Mock Exam One
AAT L2 Elements of Costing

Contents **Page**

This practice assessment is one of a set of five AAT mock practice assessments which have been published for this subject. They are produced by expert AAT tutors to ensure real AAT exam style and real AAT exam standard tasks and ensure the best chance of success.

All practice assessments are relevant for the current syllabus.

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Mock Exam One

AAT L2 Elements of Costing

Assessment information:

You have **1 hour and 30 minutes** to complete this practice assessment.

This assessment contains **10 tasks** and you should attempt to complete **every** task. Each task is independent. You will not need to refer to your answers to previous tasks. Read every task carefully to make sure you understand what is required.

Where the date is relevant, it is given in the task data.
Both minus signs and brackets can be used to indicate negative numbers **unless** task instructions say otherwise.

You must use a full stop to indicate a decimal point. For example, write 100.57 not 100,57 or 100 57

You may use a comma to indicate a number in the thousands, but you don't have to. For example, 10000 and 10,000 are both acceptable.

Task 1 (10 marks)

(a) Identify whether the following statements are TRUE or FALSE

(4 marks)

	TRUE	FALSE
When a manufacturer classifies costs by element, quality control salaries would be classified as labour.	☐	☐
When a manufacturer classifies costs by function, selling and distribution costs would be classified as production expenses.	☐	☐
Direct costs are specific costs required to make a product or deliver a service.	☐	☐
A variable cost is any cost where if no production of goods are made, then the expense would still have to be incurred.	☐	☐

(b) (i) Identify TWO users of management accounts by clicking on the left hand box and matching it to the appropriate right hand boxes. You can remove a line by clicking on it.

(2 marks)

Management Accounts

Bank

Manager

Shareholder

Director

Customers

(b) (ii) Complete the following sentence using the drop down list.

(1 mark)

The classification of cost that is useful for forecasting costs, in particular when activity levels rise and fall, would be the classification by

Picklist: Element, Behaviour, Function, Nature.

(c) (i) HOS is a hospital which treats patients. Code the following transactions for its operating costs using the table below. Each transaction should have a four character code.

(2 marks)

Activity	Code	Nature of cost	Sub code	Transaction	Code
Materials	M	Direct	800	Bandages to treat patients	
		Indirect	900	Hospital management salaries	
Labour	L	Direct	800		
		Indirect	900		
Overhead	O	Direct	800		
		Indirect	900		

(c) (ii) Identify whether the following statement is true or false using the drop down list below

(1 mark)

A numeric coding system would include both letters and numbers.

Picklist: TRUE, FALSE.

End of Task

Task 2 (10 marks)

(a) Identify whether the following statements are TRUE or FALSE.

(3 marks)

	TRUE	FALSE
When using the AVCO method, the cost of each issue of materials to production would be valued at the average price of all inventory held on the date of each issue.	☐	☐
The balance for closing inventory using the LIFO method would be higher than if using the the FIFO method during a period of rising prices.	☐	☐
FIFO, LIFO and AVCO are methods used to determine an issue cost for materials, or the value of closing inventory remaining at the end of a period.	☐	☐

(b) Complete the following sentence using the drop down list.

(2 marks)

An overtime premium is normally treated as a direct cost of production, when the overtime work undertaken by a production worker is due to the [ ]

Piecework as a remuneration system encourages a greater [ ] of work undertaken by production workers.

Picklist: General pressure of work Customer's specific request, Speed, Quality.

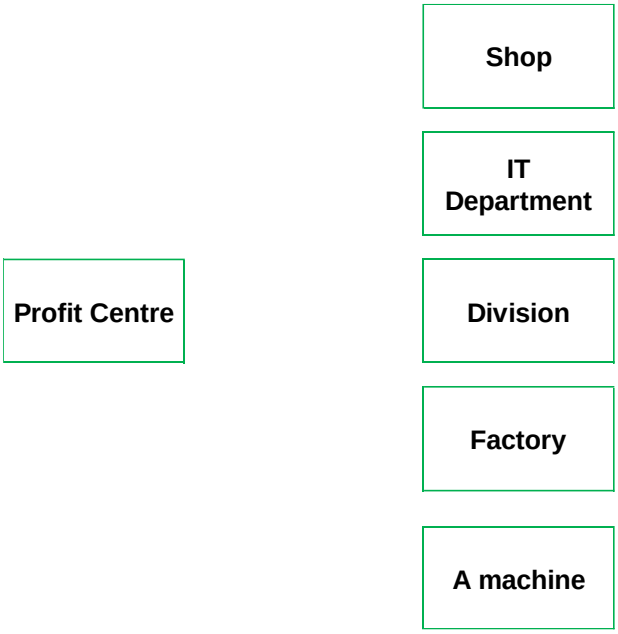
(c) Identify whether the following statements are TRUE or FALSE.

(2 marks)

	TRUE	FALSE
Management accounting may use many different classifications of costs. Financial accounting generally records financial transactions using historical cost.	☐	☐
Financial accounting systems are used to supply information to management about the product unit costs and amounts of profit earned for each unit of product sold by the business.	☐	☐

(d) Identify TWO examples of profit centres by clicking on the left hand box and matching it to the appropriate right hand boxes. You can remove a line by clicking on it.

(2 marks)



(e) Complete the following sentence using the drop down list.

(1 mark)

For a manufacturer which is machine intensive the most appropriate overhead absorption rate would be [ ]

Picklist: Per labour hour, Per machine hour, Per unit.

End of Task

Task 3 (10 marks)

Coffee Shop RUS (CSRUS) orders different grades of coffee beans for its national high street of coffee shops.

For management accounting purposes CSRUS use the FIFO (first in, first out) method for inventory valuation.

