CPA IRELAND | CERTIFIED PUBLIC ACCOUNTANTS

MANAGEMENT ACCOUNTING

FORMATION 2 EXAMINATION - AUGUST 2016

NOTES:
Section A - Questions 1 and 2 are compulsory. You have to answer Part A **or** Part B **only** of Question 2. Should you provide answers to both Part(s) A and B of Question 2, you must draw a clearly distinguishable line through the answer not to be marked. Otherwise, only the first answer to hand for this question will be marked.
Section B - You are required to answer any **three** out of Questions 3 to 6. Should you provide answers to all of Questions 3 to 6, you must draw a clearly distinguishable line through the answer not to be marked. Otherwise, only the first three answers to hand for these four questions will be marked.

TIME ALLOWED:
3 hours, plus 10 minutes to read the paper.

INSTRUCTIONS:
During the reading time you may write notes on the examination paper but you may not commence writing in your answer book. **Please read each Question carefully.**

Marks for each question are shown. The pass mark required is 50% in total over the whole paper.

Start your answer to each question on a new page.

You are reminded to pay particular attention to your communication skills and care must be taken regarding the format and literacy of your solutions. The marking system will take into account the content of your answers and the extent to which answers are supported with relevant legislation, case law or examples where appropriate.

List on the cover of each answer booklet, in the space provided, the number of each question attempted.

NB: PLEASE ENSURE TO ENCLOSE YOUR ANSWER SHEET TO QUESTION 3 IN THE ENVELOPE PROVIDED.

THE INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS IN IRELAND

MANAGEMENT ACCOUNTING

FORMATION 2 EXAMINATION - AUGUST 2016

Time allowed: 3 hours, plus 10 minutes to read the paper.
Section A: Answer Question 1 and either Part A or Part B of Question 2.
Section B: You are required to answer any three out of Questions 3 to 6.

SECTION A - QUESTIONS 1 AND 2 ARE COMPULSORY

1. Cloudy Orchard Limited produces high quality organic cider for a niche market in the United Kingdom. Manufacturing consists of two main processes, Pressing and Fermentation. The Pressing process involves chopping, pulping and pressing of organic apples while the Fermentation process involves the addition of yeast and sugar to the mixture. Both processes incur conversion costs comprising labour and overhead expenses. Cloudy Orchard Limited has been producing cider for five years and based on experience expects a loss of 5% of inputs in the Pressing process, which is detected when production is 60% complete. In the Fermentation process the company expects a loss of 4% of inputs and this is detected when production is 80% complete. Losses in production from the Pressing process are sold as scrap to a local pig farmer for €0.02 per litre. Losses in production from the Fermentation process have no scrap value. The company uses the weighted average method to value production and inventory.

Details of the production processes for the month of August are provided below:

Pressing	**Litres**	**% Complete**	**Value**
Opening inventory	25,000		
- Materials		100	€6,007
- Conversion costs		50	€1,336
Input to process	325,000		
- Materials			€61,068
- Conversion costs			€22,964
Completed and transferred to Fermentation process	293,750		
Closing inventory	40,000		
- Materials		100	
- Conversion costs		25	

Fermentation	**Litres**	**% Complete**	**Value**
Opening inventory	36,000		
- Pressing process costs		100	€9,811
- Materials		100	€720
- Conversion costs		75	€274
Input to process			
- Transferred in from Pressing process			
- Materials			€5,640
- Conversion costs			€4,406
Completed and transferred to Bottling	308,000		
Closing inventory	10,000		
- Pressing process costs		100	
- Materials		100	
- Conversion costs		40	

REQUIREMENT:

(a) For the month of August prepare the following accounts, clearly showing all workings:

(i) Pressing process account
(ii) Fermentation process account
(iii) Normal loss account (20 marks)

(b) The FIFO (first in first out) method can be used as an alternative method of process costing. Describe how FIFO differs from the weighted average method used by Cloudy Orchard Limited.
(3 marks)

(c) Explain the term 'abnormal loss' and provide an example to illustrate your answer. (2 marks)

[Total: 25 Marks]

ANSWER PART (A) OR PART (B)

2.

(A) XX Glass Limited has been in operation for the past seven years and manufactures shower doors. Since its establishment the company has used a traditional overhead absorption costing system. However, the managing director, Peter Kenny, is considering making a change.

Over the past few years, Peter has streamlined the production process and reduced materials and labour costs significantly. He has now turned his attention to the company's overhead costs and when one of his suppliers mentioned an alternative overhead costing system, activity based costing (ABC), he asked for your assistance.

