Introduction to Finance

SAMPLE TIME CONSTRAINED ASSESSMENT
MARKING SCHEME

This marking scheme has been prepared as a **guide only** to markers. This is not a set of model answers, or the exclusive answers to the questions, and there will frequently be alternative responses which will provide a valid answer. Markers are advised that, unless a question specifies that an answer be provided in a particular form, then an answer that is correct (factually or in practical terms) **must** be given the available marks.

If there is doubt as to the correctness of an answer, the relevant NCC Education materials should be the first authority.

Throughout the marking, please credit any valid alternative point.

Where markers award half marks in any part of a question, they should ensure that the total mark recorded for the question is rounded up to a whole mark.

Answer any FOUR (4) questions

Marks

Question 1

a) Example Limited is preparing its Annual Report and Financial Statements for the year ending 31 December 20X7. The accountant has the following information:

- According to the ledger record, sales total £105,000 for the period, however one invoice for goods sold on 30 December 20X7 was not recorded in the ledger. This invoice is £4,000 and has not been paid by the customer.
- Records for the inventory check on 31 December 20X6 show £29,000, and the new inventory check done on 31 December 20X7 shows £20,000.

- The expenses for the year were:
  - Purchases of inventory for resale £47,000, of which £2,000 has not been paid.
  - Depreciation £2,000
  - Administrative staff salaries £15,000
  - Other costs £5,000 including electricity of £1,400
  - Interest paid of £8,000

- The ledger shows £46,000 owing from customers, compared to £20,000 as of 31 December 20X7.
- One customer called Bad Business Limited, owing £6,000, has ceased to trade, and will not be able to pay the amount shown in the ledger for 20X7.
- Cash held in the bank has risen to £8,000.
- The company had to take out a 10-year loan of £10,000 during the year.
- As of 31 December 20X6, the company had two loans outstanding, each of £10,000. One is due for repayment in March 20X8 and the other in July 20X9.
- There were no purchases or sales of non-current assets. Non-current assets had a *Net Book Value* (also called a Written Down Value) of £38,000 as at 31 December 20X6.
- As of 31 December 20X6, reserves of retained profit were £9,000, and the company had no changes to its share capital. (N.B The share capital is the balancing figure in the Statement of Financial Position.)

		Marks
i)	Prepare an *Income Statement* and a *Statement of Financial Position* for Example Limited for the year ended 31 December 20X7.	**15**

MARK SCHEME

0-3 Marks	***4–5 Marks***	***6-8 Marks***	***9-10 Marks***	***11-15 Marks***
Produces basic statements, with little or no attempt to format in an appropriately recognised style.	***Produces limited statements, with some attempt to appropriately format.***	***Produces adequately formatted statements.***	***Produces sound statements, with good formats containing headings and clear layouts.***	***Produces comprehensive statements, that are suitable for IAS presentation.***
Can basically identify, adapt and use appropriate methods, producing few correct figures.	***In a limited way, can identify, adapt and use appropriate methods to reach limited solutions, with some correct figures.***	***Can adequately identify, adapt and use appropriate skills and methods to reach appropriate solutions with mostly correct figures.***	***Can soundly identify, adapt and use appropriate skills and methods to reach supported and appropriate solution with minimal errors, although statements may not balance.***	***Can coherently identify, adapt and use appropriate skills and methods s to reach well supported and highly appropriate solutions. Statements will balance.***

Workings (no need to show workings, shown here for clarity):