The stores ledger records for Coffee Bean Z grade (Arabica bean) shows the following receipts into stores during October:

Date of purchase	Number of tonnes	Price per tonne (£)	Total cost (£)
1 October	80	900.00	72,000
7 October	200	920.55	184,110
14 October	150	950.00	142,500

CSRUS is considering using the AVCO (average cost method) as an alternative to the FIFO (first in, first out) method for its management accounts.

(a) Calculate the cost of issuing 150 tonnes of bean Z grade coffee beans to CSRUS's national chain of coffee shops on 20 October and the closing inventory balance after the issue using FIFO (first in, first out) and AVCO (average cost method).

(10 marks)

	Value of issue (£)	Balance after issue (£)
FIFO		
AVCO		

End of Task

Task 4 (8 marks)

ICS is manufacturer which makes watering cans for outdoor garden use.

The following details relate to its factory employees for the month of October:

- All employees in the factory are paid a basic rate of £8 per hour.
- Night shift workers are also paid an 'unsociable hours premium' of 25% of basic rate (overtime premium 1).
- Overtime hours worked are paid at basic rate + 20% overtime premium (overtime premium 2).
- A total of 1200 hours were worked by night shift workers which included 200 hours of overtime.

There were 6 production workers in a night shift for October. A bonus is paid to each worker of £50 for each complete percentage that actual output exceeds target. The target for the night shift was 35000 units for October and 38500 units were actually made by the 6 production workers.

(a) Complete the gaps in the table below to calculate the total labour cost for the nightshift team for October.

(6 marks)

Note: do not enter figures in grey cells.

Labour cost	Hours	£
Basic pay		
Overtime premium 1		
Overtime premium 2		
Total cost before bonus		
Bonus payment		
Total cost including bonus		

(b) Complete the following sentence.

(2 marks)

The basic pay and overtime for each team member for the month of October (to the nearest pound) was £ [ ]

The bonus payable to each team member (to the nearest pound) for the month of October was £ [ ]

End of Task

Task 5 (10 marks)

A manufacturing company is considering how to cost the various products that it makes. It needs to decide on the overhead absorption basis it will use.

The methods it is considering are:

- a machine hour basis
- a labour hour basis

(a) Complete the table below to show the two overhead absorption rates that the company could use. Show your calculations to two decimal places.

(2 marks)

	Machine hour	Labour hour
Overheads (£)	280,000	280,000
Activity	28,000	11,200
Absorption rate (£)		

The following data relates to making one unit of one of its products:

- Material: 3.4 kilograms (kg) at £1.20 per kg.
- Labour: 15 minutes at £10.00 per hour.
- Machine time: 30 minutes per unit.

(b) Complete the table below to calculate the total unit cost of the product, using each of the overhead absorption rates you calculated in (a) above. Show your calculations to two decimal places.

(6 marks)

Cost	Machine hour (£)	Labour hour (£)
Materials	4.08	4.08
Labour	2.50	2.50
Overheads		
Total unit cost		

(c) Which of the three overhead recovery methods is best suited to an environment where the production work is carried out manually.

(2 marks)

Picklist: Labour hours, Machine hours, Per unit.

End of Task

Task 6 (10 marks)

(a) Identify the type of cost using classification by behaviour, for each of the three descriptions of costs below.

(3 marks)

Cost	Cost behaviour	Fixed	Variable	Semi-variable
Energy	£34,000 per year regardless of units made + £3.45 per unit made.	☐	☐	☐
Direct material	5 litres per unit made at £2.99 a litre.	☐	☐	☐
Depreciation	£18,000 a year.	☐	☐	☐

(b) Complete the table shown below to calculate the costs of production for output levels of 8000, 12000 and 15000 units.

(7 marks)

Units	Total cost (£)	Variable cost (£)	Fixed cost (£)
8000			
12000			15,000
15000		33,750	

End of Task

Task 7 (8 marks)

A manufacturer has the following cost information for the last month:

	£
Materials costs:	
Materials forming part of the product	45000
Materials not forming part of the product	5000
Labour costs:	
Labour working on production	67000
Labour supporting work on production	8000
Factory indirect expenses	24000

Relevant inventory changes were:

	£
Work in progress	
Opening	156000
Closing	175000
Finished goods:	
Opening	56000
Closing	78000

Complete the table below to show the manufacturers cost structure for the last month.

(8 marks)

Cost structure for the last month	£
DIRECT MATERIAL USED	
DIRECT COST	
MANUFACTURING COST	
COST OF GOODS MANUFACTURED	
COST OF GOOD SOLD	

End of Task

Task 8 (14 marks)

- All employees in the factory are paid a basic rate of £9 per hour.
- Workers are paid an overtime payment of time and a half for hours worked in excess of normal time (Monday to Friday).
- Workers are paid an overtime payment of double time for hours worked on a Saturday or Sunday (Weekend).

A total of 405 hours were worked in the week by 10 production workers which included 20 hours of overtime worked on the Weekend and 35 hours of overtime worked during Monday to Friday.

A bonus is paid to each production worker of £2.50 for every hour that is saved for production work undertaken. 850 units were made in the week by 10 production workers. Production workers as a team are expected to take 30 minutes for every unit made.

(a) Calculate the basic pay, overtime premium and total pay before bonus for the week for the 10 production workers in the table shown below.

(4 marks)

Note: Do not enter figures in grey cells. Round all figures to the nearest £.

Labour cost	Hours	£
Basic pay	405	
Overtime premium (Mon to Fri)	35	
Overtime premium (Weekend)	20	
Total pay before bonus		

(b) Complete the following sentence.

(1 mark)

Last week each production worker was paid a bonus of £ _____

(c) Complete the following sentence.

(1 mark)

Last week the total pay including bonuses for all 10 production workers was

£ _____

(d) (i) Calculate the total cost and cost per unit of last week's production of 850 units shown in the table below.