REQUIREMENT:
Prepare a report on activity based costing (ABC) for Peter Kenny, managing director of XX Glass Limited, that:

(a) Explains the difference between traditional overhead absorption costing and ABC. (3 marks)

(b) Describes the operation of an ABC system. (6 marks)

(c) Outlines the advantages and disadvantages of adopting ABC in XX Glass Limited. (5 marks)

Format and Presentation (1 mark)

[Total: 15 Marks]

<u>OR</u>

(B) You are a trainee certified public accountant with the accounting firm of Hall & Lane who offer specialised services to small and medium sized enterprises (SMEs). Recently, the firm was approached for assistance by a number of managing directors of SMEs, who wish to recruit an accountant to their companies but who were unsure of the difference between a financial accountant and a management accountant. As a first step, the partner in charge at Hall & Lane has decided to give a short presentation to the managing directors to provide information and clarification about financial accounting and management accounting.

You have been asked by the partner in charge to prepare a briefing note for the presentation.

REQUIREMENT:
Draft a briefing note for the partner in charge that:

(a) Suggests reasons why management accounting has become so important in the current business environment. (4 marks)

(b) Outlines the key differences between financial accounting and management accounting. (4 marks)

(c) Describes the role of the management accountant. (6 marks)

Format and Presentation (1 mark)

[Total: 15 Marks]

SECTION B - ANSWER ANY THREE QUESTIONS.

3. **The following multiple-choice question contains eight sections, each of which is followed by a choice of answers. Only one answer is correct in each case. Each question carries equal marks. On the answer sheet provided indicate for each question, which of the options you think is the correct answer. Marks will not be awarded where you select more than one answer for any question.**

The following information relates to Question 1 and Question 2 below:

Carlton Limited uses a standard costing system to account for its only product. During July the company manufactured 48,000 units of product and had the following details:

Materials purchased and used (385,000 kgs)	€1,160,000
Direct labour (102,000 hours)	€410,000
Materials price variance	€5,000 A
Materials usage variance	€3,000 A
Labour rate variance	€2,000 A
Labour efficiency variance	€24,000 A

1. The standard quantity of materials per unit is:

(a) 5 kgs
(b) 6 kgs
(c) 7 kgs
(d) 8 kgs

2. The standard labour hours per unit are:

(a) 2 hours
(b) 2.5 hours
(c) 3 hours
(d) 4 hours

3. A semi-variable cost is a cost that:

(a) Increases in direct proportion to output.
(b) Increases throughout the year.
(c) Contains an element of both fixed and variable cost.
(d) Remains constant irrespective of the level of output.

4. Brite Limited, a contract cleaner, has recorded the following data relating to its activities:

Square metres cleaned	12,750	15,100
Overheads incurred	€73,950	€83,585

The overhead cost to clean 16,500 square metres would be:

(a) €67,650
(b) €86,750
(c) €90,750
(d) €89,325

5. A direct cost is best described as:

(a) A cost which needs to be apportioned to a cost centre.
(b) The highest proportion of the total cost of a product.
(c) Expenditure that may be identified with a specific cost unit.
(d) A cost which cannot be influenced by its budget holder.

6. Green Agri Engineers are preparing a quote for Job 699. Costs and other related information are shown below:

Raw materials	€8,500
Direct labour (@ €9 per hour)	€14,400
Production overhead	€5.50 per direct labour hour
Administrative overhead	10% production cost
Profit margin	20% on selling price

Based on the information above the sales price for Job 699 would be:

(a) €43,587.50
(b) €31,487.50
(c) €39,625.00
(d) €46,493.33

The following information relates to Question 7 and Question 8 below:
Byways Limited reported an annual profit of €47,500 for the year ended 30 June 2016. The company uses absorption costing and produces one product, the Alpha, which has the following budgeted cost per unit:

	€
Direct material (1 kg @ €4 per kg)	4
Direct labour (4 hours @ €9 per hour)	36
Fixed overheads (4 hours @ €3 per hour)	12
	52

The normal level of activity for the company is 10,000 units per annum. However, actual production was 11,500 units. Actual fixed production overheads were as budgeted. Inventory levels at 1 July 2015 were 400 units and at 30 June 2016 were 600 units.

7. Based on the information provided, the profit for the year under variable (marginal) costing is:

(a) €49.900
(b) €45,100
(c) €50,700
(d) €44,300

8. For the year ended 30th June 2016 budgeted fixed production overheads and the under/over absorption was

	Budgeted fixed production overheads	Under/over absorption
(a)	€120,000	€18,000 over absorbed
(b)	€120,000	€18,000 under absorbed
(c)	€138,000	€18,000 over absorbed
(d)	€138,000	€18,000 under absorbed

[Total: 20 Marks]

4. Bonne Bia Limited is a newly formed company in the catering business founded by Kate and Paul Johnson. Kate and Paul have considerable experience in the food industry and saw an opportunity to establish a food/beverage business to service the tourist market during the four months from May to August. The business will be located in Wexford and permission has been obtained from Wexford County Council (WCC) to operate a food/beverage outlet near Curracloe beach. At present Kate and Paul are trying to decide between two possible food/beverage options. Pertinent information relating to each of the options is shown below. Initially, Kate and Paul intend to operate the outlet themselves without employing any other staff.

