that the fixed cost content of the semi-variable costs will remain constant throughout the range of activity shown.

Required:

a) Calculate, for each production method, the profit which will result from manufacture of the new World Cup Soccer Ball, at each of the following levels of activity:
120,000 soccer balls per month
140,000 soccer balls per month
180,000 soccer balls per month **(23 marks)**

b) Calculate for each production method;
i. The breakeven point in number of soccer balls
ii. The margin of safety percentage **(8 marks)**

c) Write a brief note explaining each of the following terms:
i. Fixed Costs
ii. Variable Costs
iii. Semi-Fixed Costs
You should include diagrams where appropriate and give examples for each. **(9 marks)**

Total: 40 marks

Aug 18

Section B
Answer any TWO questions

Question 2:

Sunnies Co. manufactures two types of sunglasses "Polarised" and "Non-Polarised". Sunnies have prepared the budget below for the upcoming financial period:

	Polarised	Non-Polarised
	€	€
Sales Price per unit	55.00	140.00
Direct Labour Cost per unit	13.00	16.00
Direct Material Cost per unit	17.00	35.00
Fixed Costs	77,000	140,000

	units	units
Annual Sales	5,000	3,500

Fixed Costs can be directly associated with the product.

The management of Sunnies have requested the following information:

a) Calculate the Profit / Loss budgeted for each of the products. **(7 marks)**

b) The break-even point for each product in:
   (i) units
   (ii) monetary values **(8 marks)**

c) The percentage margin of safety in percentage terms. **(5 marks)**

d) Management are now considering the below alternative options to improve profit;

Option 1: Decreasing the selling price of each product by 10%. It is expected that this would increase sales by 20%.

Option 2: Decreasing all variable costs by 10% and decreasing fixed costs by 10%. These changes would not be expected to have an impact on sales.

For the two options detailed above, calculate;
   (i) The effect on profit **(5 marks)**
   (ii) The breakeven point in units **(5 marks)**

Total: 30 marks

Aug 17

Section B
Answer any TWO questions

Question 2:

Sunnies Co. manufactures two types of sunglasses "Polarised" and "Non-Polarised". Sunnies have prepared the budget below for the upcoming financial period:

	Polarised	Non-Polarised
	€	€
Sales Price per unit	55.00	140.00
Direct Labour Cost per unit	13.00	16.00
Direct Material Cost per unit	17.00	35.00
Fixed Costs	77,000	140,000

	units	units
Annual Sales	5,000	3,500

Fixed Costs can be directly associated with the product.

The management of Sunnies have requested the following information:

a) Calculate the Profit / Loss budgeted for each of the products. **(7 marks)**

b) The break-even point for each product in:
   (i) units
   (ii) monetary values **(8 marks)**

c) The percentage margin of safety in percentage terms. **(5 marks)**

d) Management are now considering the below alternative options to improve profit;

Option 1: Decreasing the selling price of each product by 10%. It is expected that this would increase sales by 20%.

Option 2: Decreasing all variable costs by 10% and decreasing fixed costs by 10%. These changes would not be expected to have an impact on sales.

For the two options detailed above, calculate;
   (i) The effect on profit **(5 marks)**
   (ii) The breakeven point in units **(5 marks)**

Total: 30 marks

Jan 17

Question 3:

Celtic Dress manufactures two types of Irish dancing shoes "Soft Shoes" and "Hard Shoes". Celtic Dress have prepared the below budget for the upcoming financial period:

	Soft Shoes	Hard Shoes
	€	€
Sales Price	55.00	75.00
Direct Labour Cost	17.50	24.00
Direct Material Cost	12.50	18.00
Fixed Costs	77,500	125,540

	units	units
Annual Sales	4,000	5000

Fixed Costs can be directly associated with the product.

The management of Celtic Dress have requested the following information:

a) Calculate the Profit / Loss budgeted for the each of the products. **(7 marks)**

b) The break-even point for each product in:
(i) units
(ii) monetary values **(8 marks)**

c) The percentage margin of safety in percentage terms. **(5 marks)**

d) Management are now considering the below alternative options to improve profit;

Option 1: Decreasing the selling price of each product by 20%. It is expected that this would increase sales by 40%.

Option 2: Decreasing all variable costs by 12% and decreasing fixed costs by 12%. These changes would not be expected to have an impact on sales.

For the two options detailed above, calculate;
(i) The effect on profit **(5 marks)**
(ii) The breakeven point in units **(5 marks)**

Total: 30 marks