(d) (ii) Calculate what these figures would have been if production had increased to 1000 units in the table below.

(8 marks)

Notes:

- **The direct labour cost for the production of 850 units is your figure as calculated in part (c) above.**
- **Calculate all costs per unit to three decimal places.**

Units made and sold:	850 units	1000 units
	£	£
Variable costs:		
Direct material	1,904	
Direct labour		
Fixed costs:		
Depreciation charges	2,000	
Total cost		
Cost per unit		

End of Task

Task 9 (8 marks)

(a) Identify TWO variances below that will increase profits by clicking on the left hand box and matching it to the appropriate right hand boxes. You can remove a line by clicking on it.

(2 marks)

(b) Complete the table shown below and identify whether the variance for materials is adverse or favourable by using the drop down list below. Do not use a minus sign for negative figures.

(4 marks)

Picklist: Adverse, Favourable, No variance.

	Budgeted income/expense £	Variance £	Actual income/expense achieved	Adverse/ Favourable
Sales	60000	5000		Favourable
Wages		2500	15500	Adverse
Materials	9600	600	10200	
Overhead	4000	1000		Favourable

(c) Show whether the following statement are true or false.

(2 marks)

	TRUE	FALSE
A cost variance is always significant.	☐	☐
Income which exceeds budget in a period will produce an adverse variance.	☐	☐

End of Task

Task 10 (12 marks)

You have been asked to provide information on the company's sales and cost performance for the month.

Company policy:

- Sales variances in excess of 10% of budget, and that are greater than £5,000, are significant. They should be reported to the sales manager.
- Cost variances in excess of 10% of budget, and that are greater than £500 are significant. They should be reported to the production manager.
- Variances in excess of 20% of budget, and that are greater than £10,000, are significant. They should be reported to the managing director.

Significant variances should be reported to the relevant manager for review and appropriate action.

The budget and actual figures have already been summarised in the table below:

(a) Complete the table below to show each variance, the variance percentage as a proportion of budget. Percentages should be rounded to TWO decimal places. Identify whether each variance is significant or not using the drop down list. Identify who (if anyone) the variance should be reported to using the drop down list.

(12 marks)

Picklist: Significant, Not significant, Sales manager, Production manager, Managing director, Not required.

	Budgeted income/expense £	Actual income/expense £	Variance £	Variance as a percentage of budget %	Significant / not significant	Who (if anyone) the variance should be reported to
Sales	40000	55000				
Direct materials	1500	2200				
Direct labour	4500	4500				
Overheads	2000	1500				

End of Task

Mock Exam One - Solutions

AAT L2 Elements of Costing

Task 1 (10 marks)

Accounting is divided in two main areas of specialisation:

Financial Accounting

- Historical in nature and reports on past financial events e.g. assets, sales and profit.
- Regulated by company laws and accounting standards
- Used by external users e.g. lenders (banks), customers, suppliers, shareholders.
- Used to determine the tax position of the business.
- Income, expenses, assets and liabilities reported normally annually (every 12 months).

Management Accounting

- Futuristic e.g. forecasting budgets and unit costs and prices for new products.
- You can do whatever you like for management accounts they are not externally regulated.
- Mainly used by internal users e.g. managers, directors, staff.
- Used for better business planning, controlling and decision making.
- Reports on anything you like e.g. non-financial (environment, social, welfare, innovation, customer satisfaction, quality).

Management accounts are used for:

- Decision making e.g. product pricing and planning for resources.
- Planning e.g. preparation of budgets and forecasts.
- Monitoring and controlling e.g. monitoring financial and non-financial performance of the business, or its products, resources or departments.

Classification of costs (element, function, behaviour and nature):

By element

- Material
- Labour
- Overhead/Expenses

This is a very simple way of looking at costs but does not say if each cost is fixed or variable, or direct or indirect, or operating (production) or non-operating (non-production) cost.

By function

This more the financial accountant's rather than the management accountants' point of view and for the purposes of coding expenses and reporting profits for the period.

- Production (manufacturing, factory or operating) costs e.g. factory materials, labour and overhead (expenses). Often called operational costs.
- Non-production costs (non-manufacturing or non-operating) e.g. administration (HR, IT, Finance, R&D), Selling & Distribution (selling, advertising, marketing, sales people, warehousing & transport) and finance costs (bank interest and charges). Often called core costs (or non-operating overhead).

By behaviour

Useful for Budgeting and forecasting costs.

Variable cost (VC)

- If nothing is made (zero production) you incur nothing (zero cost)
- Total VC will rise and fall with units made
- The unit VC (total variable cost ÷ units made) tends to remain constant (does not change) regardless of the number of units made

Fixed Cost (FC)

- If nothing is made (zero production) you will still incur the fixed cost
- Total FC remains constant (fixed) regardless of the number of units made.
- The unit FC (total fixed cost ÷ units made) falls as the number of units made increases (and vice versa)

Semi variable (VC + FC)

- If you make nothing you still incur the fixed cost
- The variable cost will rise and fall with units made

Fixed Cost can also be stepped in nature, when production levels go up, more resources could be required by the business and fixed costs such as rent, depreciation charges, indirect labour cost etc may increase. A stepped fixed cost will increase if you exceed a certain number of units made.

By nature

Useful for product costing.

- Direct costs (PRODUCT COST) e.g. materials and production labour specifically required to make the product or service, treated as a variable cost in your exam.
- Indirect costs (PERIOD COSTS) e.g. take the opposite view, non-specific to any product being made or service delivered, treated as a fixed cost in your exam.

Cost coding

Costs are coded from original documents received e.g. purchase invoices, credit notes, payroll data, cheque stubs and cash payments. Costs can be charged to departments, products, or divisions. Coding costs enables greater efficiency and consistency of data processing, as well as segmenting costs (or income) to identify trends e.g. sales going up, costs going down, profits going up etc.