<u>Option 1 – Crepes on the Beach</u>

The food outlet would offer French style crepes with a variety of fillings.

Costings

Rather than having a range of selling prices a fixed price has been set for each crepe and this price is midway between the highest and lowest prices expected. Additionally, an average variable ingredient cost has been computed based on possible crepe fillings. Other relevant information is as follows:

Selling price per crepe (Budgeted sales 16,800 crepes)	€3.20
Average variable ingredient cost per crepe	€1.20
Other variable costs (disposable cutlery, packaging etc.)	20% selling price
Licence fee payable to WCC	€1,600
Rent of premises (including tables, chairs etc.) per month	€2,000
Insurance for four month period	€1,296

<u>Option 2 – Coffee dreams</u>

This beverage outlet would offer a range of beverages using the highest quality coffee beans.

Costings

Again a fixed price has been set for all coffee beverages and this price is midway between the highest and lowest prices expected. Additionally, an average variable ingredient cost has been computed based on milk, cream and other flavourings that may be used in making the various coffee drinks.

To create the coffees a special barista machine is required. This machine may be rented from a well-known coffee company on a monthly basis. The monthly rental is €1,006 plus €0.125 per cup of coffee produced. Other relevant information is as follows:

Selling price per cup of coffee (Budgeted sales 12,000 cups of coffee)	€3.50
Average variable ingredient cost per cup of coffee	€0.75
Other variable costs (disposable cups, spoons, etc.)	10% selling price
Licence fee payable to WCC	€1,600
Rent of premises (including tables, chairs etc.) per month	€2,000
Insurance for four month period	€1,296

REQUIREMENT:

(a) For EACH option:

(i) Calculate the breakeven point in sales revenue. (7 marks)

(ii) If Bonne Bia Limited requires a profit of €17,500, how many units must be sold? (5 marks)

(iii) If actual sales achieved are equal to budgeted sales, compute the margin of safety in units and percentages. (6 marks)

(b) Recommend which option Bonne Bia Limited should choose giving reasons for your answer. (2 marks)

[Total: 20 Marks]

5. Star Luggage Limited was established in 1990 and produces a variety of suitcases, cabin bags and holdalls for high street stores. The company has an efficient manufacturing facility comprising two production departments, Forming and Finishing, and two service departments, Stores and Machine Maintenance. While direct product costs are easily established and recorded, overhead costs attributable are more difficult to ascertain. Currently, the company uses a traditional absorption costing system to assign overheads to its products.

Budgeted cost information for the month of August is shown below:

	Total	Forming	Finishing	Stores	Machine Maintenance
	€	€	€	€	€
Direct labour	285,400	152,100	133,300		
Indirect labour	108,250	16,400	15,500	31,750	44,600
Power	62,800				
Equipment depreciation	54,000				
Equipment insurance	28,400				
Factory building repairs	17,800				
Factory security	38,750				
Marketing costs	18,150				
Factory rent	36,000				

Details relating to the company's budgeted activity for the month of August have also been provided:

	Total	Forming	Finishing	Stores	Machine Maintenance
Machine hours	26,500	21,200	5,300		
Direct labour hours	10,800	3,780	7,020		
Floor area (square metres)	1,600	800	300	400	100
Value of stores issues	180,000	162,000	18,000		
Kilowatt hours (% usage)	100	50	30	10	10
Value of equipment	€800,000	€400,000	€240,000	€80,000	€80,000

REQUIREMENT:

(a) On the basis of the information provided above, prepare a schedule of the total budgeted overheads for each of the four departments, clearly showing the basis of apportionment.

(8 marks)

(b) Calculate the total budgeted overheads for both production departments after the service departments have been re-apportioned to them.

(3 marks)

(c) Compute pre-determined overhead absorption rates for each of the production departments. (4 marks)

(d) At the end of August the following information was obtained:

	Forming	Finishing
Actual overhead costs	€248,000	€107,195
Actual labour hours worked	4,250	8,125
Actual machine hours recorded	20,950	5,750

Calculate the under or over absorbed overhead for the Forming and Finishing departments. (5 marks)

[Total: 20 Marks]

6. Joy Dunne loves to bake and has decided to start her own business in Westport. She has developed a delicious low calorie cupcake recipe and has created two varieties: Vanilla Cream and Chocolate Swirl. Joy hopes to commence production in September 2016 and has conducted some market research to assess the interest in, and demand for, her products. She has €5,000 of savings to use for the business, but will require additional bank funding to get the business started. Joy has prepared the following information relating to her business:

1. Estimated sales demand

Cupcakes	**September**	**October**	**November**	**December**	**January**	**February**
Vanilla Cream	1,000	1,500	1,600	1,800	2,000	2,000
Chocolate Swirl	1,500	1,650	1,800	2,200	2,100	2,230

   Joy has obtained orders from a hotel that specialises in arranging conferences and events. She also has orders from local restaurants and coffee shops. She estimates that 30% of her customers will pay cash immediately and has agreed to give one month's credit to the remaining customers.