Revenue = £105,000+£4,000 not recorded=£109,000
Receivables = £46,000 recorded + £4,000 not recorded - £6,000 provision = £44,000
Cost of Goods Sold = opening inventory + purchases – closing inventory = £29,000+£47,000-£20,000=£56,000
Operating Costs (or similar name) £2,000+£15,000+£5,000+£6,000 not recoverable from customer=£28,000 (note, depreciation is not a direct cost for cost of sales)
Current liabilities – Trade payables £2,000, Bank Loan due in 20X8 £10,000
Change in trade payables £12,000-£10,000
Trade receivables = £46,000 + £4,000 - £6,000 = £44,000
Non-current liabilities – New loan + old long-term liabilities = £10,000+£10,000=£20,000
Non-current assets depreciated by £2,000 - £38,000-£2,000=£36,000
Reserves will change in accordance with profit for the year
Share Capital is a balancing figure, should be £50,000 (see below)
Income Statement for Example Limited for the year ended 31 December 20X7 (note IAS 1 uses the term 'Statement of Profit or Loss', either title is fine)

Marks

Income Statement for Example Limited for the year ended 31 December 20X7

	£'000	£'000
Revenue (above)		*109*
Cost of Sales (above, no need to expand)		
Opening inventory	*29*	
Purchases	*47*	
Closing inventory	*(20)*	
		(56)
Gross Profit		*53*
Administrative expenses (above)		*(28)*
Operating profit		*25*
Interest expense (question direct)		*(8)*
Profit		*17*

Statement of Financial Position of Example Limited as at ~~of~~ 31 December 20X7

	£'000	£'000
Non-current assets (see above)		*36*
Current Assets (see above)		
Inventories	*20*	
Trade receivables	*44*	
Cash and cash equivalents	*8*	
	72	
Liabilities		
Current liabilities (see above)		
Trade payables	*2*	
Current portion of long-term borrowings	*10*	
	12	
Net current assets		*60*
Noncurrent liabilities (see above)		
Non-current borrowings	*20*	
	20	
Net assets		*76*
Equity		
Ordinary Shares (Balancing figure)	*50*	
Retained earnings (£9,000+£17,000 above)	*26*	
Total Equity		*76*

Marks

b) Explain the accounting concepts prudence, accruals and going concern, illustrating your answer with examples from **part (a)** which demonstrate how the concepts have been applied. **10**

MARK SCHEME

0-2 Marks	*3 Marks*	*4-5 Marks*	*6 Marks*	*7-10 Marks*
Has basic awareness of the prudence concept and how to apply it.	***Has limited awareness of the prudence concept and how to apply it.***	***Has adequate awareness of the prudence concept and how to apply it.***	***Has sound, informed awareness of the prudence concept and how to apply it.***	***Has comprehensive, well-informed awareness of the prudence concept and how to apply it.***
Has basic awareness of the accruals concept and how to apply it.	***Has limited awareness of the accruals concept and how to apply it.***	***Has adequate awareness of the accruals concept and how to apply it.***	***Has sound, informed awareness of the accruals concept and how to apply it.***	***Has comprehensive, well-informed awareness of the accruals concept and how to apply it.***
Has basic awareness of the going concern concept and how to apply it.	***Has limited awareness of the going concern concept and how to apply it.***	***Has adequate awareness of the going concern concept and how to apply it.***	***Has sound, informed awareness of the going concern concept and how to apply it.***	***Has comprehensive, well-informed awareness of the going concern concept and how to apply it.***

Prudence is a conservative approach used in accounting to ensure that profits are not anticipated and that losses are addressed as soon as sufficient reliable information is available to enable an informed decision to be made about risk.

In applying the concept, profits are not overstated and neither are asset values.

This is illustrated in the case of Example Ltd:
The bad debt is recognised and included as an expense in the Income Statement. This reduces the profits by £2,000 as a recognition that the £2,000 outstanding as trade receivables will not be realised.

Accruals ensures that costs and revenues are recognised and incurred or earned and are matched with each other in the relevant accounting period. This may or may not be different from the time period when cash payments are made or cash receipts take place.

Marks

This is illustrated in the financial statements of Example Ltd:
Trade receivables represent sales on credit taking place within the accounting year covered by the financial statements. The cash payment from customers will not take place until the next accounting year.
Trade payables represent purchases of goods for resale which again took place within the accounting year and which will not be paid until the following accounting year.