Each organisation has its own coding structure for its management accounts, they may be different to coding within a financial accounting system which uses general ledger codes for income, expense, assets and liabilities.

Cost codes can be:

- Numeric (numbers only).
- Alphabetic (letters only).
- Alpha-numeric (numbers and letters).

There is no hard or fast rules for how a coding system should be designed, exam tasks will explain the coding system if requirements are to code income or expenses.

(a) Identify whether the following statements are TRUE or FALSE

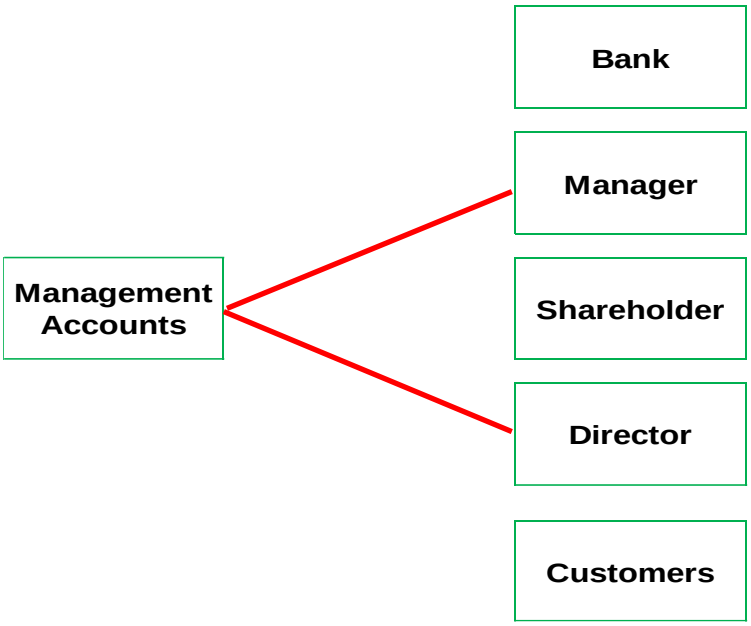
(4 marks)

	TRUE	FALSE
When a manufacturer classifies costs by element, quality control salaries would be classified as labour.	☑	☐
When a manufacturer classifies costs by function, selling and distribution costs would be classified as production expenses.	☐	☑
Direct costs are specific costs required to make a product or deliver a service.	☑	☐
A variable cost is any cost where if no production of goods are made, then the expense would still have to be incurred.	☐	☑

- When a manufacturer classifies costs by element, quality control salaries would be classified as labour. Any staff cost would be labour cost using this classification.
- When a manufacturer classifies costs by function, selling and distribution costs would be classified as production expenses. Selling and distribution expenses, also administration and finance costs are examples of non-production (non-manufacturing) cost using this classification, not production (manufacturing) cost.
- Direct costs are specific costs required to make a product or deliver a service. This is a definition of direct cost using classification of cost by nature.
- A variable cost is any cost where if no production of goods are made, then the expense would still have to be incurred. This is an example of fixed not variable cost.

(b)(i) Identify TWO users of management accounts by clicking on the left hand box and matching it to the appropriate right hand boxes. You can remove a line by clicking on it.

(2 marks)



(b)(ii) Complete the following sentence using the drop down list.

(1 mark)

The classification of cost that is useful for forecasting costs, in particular when activity levels rise and fall would be classification by

Behaviour

Picklist: Element, Behaviour, Function, Nature.

(c)(i) HOS is a hospital which treats patients. Code the following transactions for its operating costs using the table below. Each transaction should have a four character code.

(2 marks)

Activity	Code	Nature of cost	Sub code	Transaction	Code
Materials	M	Direct	800	Bandages to treat patients	M800
		Indirect	900	Hospital management salaries	L900
Labour	L	Direct	800		
		Indirect	900		
Overhead	O	Direct	800		
		Indirect	900		

(c)(ii) Identify whether the following statement is true or false using the drop down list below

(1 mark)

A numeric coding system would include both letters and numbers.

FALSE

Task 2 (10 marks)

(a) Identify whether the following statements are TRUE or FALSE.

(3 marks)

	TRUE	FALSE
When using the AVCO method, the cost of each issue of materials to production would be valued at the average price of all inventory held on the date of each issue.	☑	☐
The balance for closing inventory using the LIFO method would be higher than if using the the FIFO method during a period of rising prices.	☐	☑
FIFO, LIFO and AVCO are methods used to determine an issue cost for materials, or the value of closing inventory remaining at the end of a period.	☑	☐

FIFO, LIFO and AVCO are used to determine the usage (issue) cost or value of closing left remaining at the end of the period. If inventory has been purchased at different prices over time, then different amounts can be charged as expenses (issue cost) for the period.

FIFO

- Look at the date of each issue - THE COST OF INVENTORY ISSUED (USED) IS THE FIRST OR 'EARLIEST/OLDEST' INVENTORY THAT HAS BEEN PURCHASED FROM THE INVENTORY YOU ARE GIVEN 'IN DATE ORDER'.

LIFO

- Look at the date of each issue - THE COST OF INVENTORY ISSUED (USED) IS THE LAST OR 'LATEST/MOST RECENT' PURCHASED FROM THE INVENTORY YOU ARE GIVEN 'IN DATE ORDER'.

AVCO

- Look at the date of each issue - THE COST OF INVENTORY ISSUED (USED) IS THE 'AVERAGE PRICE' OF 'ALL INVENTORY' HELD AT THE DATE OF THE ISSUE.

Summary of how rising prices affect values:

Rising prices	Issue Cost	Profit	Inventory Value
FIFO	**Lowest**	**Highest**	**Highest**
LIFO	**Highest**	**Lowest**	**Lowest**
AVCO	**Middle**	**Middle**	**Middle**

The inventory balance under the FIFO method will be higher than the LIFO method, so only the second statement is false.