2. The Vanilla Cream cupcakes will have a selling price of €1.80 each while the Chocolate Swirl cupcakes will sell for €1.95 each for the first three months but she intends to increase these prices by 10% after that time.

3. The cupcakes are made using the same basic ingredients but with a different topping. Joy has calculated that for each variety of cupcake, the basic ingredient cost is 20% of the selling price while the cost of the topping is 8% of the selling price. In line with the selling price increase of 10% noted at 2 above, Joy also expects an increase in the cost of ingredients of 10% after the first three months of operations.

4. In terms of paying for ingredients and toppings, Joy has negotiated that she will get one month's credit from the ingredient suppliers but must pay cash immediately for topping purchases.

5. Some months ago, Joy successfully applied for a grant from the Local Enterprise Board. She will receive €5,100 in total, to be paid in two equal instalments, September 2016 and January 2017.

6. To start production, Joy will need to purchase some kitchen equipment in September costing €4,500. The equipment is expected to last for four years and have no scrap value at the end of that time.

7. Joy has located suitable premises, which have been approved by the food safety authority, and which will cost €1,200 per month to rent. The landlord requires one month's rent as a deposit, and this must be paid with the first month's rent.

8. Other operating costs including power, packaging, insurance, administration expenses and depreciation of kitchen equipment are expected to be €4,005 for the year. Additionally, Joy will employ two staff in the business and will pay wages of €1,320 each per month. The relevant costs are paid in the month in which they are incurred.

REQUIREMENT:

(a) Prepare a cash budget for Joy Dunne's business, on a monthly basis, for the six month period commencing 1 September 2016, clearly showing the closing cash balance at the end of each month.

(16 marks)

(b) Explain Zero Based Budgeting (ZBB) and outline TWO benefits of ZBB over traditional budgeting methods.

(4 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

THE INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS IN IRELAND

MANAGEMENT ACCOUNTING

FORMATION 2 EXAMINATION - AUGUST 2016

SOLUTION 1

Workings

Pressing process

Inputs	Total Physical Units	Equivalent units Materials	Conversion costs	
	Litres	Litres	Litres	
Opening WIP	25,000			
Materials input	325,000			
	350,000			
Outputs				
Closing WIP	40,000	40,000	10,000	
Normal loss 5% of materials input	16,250	0	0	
Transferred to Cooking process	293,750	293,750	293,750	
	350,000	333,750	303,750	
Costs				
Value of opening work in progress	€7,343	€6,007	€1,336	
Total costs incurred during month	€84,032	€61,068	€22,964	
Less scrap value of losses €0.02 per litre	-€325	-€325		
Total costs to be allocated	€91,050	€66,750	€24,300	
Cost per equivalent unit		€0.200	€0.080	€0.280

(3 marks)

Allocation of costs

Valuation of output transferred to Fermentation process = 293,750 Litres x €0.28 per Litre =	€82,250
Valuation of closing WIP (40,000 Litres) 25% complete	
Materials: 40,000 Litres x €0.20 =	€8,000.00
Conversion costs: 40,000 Litres x 25% x €0.080 =	€800.00
	€8,800.00
	(2.5 marks)
	€91,050.00

Fermentation process

Inputs	Total Physical Units	Equivalent units Pressing process costs	Material costs	Conversion costs	
	Litres	Litres	Litres	Litres	
Opening WIP	36,000				
Materials input from Mixing process	293,750				
	329,750				
Outputs					
Closing WIP	10,000	10,000	10000	4,000	
Normal loss 4% of materials input	11,750	0	0	0	
Completed and transferred	308,000	308,000	308,000	308,000	
	329,750	318,000	318,000	312,000	
Opening WIP	€10,805	€9,811	€720	€274	
Pressing process costs transferred in	€82,250	€82,250			
Costs incurred	€10,046		€5,640	€4,406	
Total costs to be allocated	€103,101	€92,061	€6,360	€4,680	
Cost per equivalent unit		€0.2895	€0.0200	€0.0150	€0.3245

(4.5 marks)

Valuation of finished output transferred: 308,000 Litres @ €0.3245 per Litre =	€99,946.00
Valuation of closing WIP (10,000 Litres 40% complete)	
Pressing process costs: 10,000 Litres x €0.2895 =	€2,895.00
Materials cost: 10,000 Litres x €0.02 =	€200.00
Conversion costs: 10,000 x 40% x Litres x €0.015 =	€60.00
	€3,155.00
	(3 marks)
Total cost	€103,101

a) i)

Pressing process account

	Litres	€		Litres	€
Opening WIP	25,000	7,343			
Inputs	325,000		Transferred to Fermentation		
Materials		61,068	Process	293,750	82,250
Labour & overhead		22,964	Normal loss	16,250	325
			Closing WIP	40,000	8,800
	350,000	91,375		350,000	91,375