Going concern recognises that a business is able to continue to trade for the foreseeable future, which is generally recognised to be for a further year at least. If a business is not a going concern, assets will need to be sold immediately and all liabilities settled as far as is possible. Effectively the company will be liquidated.

The fact that non-current assets are depreciated and not valued at immediate sale value, that the accruals concept is applied and that loans are recognised for the time periods at which they are due to be repaid in the normal course of business indicates an assumption that the business is a going concern and has no need to immediately stop trading.

Total 25 Marks

Question 2

a) The following are business concepts:

- The remuneration of business owners
- The remuneration of employees
- Liability of owners
- Privacy of owners

i) Explain for each of the following how each of the above concepts applies: **15**

- A sole trader
- A partnership (not an LLP)
- A limited liability company

Marks

MARK SCHEME

0-3 Marks	*4–5 Marks*	*6-8 Marks*	*9-10 Marks*	*11-15 Marks*
Has basic awareness of different forms of business ownership.	*Has limited awareness of different forms of business ownership.*	*Has adequate awareness of different forms of business ownership.*	*Has sound, informed awareness of different forms of business ownership.*	*Has comprehensive, well-informed awareness of different forms of business ownership.*
Provides basic interpretation and evaluation of the factors related to each of the business structure.	*Provides limited interpretation and evaluation of the factors related to each of the business structure.*	*Provides consistent interpretation and evaluation of the factors related to each of the business structure.*	*Provides critical interpretation and evaluation of the factors related to each of the business structure.*	*Provides consistently critical interpretation and evaluation of the factors related to each of the business structure.*

Indicative content:

Sole trader:

- ***Ownership – one owner. The owner earns on the basis of the profits of the business, which is not necessarily related to any amounts the owner is paid. Payments to owners are called 'drawings'. There can be non-owner employees, paid based upon an agreed salary or rate which need not be related to the profits of the business.***
- ***Liability – the owner is the business, so the owner has unlimited liability to any of the businesses' creditors (those to whom the business owes money).***
- ***Privacy – Other than tax authorities there is no requirement to disclose any data to any third party.***

Partnerships (NOTE – NOT Limited Liability Partnerships)

- ***Ownership – multiple owners who own proportions of the business, the proportions being dictated by a Partnership Agreement. Owners are called partners and are remunerated based upon the profits of the business. Partnerships can have employees, who would be paid based upon an agreed salary (for example) which need not be related to the profits of the business.***
- ***Liability – partners are liable for the debts of the business personally. This can be jointly (as in all contribute to meet any liability) and/or several (where individuals are responsible for the liabilities). There is no limit to this liability, which may bankrupt the partners if it is beyond their ability to pay.***

- ***Privacy - Other than tax authorities there is no requirement to disclose any data to any third party. Partners usually all have access to the books and records of the business.***

Limited liability companies:

- ***Ownership – there can be multiple owners known as shareholders depending on the jurisdiction. Each shareholder of the same type of share has ownership in proportion to the number of shares they own. Companies can have employees, and employees may also be shareholders. Remuneration to shareholders is via a dividend paid per share owned; while the number of dividends paid is not related to the profit in the period of payment, companies cannot pay out dividends beyond their reserves. Remuneration to employees is the same as for a partnership or sole trader, on an agreed salary or rate.***
- ***Liability – shareholders are only liable for the debts of a company up to the nominal value of any shares they own. This is a key difference from the other two business forms, the company as an artificial person stands in-between the owners and liability, except in circumstances of outright fraud or bad faith.***
- ***Privacy – companies are required to publish various amounts of data depending on the jurisdiction the company size. Shareholders have no right to inspect the books and records but should receive some form of annual report concerning the company's finances (inter alia). As a result, many companies have a requirement for an audit, where a third party called an auditor looks at the reports sent to shareholders and says if those reports are true and fair.***

Questions continue on the next page

Marks

b) Explain the accounting equation and describe how it would operate for a new business where an owner invests £10,000 and then: **10**

- Purchases a vehicle for £5,000;
- Purchases inventory for £3,000; and
- Sells all the inventory for £5,000