During a period of rising prices. FIFO selects an issue cost using the earliest inventory you have purchased, so during periods of rising prices this should be the cheapest of your purchases. If you issue at the cheapest cost then what you would have left is a higher inventory balance left at the end of the period (summary provided above for all inventory valuation methods).

(b) Complete the following sentence using the drop down list.

(2 marks)

An overtime premium is normally treated as a direct cost of production, when the overtime work undertaken by a production worker is due to the **customer's specific request.**

An overtime premium is the additional amount given to employees for the overtime hours they have worked. For example, if the normal rate is £10 an hour and the overtime rate £15 an hour, the premium for overtime would be £5 an hour.
The reason for overtime determines direct or indirect treatment of the overtime premium as a cost recognised, if due to the general pressure of work, the premium cost is treated as indirect labour cost (overhead), if at the specific of the customer the overtime is worked, then its treated as direct labour cost, not overhead.

Piecework as a remuneration system encourages a greater **speed** of work undertaken by production workers. Time based methods more likely to encourage greater quality of work since payment by the hour rather than payment by the unit, does not force production employees to rush in order to get paid more.

(c) Identify whether the following statements are TRUE or FALSE.

(2 marks)

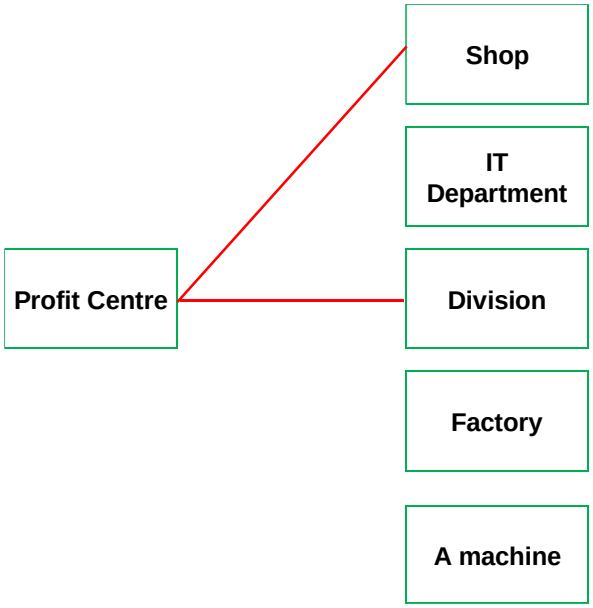
	TRUE	FALSE
Management accounting may use many different classifications of costs. Financial accounting generally records financial transactions using historical cost.	☑	☐
Financial accounting systems are used to supply information to management about the product unit costs and amounts of profit earned for each unit of product sold by the business.	☐	☑

(d) Identify TWO examples of profit centres by clicking on the left hand box and matching it to the appropriate right hand boxes. You can remove a line by clicking on it.

(2 marks)

A responsibility centre is where a manager has authority and responsibility to deliver financial performance in terms of certain areas of responsibility.

- Cost Centre (costs only).
- Profit Centre (income and cost).
- Investment Centre (income and cost) and investment made (assets and liabilities).



(e) Complete the following sentence using the drop down list.

(1 mark)

For a manufacturer which is machine intensive the most appropriate overhead absorption rate would be **per machine hour**.

Task 3 (10 marks)

(a) Calculate the cost of issuing 150 tonnes of bean Z grade coffee beans to CSRUS's national chain of coffee shops on 20 October and the inventory balance after the issue using FIFO (first in, first out) and AVCO (average cost method).

(10 marks)

	Value of issue (£)	Balance after issue (£)
FIFO	136439	262171
AVCO	139050	259560

FIFO, LIFO and AVCO are used to determine the usage (issue) cost or value of closing left remaining at the end of the period. If inventory has been purchased at different prices over time, then different amounts can be charged to the profit or loss as expenses (issue cost) for the period.

FIFO

- Look at the date of each issue - THE COST OF INVENTORY ISSUED (USED) IS THE FIRST OR 'EARLIEST/OLDEST' INVENTORY THAT HAS BEEN PURCHASED FROM THE INVENTORY YOU ARE GIVEN 'IN DATE ORDER'.

On the 18 October 150 units were issued. The first (earliest in date order) you had for inventory was on 1 October, these are used (issued) first, the total value given as £72,000. Another 70 units were issued and these would be included in the purchases made on the 7 October. The price was given in the task at £920.55 per tonne, so if using only 70 of these units then use the purchase price to calculate how much this cost. 70 units x 920.55 per tonne = £64,438.50. Note the £64,439 below has been rounded to the nearest £. The total issue cost would be £136,439 if using FIFO.

1 October	80	900.00	72,000
7 October	70	920.55	64,439
Total (FIFO)	150		136,439

The balance after the issue would be any closing inventory remaining.

Date of purchase	Number of tonnes	Price per tonne	Total cost (£)
1 October	80	900.00	72,000
7 October	200	920.55	184,110
14 October	150	950.00	142,500
Total on the 14 October	430		398,610
Issue 14 October	-150		-136,439
Balance after issue	280		262,171

AVCO

- Look at the date of each issue - THE COST OF INVENTORY ISSUED (USED) IS THE 'AVERAGE PRICE' OF 'ALL INVENTORY' HELD AT THE DATE OF THE ISSUE.

To work out the average price on the 18 October, add up all units and add up all values of inventory which is held on this date. The task indicates that on the 18 October, the total value of all inventory was £398,610 and the total units 430 units held in inventory. The average price would be total value £398,610 ÷ 430 total units = an average purchase price on 18 October of £977.00.