(2.5 marks)

a)ii)

Fermentation process account

	Litres	€		Litres	€
Opening WIP	36,000		Completed & transferred	308,000	99,946
- Prior process costs		9,811	Normal loss	11,750	0
- Materials cost		720			
- Conversion costs		274	Closing WIP	10,000	3,155
Transferred in from pressing process	293,750	82,250			
Materials cost		5,640			
Conversion costs		4,406			
	329,750	103,101		329,750	103,101

(3 marks)

a) iii)

Normal loss account

	Litres	€		Litres	€
Pressing process account	16,250	325	Bank		325
Fermentation process account	11,750	0			0
	28,000	325		28,000	325

(1.5 marks)

(20 marks)

(b) Describe how FIFO method differs from Weighted Average method

FIFO differs from Weighted Average method in process costing as it is based on a different assumption regarding opening inventory:

- Weighted Average assumes that opening work in progress (WIP) inventory merges with units introduced during the current period and cannot be separately identified.

- The Weighted Average method calculates the cost per unit by totalling the cost of opening WIP inventory and the costs incurred during the period and dividing this total by the total number of equivalent units (i.e. number of units introduced during the period plus the equivalent number of units of closing WIP inventory).

- FIFO assumes that the opening WIP inventory in a process is the first group/batch of units to be completed in the current period and is separate from the units introduced and processed during the current period.

- FIFO charges the cost of opening WIP inventory separately to completed production and the cost per unit is based ONLY on the current period costs and production for the current period. Closing WIP inventory is assumed to be from the units introduced during the current period.

(3 marks)

(c) Explain 'abnormal loss' and give an example to illustrate your answer

An abnormal loss is also called an uncontrollable loss. It is a loss that is not expected to occur under efficient operating conditions.

It is not considered an inherent part of the production process because it arises from inefficiencies and is not included in the process costs.

An example would be incorrect mixing of ingredients or cutting of fabric. (2 marks)

[Total: 25 marks]

SOLUTION 2
(A)
REPORT
To: Mr Peter Kenny, Managing Director, XX Glass Limited
From: A Management Accountant
Subject: Activity Based Costing
Date: August 2016

Further to your request for assistance, the information regarding activity based costing (ABC) is provided below. Firstly, the report distinguishes between traditional overhead absorption costing and activity based costing, next it describes the operation of activity based costing and finally it presents the advantages and disadvantages of activity based costing.

Distinction between traditional overhead absorption costing and activity based costing
Both traditional overhead absorption costing and activity based costing use a two stage allocation process and the main differences between the two costing methods occur in this process.

Traditional overhead absorption costing assigns overheads to production and service departments while activity based costing assigns overheads to each major activity.

Traditional overhead absorption costing traces overheads to products by applying overhead absorption rates calculated using a small number of allocation bases. Activity based costing identifies the drivers of cost for each activity and hence may use many different 'cost drivers' to allocate costs to products.

(3 marks)

The operation of activity based costing
Activity based costing involves a number of stages as follows:
1. The activities that cause overheads to be incurred are identified.
2. Costs are accumulated (or pooled) based on these activities.
3. The factors that cause the cost of each activity to arise (or to change) are selected. These are called 'cost drivers'. The total quantity (or volume) of each cost driver is established and each activity overhead cost is divided by this cost driver total to obtain an activity cost per cost driver.
4. Activity overheads are assigned to products based on the usage of the activity and the activity cost per cost driver.

(6 marks)

Advantages and disadvantages of activity based costing (ABC)
Advantages:
1. ABC will provide more realistic product costs for XX Glass Limited
2. ABC will allow more overheads to be traced to the products
3. ABC recognises that it is activities which cause cost not products and it is products which consume activities.
4. ABC focuses attention on the real nature of cost behaviour and will help XX Glass Limited to reduce costs and identify activities which do not add value to the products.
5. ABC recognises the complexity and diversity of modern production by the use of multiple cost drivers, many of which are transaction based rather than based on production volume.
6. ABC provides useful financial measures (e.g. Cost driver rates) and non-financial rates (e.g. Transaction volumes).

Disadvantages:
1. A full ABC system with numerous cost pools and multiple cost drivers is understandably more complex than traditional systems and will thus be more expensive for XX Glass Limited to develop and administer.
2. The company may experience difficulty in selecting appropriate cost drivers.
3. If there are overhead costs in XX Glass Limited that are common across activities there will be problems in deciding how to split these costs accurately between activities.

Should you require clarification or explanation in relation to the matters noted in this report, or any require further assistance, I will be happy to assist you.

Yours sincerely,
A Management Accountant. (5 marks)

(Format and presentation 1 mark)

[Total: 15 Marks]

(B) BRIEFING NOTE

(a) Reasons why management accounting has become so important to a business

Management accounting has grown and become more important as a result of the following factors:

- Global market – with improvements in transportation and communication the market for customers has expanded and so too have company operations. Management accounting enables cost information to be provided and analysed across divisions, segments and countries to support overall activities of the company.
- Changing cost structures – in the past materials and labour comprised the highest product costs but this has changed, overheads are now more significant and need to be carefully monitored. Management accounting facilitates the monitoring and control of costs.
- Increased competition – it is now more important than ever to have accurate cost information as companies are competing not just in terms of product price but also other factors such as product quality and customer service. Access to accurate product cost information allows companies to focus attention away from pricing to other significant factors.
- Internet opportunities – the arrival of the internet has brought greater opportunity to buy and sell products and services more easily, and to monitor competitors and consumer trends. Management accounting may be implemented to gather cost information from all sources easily.
- Changing customer needs – customers have become more discerning and it is now more important to have pertinent information relating to customers and their profitability to a business. Management accounting allows companies to use cost information and techniques to obtain data on the cost of providing services to customers.
- Changing product lifecycles – due to intense competition and changing customer needs product lifecycles are becoming shorter. Companies need to be ready and able to introduce new products quickly and management accounting can facilitate this process by providing essential information for costing and decision making.
- Any other relevant point

(4 marks)

(b) Key differences between financial accounting and management accounting.

There are a number of areas where management accounting differs from financial accounting:

Financial Accounting	**Management Accounting**
There is a legal requirement for companies to prepare financial statements	There is no legal requirement to prepare management accounts
Financial accounting has an external focus. It is designed to provide information to users who are external to an organisation.	Management accounting has an internal focus. It is designed to assist company managers in planning, controlling and decision-making activities.
Financial accounting focuses on the organisation as a whole.	Management accounting information may focus on many areas as required by the company.
Financial accounting information is presented in a format prescribed by law and by accounting standards.	The layout and substance of management accounting information is decided by company management.
Most financial accounting information is expressed in monetary terms	Management accounting information may include both monetary and non-monetary information.
Financial accounting provides information on what has happened in the past	Management accounting may be used for planning purposes and also for presenting information on past activities.
A detailed set of financial statements for a business is produced annually and in some cases less detailed financial information may be produced semi-annually.	Management accounting information may be prepared daily, monthly, weekly etc. as required.

(4 marks)

(c) The role of the management accountant

Management accounting meets the needs of managers responsible for day to day operation of the business. As part of his/her role the management accountant provides information to facilitate a range of activities including:

Planning and controlling

To carry out their roles effectively the various managers in a business require information to assist them in planning and controlling the operations of the organisation. Planning involves translating goals and objectives into the specific activities and resources that are required to achieve these goals and objectives. The management accountant is involved in the preparation of both long term and short term plans. Budgets are short-term plans that are prepared in more detail than longer term plans. Control involves the process of ensuring that actual outcomes conform to planned or expected outcomes. Budgets may be used to support the controlling of activities by providing a measure against which actual performance may be compared.

Decision making

Managers also require information to assist them with routine and non-routine decision making. Routine decisions relate to issues such as assessing the profitability of different segments of an organisation in terms of products, services and customers. Non-routine decisions are made infrequently and may relate to strategic issues such as the introduction of new products or services. The information provided by the management accountant to support these decisions may be financial or non-financial in nature, depending on what best meets the needs of management. In many instances cost information accumulated by the management accountant is relied upon to inform decisions, and therefore it is critical that such information is of a high quality.

Performance measurement

The management accountant generates periodic reports, which compare actual performance to plan, and provides these to managers enabling them to determine if operations are proceeding as expected and to identify where corrective action may be required. These periodic reports also allow managerial performance to be evaluated and provide incentives for managers to try to achieve favourable results.

Allocation of costs between cost of goods sold and inventories

It is important to allocate costs to products as accurately as possible in order to establish the profitability of the business. The management accountant ensures that cost information is collected and correctly allocated to cost of sales or inventories as appropriate. The management accountant may use techniques such as activity based costing to allocate overheads to products or the first in first out (FIFO) method to value inventory.

(6 marks)
(Format and presentation 1 mark)

[Total: 15 marks]

SOLUTION 3

1. Answer **(d)** 8 kgs

Materials price variance = (SP – AP) x AQ
-5,000 = (SP – AP) x 385,000 (AP x AQ = Actual material cost)
-5,000 = 385,000 SP – 1,160,000
SP = (1,160,000 - 5,000)/385,000 = 3

Materials usage variance = (SQ – AQ) x SP
-3,000 = (SQ – 385,000) x 3
-3,000 = 3SQ – 1,155,000
SQ = (1,155,000 – 3,000)/3 = 384,000 kgs for 48,000 units = 8 kgs per unit