The number of units issued was 150 units on the 18 October, so each tonne is issued at an average cost of £977.00 per tonne. 150 units x £977.00 per tonne = £139,050 issue cost. The balance of inventory remaining at the end of the period would £398,610 (the total value of inventory held on the 14 October) less the issue cost of £139,050 on the 14 October leaving a balance of £259,560.

Task 4 (8 marks)

(a) Complete the gaps in the table below to calculate the total labour cost for the nightshift team for October.

(6 marks)

Workings:

- 1200 hours worked at normal time x £8 = £9,600.
- Overtime premium 1 (excess paid above normal cost) 25% of basic rate (£8) = £2 premium (in addition to the normal rate of £8). 1200 hours were nightshift x £2 premium = £2,400.
- Overtime premium 2 (excess paid above normal cost) 20% of basic rate (£8) = £1.60 premium (in addition to the normal rate of £8). 200 hours were overtime x £1.60 premium = £320.
- The bonus (further details below) pays to each production worker (6) x £50 x for every complete % output exceeds target (this was 10%, or '10') = £3,000.

Labour cost	Hours	£
Basic pay	1200	9600
Overtime premium 1	1200	2400
Overtime premium 2	200	320
Total cost before bonus		12320
Bonus payment		3000
Total cost including bonus		15320

Bonus calculation

Target	35000	
Achieved (actual output)	38500	
Amount actual output exceeds target	3500	
Amount actual output exceeds target, as a percentage of target	10.00%	
6 production workers x £50 for every complete % (10) =		£3,000

(b) Complete the following sentence.

(2 marks)

The basic pay and overtime for each team member for the month of October (to the nearest pound) was **£2,053**. Total cost before bonus £12,320 ÷ 6 team workers = 2053.333333, rounded to the nearest whole pound £2,053. The bonus payable to each team member (to the nearest pound) for the month of October was **£500**. The bonus £3,000 total ÷ 6 team workers = £500 per team member.

Task 5 (10 marks)

A business can charge its indirect production overhead from its different cost centres to its products it makes during the accounting period. There are three ways you must know how to do this according to your syllabus.

- Per unit
- Per labour hour
- Per machine hour

$$\text{Overhead absorption rate} = \frac{\text{budgeted overhead}}{\text{budgeted activity (units or hours)}}$$

(a) Complete the table below to show the two overhead absorption rates that the company could use. Show your calculations to two decimal places.

(2 marks)

	Machine hour	Labour hour
Overheads (£)	280,000	280,000
Activity	28,000	11,200
Absorption rate (£)	10.00	25.00

- £280,000 ÷ 28,000 machine hours = £10.00 per machine hour.
- £280,000 ÷ 11,200 machine hours = £25.00 per labour hour.

(b) Complete the table below to calculate the total unit cost of the product, using each of the overhead absorption rates you calculated in (a) above. Show your calculations to two decimal places.

(6 marks)

Cost	Machine hour (£)	Labour hour (£)
Materials	4.08	4.08
Labour	2.50	2.50
Overheads	5.00	6.25
Total unit cost	11.58	12.83

- Machine hour basis: 30 minutes of machine time per unit ÷ 60 minutes in one hour = 0.5 hours per unit x £10 per machine hour = £5.00 overhead charged per unit made.

- Labour hour basis: 15 minutes of labour time per unit ÷ 60 minutes in one hour = 0.25 hours per unit x £25 per labour hour = £6.25 overhead charged per unit made.

- In both cases all costs now need adding up to show the total unit cost of the product for each method. Notice the two answers for the total unit cost are different depending on which method is applied.

(c) Which of the three overhead recovery methods is best suited to an environment where the production work is carried out manually.

(2 marks)

Labour hours

- Per unit (single or few products). This method is more suitable when only a single product is made and the units of output are identical in all respects. So, whether machine hour or labour hour methods are used, it would make no difference to the products cost, in which case you may as well charge per unit.
- Per labour hour (if manual and labour intensive). This method is more suitable when production work is mainly carried out manually.
- Per machine hour (if machine intensive). This method is more suitable when machines (automation) is used extensively for production work.

Task 6 (10 marks)

(a) Identify the type of cost using classification by behaviour, for each of the three descriptions of costs below.

(3 marks)

Cost	Cost behaviour	Fixed	Variable	Semi-variable
Energy	£34,000 per year rergardless of units made + £3.45 per unit made.	☐	☐	☑
Direct material	5 litres per unit made at £2.99 a litre.	☐	☑	☐
Depreciation	£18,000 per year,	☑	☐	☐

(b) Complete the table shown below to calculate the costs of production for output levels of 8000, 12000 and 15000 units.

(7 marks)

Units	Total cost (£)	Variable cost (£)	Fixed cost (£)
8000	33,000	18,000	15,000
12000	42,000	27,000	15,000
15000	48,750	33,750	15,000

Workings:

- Fixed cost should be the same regardless of the number of units, so put £15,000 into the fixed cost column for all unit ranges.
- Variable cost given for 15000 units which is £33,750, variable cost remains constant per unit for each unit made. Work out the variable cost £33,750 ÷ 15000 units = £2.25 variable cost per unit.
- Variable cost (8000 units) x £2.25 variable cost per unit = £18,000.
- Variable cost (12000 units) x £2.25 variable cost per unit = £27,000.
- Now add for each range of output your fixed and variable costs together to get the total cost (TC = FC + VC) for each range of output.

Task 7 (8 marks)

Complete the table below to show the manufacturers cost structure for the last month.

(8 marks)

A manufacturing account is an account used to accumulate all the manufacturing costs of goods completed by a manufacturer during an accounting period. Tasks can ask for any figure that would routinely be obtained by constructing the manufacturing account, so it needs to be memorised for your exam. A manufacturing account has been constructed below in order to obtain the figures required to answer the task requirement.

Manufacturing account	£
Opening inventory of raw material	0
Purchases of raw material	45,000
Closing inventory of raw material	0
DIRECT MATERIAL USED	45,000
Direct labour	67,000
DIRECT COST	112,000
Manufacturing overheads	37,000
MANUFACTURING COST	149,000
Opening inventory of work in progress	156,000
Closing inventory of work in progress	175,000
COST OF GOODS MANUFACTURED	130,000
Opening inventory of finished goods	56,000
Closing inventory of finished goods	78,000
COST OF GOOD SOLD	108,000

Notes:

You add up all costs to obtain the different amounts for the cost classifications given, the only 3 deductions (not additions) are the three figures for closing raw materials, closing work in progress and closing finished goods. So, only 3 deductions which all start with the word 'closing'. All the other costs you add up and sub-total as you go along.

The total of all direct costs for the period (see below £112,000) is also called 'prime cost'. Prime cost is the direct cost of a product in terms of the materials and labour involved specifically in its production (direct material and direct labour), excluding indirect costs ('manufacturing overhead).

The layout starts with direct costs and then manufacturing overhead is for all other indirect costs in this case 3 figures are given which need to be added together to get manufacturing overhead (indirect cost) for the period. Manufacturing overhead is the indirect material £5,000 + indirect labour £8,000 + factory indirect expenses £24,000 = £37,000.

Cost structure for the last month	£
DIRECT MATERIAL USED	45,000
DIRECT COST	112,000
MANUFACTURING COST	149,000
COST OF GOODS MANUFACTURED	130,000
COST OF GOOD SOLD	108,000

Task 8 (14 marks)

(a) Calculate the basic pay, overtime premium and total pay before bonus for the week for the 10 production workers in the table shown below.

(4 marks)

Note: do not enter figures in grey cells. Round all figures the nearest £.

Labour cost	Hours	£
Basic pay	405	3,645
Overtime premium (Mon to Fri)	35	158
Overtime premium (Weekend)	20	180
Total pay before bonus		3,983

- 405 hours in total worked at basic rate £9 per hour.
- 35 hours (Mon to Fri) at time and a half, so the overtime premium (excess paid above basic rate), 50% x £9 basic rate = £4.50 overtime premium. £4.50 x 35 hours = £158 (rounded).
- 20 hours (Weekend) at double time, so the overtime premium (excess paid above basic rate), 100% x £9 basic rate = £9 overtime premium. £9 x 20 hours = £180.

(b) Complete the following sentence.

(1 mark)

Last week each production worker was paid a bonus of £**50**.

- A total of 405 hours were worked in the week by 10 production workers.
- Production workers as a team are expected to take 30 minutes for every unit made.
- 850 units were made in the week by 10 production workers.
- If 850 units were made the target is 30 minutes (0.5 hours) per unit, 850 x 0.5 hours = 425 hours. This is how long production was expected to take.
- The production workers took only 405 hours, so compared with what was expected, saved 425 hours (expected) – 405 hours (actual) = 20 hours saved.
- A bonus is paid to each production worker of £2.50 for every hour that is saved for production work undertaken. 20 hours saved x £2.50 for each hour saved = £50 bonus paid to each production worker.

(c) Complete the following sentence.

(1 mark)

Last week the total pay including bonuses for all 10 production workers was £**4483**.

There are 10 production workers. Total pay before bonus was £3,983 + bonus to 10 production workers (£50 bonus each x 10 production workers = £500) = £4,483.

(d) (i) Calculate the total cost and cost per unit of last week's production of 850 units shown in the table below.

(d) (ii) Calculate what these figures would have been if production had increased to 1000 units in the table below.

(8 marks)

Units made and sold:	850 units	1000 units
	£	£
Variable costs:		
Direct material	1,904	2,240
Direct labour	4,483	5,274
Fixed costs:		
Depreciation charges	2,000	2,000
Total cost	8,387	9,514
Cost per unit	9.867	9.514

Workings:

- Direct material is a variable cost. Cost per unit £1,904 ÷ 850 units = £2.24 a unit. For 1000 units the cost would be £2.24 a unit x 1000 units = £2,240.
- Direct labour including bonus for 850 units £4,483. Cost per unit £4,483 ÷ 850 units = £5.274117647 a unit. For 1000 units the cost would be £5.274117647 a unit x 1000 units = £5,274 (rounded to the nearest £).
- Fixed cost would be the same for both 850 and 1000 units.
- Total costs = Variable and Fixed costs added together.
- Cost per unit. For 850 units, £9,867 ÷ 850 units = £9.867 per unit. For 1000 units, £9,514 ÷ 1000 units = £9.514 per unit.

Task 9 (8 marks)

Students need to be able to:

- Calculate differences between actual and budgeted costs and income
- Identify whether variance is adverse or favourable for costs and income.

Students need to be able to apply exception reporting to identify significant variances:

- Calculate variances as a percentage of budget
- Identify significant variances according to an organisation's policy
- Report significant variances to a relevant manager

Variance analysis is a process, which compares budgeted costs (and income) to the actual costs (and income) for an organisation. This information will be used to improve operational performance by control action taken by management.