2. Answer **(a)** 2 hours

Labour variance = (SR – AR) x AH
-2,000 = (SR – AR) x 102,000 (AR x AH = Actual labour cost)
-2,000 = 102,000 SR – 410,000
SP = (410,000 - 2,000)/102,000 = 4

Labour efficiency variance = (SH – AH) x SR
-24,000 = (SH – 102,000) x 4
-24,000 = 4SQ – 408,000
SQ = (408,000 – 24,000)/4 = 96,000 hours for 48,000 units = 2 hours per unit

3. Answer **(c)** contains an element of both fixed and variable cost

4. Answer **(d)** €89,325

	Square metres cleaned	Overhead incurred
	15,100	€83,585
	12,750	€73,950
Difference	2,350	€9,635

Variable overhead = €9,635/2,350 = €4.10 per unit
Fixed overhead = €83,585 – (15,100 x €4.10) = €21,675

Cost to clean 16,500 square metres = €21,675 + (16,500 x €4.10) = €89,325

5. Answer **(c)** expenditure that may be identified with a specific cost unit

6. Answer **(a)** €43,587.50

Job 699	€
Raw materials	8,500.00
Direct Labour (€14,400/€9 = 1,600 hours)	14,400.00
Production overhead (1,600 hours x €5.50)	8,800.00
Total production cost	31,700.00
Administrative overhead (10% x production cost)	3,170.00
Total cost (80% selling price)	34,870.00
Profit margin (20% selling price)	8,717.50
Selling price (100%)	43,587.50

7. Answer **(b)** €45,100

Profit under absorption costing	€47,500
Adjustment for fixed production overhead in inventory (400 – 600) x €12	(€ 2,400)
Profit under variable (marginal) costing	€45,100

8. Answer **(a)** €120,000 and €18,000 over absorbed

Budgeted (actual) fixed production overhead = 10,000 units x €12/unit	€120,000
Absorbed fixed production overhead = 11,500 units x €12/unit	€138,000
Over absorbed fixed production overhead	(€ 18,000)

[Total: 20 marks]

SOLUTION 4

(a)

(i) Break even point in sales revenue

	Crepes	Coffee
Fixed costs	€	€
Licence fee payable to WCC	1,600	1,600
Rent of premises	8,000	8,000
Insurance	1,296	1,296
Coffee machine cost	0	4,024
Total fixed costs	10,896	14,920
Sales revenue per unit	3.20	3.500
Less: variable costs		
Ingredient costs	1.20	0.750
Other variable costs	0.64	0.350
Coffee machine costs	0.00	0.125
Total variable cost per unit	1.84	1.225
Contribution per unit	1.36	2.275
Contribution margin ratio(CMR) = Contribution/Sales =	0.425	0.65
Break even point in sales revenue = Total fixed costs / CMR =	€25,637.65	€22,953.85

(7 marks)

(ii) If a profit of €17,500 is required how many crepes/coffees must be sold?

Target profit in units = Total fixed costs + Target profit / Contribution per unit

For Crepes = €10,895 + €17,500 / €1.36 = 20,879.41 crepes

For Coffees = €14,920 + €17,500 / €2.275 = 14,250.55 coffees

Proof:	Crepes	Coffee
	€	€
Total revenue [20,879 x €3.20]/(14,251 x €3.50)	66,812.80	49,878.50
Less: total variable costs [20,879 x €1.84]/(14,251 x €1.225)	38,417.36	17,457.48
Total contribution	28,395.44	32,421.03
Less: total fixed costs (see (a) (i) above)	10,896.00	14,920.00
Profit (approximately €17,500)	17,499.44	17,501.03

(5 marks)

(iii) Margin of safety in units and percentages

Margin of safety in units = Budgeted sales (units) - Break Even sales (units)

		Crepes	Coffees
Break Even Sales (units) = <u>Total fixed costs</u>	=	<u>10,896</u>	<u>14,920</u>
Contribution per unit		1.36	2.28
	=	8012	6,558

Margin of safety in units =

		Crepes	Coffees
Crepes = 16,800 - 8,012 =		8,788	
Coffee = 12,000 - 6,558 =			5442

Margin of safety in percentages

= <u>Budgeted sales - Break Even sales</u> x 100
Budgeted sales

$$\text{Crepes} = \frac{16{,}800 - 8{,}012}{16{,}800} \times 100 = 52.3\%$$

$$\text{Crepes} = \frac{12{,}000 - 6{,}558}{12{,}000} \times 100 = 45.4\%$$

(6 marks)

(b) Recommend which option Bonne Bia Limited should choose giving reasons for your answer

Bonne Bia Limited should choose Option 2 Coffee Dreams because while it does have higher fixed costs:

- It has a lower break even point
- It has a higher contribution to sales ratio
- Any other relevant point (2 marks)

[Total: 20 Marks]