Variances can be either zero, adverse or favourable:

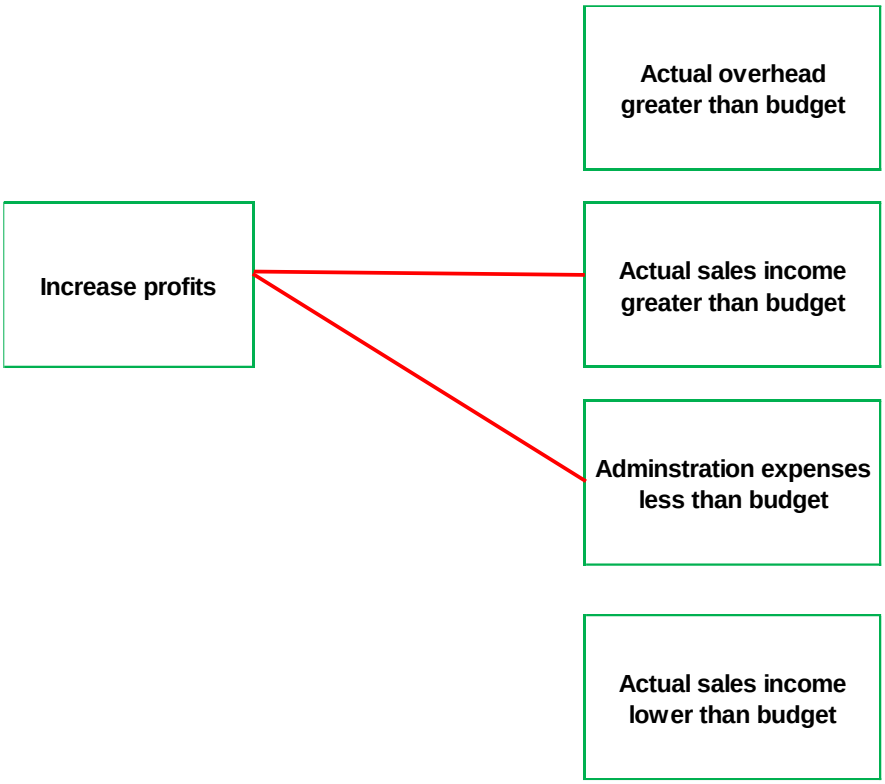
- **Adverse** variances mean that profits will be lower compared to budget, the organisation has performed **worse than expected**.
- **Favourable** variances mean that profits will be higher than budget, the organisation has performed **better than expected**.

Income and expenses variances work in the opposite direction when interpreting whether performance is better or worse than expected:

- **Income:** If actual income **exceeds budgeted income** the result is a **favourable variance**. You do better if actual income can exceed the budget.
- **Expenses:** If actual expenses (costs) **exceed budgeted expenses** (costs) the result is an **adverse variance**. You do better if actual expenses are less than budget.

(a) Identify TWO variances below that will increase profits by clicking on the left hand box and matching it to the appropriate right hand boxes. You can remove a line by clicking on it.

(2 marks)



(b) Complete the table shown below and identify whether the variance for materials is adverse or favourable by using the drop down list below. Do not use a minus sign for negative figures.

(4 marks)

	Budgeted income/expense £	Variance £	Actual income/expense achieved	Adverse/ Favourable
Sales	60000	5000	**65000**	Favourable
Wages	**13000**	2500	15500	Adverse
Materials	9600	600	10200	**Adverse**
Overhead	4000	1000	**3000**	Favourable

(c) Show whether the following statement are true or false.

(2 marks)

	TRUE	FALSE
A cost variance is always significant.	☐	☑
Income which exceeds budget in a period will produce an adverse variance.	☐	☑

- The significance of a variance depends on the organisations policy about whom and if a variance should be reported.
- Income which exceeds budget in a period will produce a favourable not adverse variance.

Task 10 (12 marks)

Students need to be able to:

- Calculate differences between actual and budgeted costs and income
- Identify whether variance is adverse or favourable for costs and income.

Students need to be able to apply exception reporting to identify significant variances:

- Calculate variances as a percentage of budget
- Identify significant variances according to an organisation's policy
- Report significant variances to a relevant manager

Variances can be either zero, adverse or favourable:

- **Adverse** variances mean that profits will be lower compared to budget, the organisation has performed **worse than expected**.
- **Favourable** variances mean that profits will be higher than budget, the organisation has performed **better than expected**.

Income and expenses variances work in the opposite direction when interpreting whether performance is better or worse than expected:

- **Income:** If actual income **exceeds budgeted income** the result is a **favourable variance**. You do better if actual income can exceed the budget.
- **Expenses:** If actual expenses (costs) **exceed budgeted expenses** (costs) the result is an **adverse variance**. You do better if actual expenses are less than budget.

Variances can be reviewed by way of size (£) and/or as a percentage (%) of budget and these calculations are then used to determine whether a variance is significant or not significant. Significant means it is substantial enough as an exception for management attention and review. To save management time the policy is often to ignore those variances which are small or trivial in nature (not significant).

	Budgeted income/expense £	Actual income/expense £	Variance £	Variance as a percentage of budget %	Significant / not significant	Who (if anyone) the variance should be reported to
Sales	40000	55000	15000	37.50%	Significant	Managing director
Direct materials	1500	2200	700	46.67%	Significant	Production manager
Direct labour	4500	4500	0	0.00%	Not significant	Not required
Overheads	2000	1500	500	25.00%	Not significant	Not required

Workings (rounded to TWO decimal places)

Sales

- 37.50% = 15000 ÷ 40000. In excess of 20% of budget, and greater than £10,000. Significant because the 'AND' rule indicates both thresholds have been exceeded, so the variance must be reported to the managing director. It also exceeds the thresholds for reporting to the sales manager, but this would be irrelevant since more important thresholds have been exceeded.

Direct materials

- 46.67% = 700 ÷ 1500. In excess of both 10% and 20% of budget, and greater than £500 (but not greater than £10,000). Significant because the 'AND' rule indicates both thresholds of 10% of budget and, greater than £500 have been exceeded, so the variance must be reported to the production manager. Both the higher thresholds have not been exceeded so do not report to the managing director.

Direct labour

- 0.00% = 0 ÷ 4500. Not significant, therefore do not report to any manager.

Overheads

- 25.00% = 500 ÷ 2000. Not significant, therefore do not report to any manager. In excess of both 10% and 20% of budget, BUT not greater than £500 (or greater than £10,000). Not significant because the 'AND' rule indicates both thresholds have to be exceeded. Do not report to any manager.