SOLUTION 5

(a) Schedule of budgeted overheads

Overhead expense	**Basis**	**Total**	**Forming**	**Finishing**	**Stores**	**Machine Maintenance**
		€	€	€	€	€
Excluding direct labour						
Excluding marketing costs						
Indirect labour	Given	108,250	16,400	15,500	31,750	44,600
Power	Kilowatt hours	62,800	31,400	18,840	6,280	6,280
Equipment depreciation	Value of machinery	54,000	27,000	16,200	5,400	5,400
Equipment insurance	Value of machinery	28,400	14,200	8,520	2,840	2,840
Factory building repairs	Floor area	17,800	8,900	3,338	4,450	1,113
Factory security	Floor area	38,750	19,375	7,266	9,688	2,422
Factory rent	Floor area	36,000	18,000	6,750	9,000	2,250
		346,000	135,275	76,414	69,408	64,905

(8 marks)

(b) Reapportionment of service departments

		Forming	Finishing	Stores	Machine Maintenance
- Stores	Value of stores issues	62,467	6,941	-69,408	
		197,742	83,355	0	64,905
- Maintenance	Machine hours	51,924	12,981		-64,905
		249,665	96,336	0	0

(3 marks)

(c) Calculation of predetermined overhead rates

	Forming	Finishing
Machine hours	21,200	
Labour hours		7,020
Overhead absorption rate	€11.78	€13.72

(4 marks)

(d) Under/over absorption of production overhead

	Forming	Finishing
	€	€
Actual overhead cost	248,000	107,195
Absorbed overhead cost		
- Forming : 20,950 x €11.78	246,791	
- Finishing: 8,125 x €13.72		111,475
Under/(Over) absorbed overhead	1,209	-4,280

(5 marks)

[Total: 20 marks]

SOLUTION 6

Workings

(W1) Receipts from customers

	September	October	November	December	January	February
	€	€	€	€	€	€
Vanilla Cream	1,800	2,700	2,880	3,564	3,960	3,960
Chocolate Swirl	2,925	3,218.5	3,510	4,719	4,505	4,783
Total sales	4,725	5,918	6,390	8,283	8,465	8,743
Received:						
- Cash sales (30% of total)	1,418	1,775	1,917	2,485	2,540	2,623
- Due afer 1 month (70% of total)		3,308	4,143	4,473	5,798	5,925
Total receipts from customers	1,418	5,083	6,060	6,958	8,338	8,548

(W2) Purchases required

	September	October	November	December	January	February
	€	€	€	€		
Ingredients - 20% of sales	945	1,184	1,278	1,657	1,693	1,749
Payable in one month		945	1,184	1,278	1,657	1,693
Toppings - 8% of sales payable in cash	378	473	511	663	677	699
Total purchase payments	378	1,418	1,695	1,941	2,334	2,392

(W3) Administration costs

	€
Total annual administration costs	4,005
Less: depreciation (non-cash cost) €4,500/4 years	1,125
Total cash annual administration costs	2,880
Cash administration costs per month	240

(a) Cash Budget for the six months commencing 1st September 2016

		September	October	November	December	January	February
Cash receipts		€	€	€	€	€	€
County Enterprise Board Grant		2,550				2,550	
Total receipts from customers	(W1)	1,418	5,083	6,060	6,958	8,338	8,548
Total cash receipts		3,968	5,083	6,060	6,958	10,888	8,548
Cash payments							
Total payments to suppliers	(W2)	378	1,418	1,695	1,941	2,334	2,392
Wages costs		2,640	2,640	2,640	2,640	2,640	2,640
Rent of premises		2,400	1,200	1,200	1,200	1,200	1,200
Administration costs	(W3)	240	240	240	240	240	240
Purchase of kitchen equipment		4,500					
Total cash payments		10,158	5,498	5,775	6,021	6,414	6,472
Net cash flow		-6,190	-415	285	937	4,474	2,076
Opening cash balance		5,000	-1,190	-1,605	-1,320	-383	4,091
Closing cash balance		-1,190	-1,605	-1,320	-383	4,091	6,167

(16 marks)

(b) Explain Zero Based Budgeting and outline TWO benefits of ZBB over traditional budgeting

Zero based budgeting implies a different approach from traditional budgeting. It requires activities to be re-evaluated each time a budget is produced. Each functional budget is prepared on the basis that each cost element is justified as though the activities were occurring for the first time. No item of expenditure is included in the budget without full prior evaluation and justification. Zero based budgeting attempts to eliminate unnecessary expenditure being retained in budgets from year to year.

(2 marks)

Advantages of Zero Based Budgeting

Any TWO of the following:

- It eliminates unnecessary expenditure being retained in budgets
- It allows questions to be asked by managers before committing funds and not afterwards as in traditional budgeting
- It focuses attention on achieving value for money
- It leads to a greater understanding by management of the workings of the organisation
- If properly implemented, it should lead to a more efficient allocation of resources
- Any other relevant point

(2 marks)

[Total: 20 Marks]