MARK SCHEME

0-2 Marks	***3 Marks***	***4-5 Marks***	***6 Marks***	***7-10 Marks***
Has basic awareness of the accounting equation.	***Has limited awareness of accounting equation.***	***Has adequate awareness of accounting equation.***	***Has sound, informed awareness of accounting equation.***	***Has comprehensive, well-informed awareness of accounting equation.***
Provides basic interpretation and application of the accounting equation to given examples.	***Provides limited interpretation and application of the accounting equation to given examples.***	***Provides consistent interpretation and application of the accounting equation to given examples.***	***Provides critical interpretation and application of the accounting equation to given examples.***	***Provides consistently critical interpretation and application of the accounting equation to given examples.***

<u>Indicative content</u>

The accounting equation is the basis for all double-entry bookkeeping; at all times, the assets of a business equal its liabilities plus any equity. Equity is the amount 'owed' to the owners.

£10,000 investment is equity, it is shown as a cash asset.
Cash £10,000=Equity £10,000
Purchasing a vehicle merely changes the asset descriptions, so now there is a cash asset of £5,000 and a non-current asset of £5,000. Equity remains the same.
Cash £5,000 + non-current asset £5,000 = Equity £10,000
Purchasing inventory is similar. While this is not the full double-entry the accounting equation still reads:
Cash £2,000 + inventory £3,000 + non-current asset £5,000 = Equity £10,000
Selling inventory increases equity due to the profit made, cash increases by £5,000, inventory decreases by £3,000, equity increases by £2,000:
Cash £7,000 + non-current asset £5,000 = Equity £12,000.

Total 25 Marks

Marks

Question 3

a) The following is a list of cost classifications: **10**

- fixed costs;
- variable costs;
- semi-variable costs;
- stepped costs;
- direct costs;
- indirect costs;
- product costs; and
- period costs

Classify each of the following as two of those cost types. Explain your answer in each case.

i) The salary of the Sales Director responsible for all product sales, who is paid a basic salary plus a bonus proportional to the sales the business secures.

ii) Sheet steel purchased for pressing into a car door, which will then be sold to a car manufacturer.

iii) Rent for a shop.

iv) The legal fees for litigation concerning a discontinued dangerous product made and sold by the business.

MARK SCHEME

0-2 Marks	***3 Marks***	***4-5 Marks***	***6 Marks***	***7-10 Marks***
Has basic awareness of different cost clarifications.	***Has limited awareness of different cost clarifications.***	***Has adequate awareness of different cost clarifications.***	***Has sound, informed awareness of different cost clarifications.***	***Has comprehensive, well-informed awareness of different cost clarifications.***
Provides basic explanation and application of cost categories to given scenarios	***Provides limited explanation and application of cost categories to given scenarios***	***Provides consistent explanation and application of cost categories to given scenarios***	***Provides critical explanation and application of cost categories to given scenarios***	***Provides consistently critical explanation and application of cost categories to given scenarios.***

Marks

Indicative content

Salary:
This is a semi-variable cost because it is partially fixed, and partially dependent upon the level of activity.
This is an indirect cost because it is spread across different products and potentially departments
This is a period cost, because the cost would be treated as an expense in the period it was incurred.

Steel:
This is a direct cost because it could be traced to the product it makes
This is a variable cost because the amount of steel consumed is dependent upon the number of products made
This is a product cost because it is a cost associated with the product – car doors in this case.

Rent:
This is a fixed cost because the rent is independent of the shop's sales.
This is a period cost because the rent would be expensed in the period in which it was incurred.
This is an indirect cost, because it would be spread over all that was sold, not one individual item.
Legal fees:
This is a period cost because it would be expensed in the period in which it was incurred.
This is an indirect cost because it does not relate to an identifiable product – the product it concerned is no longer made

Questions continue on the next page

Marks

b) Marvellous Motorcycles Limited makes three types of motorcycle, called the Marvel, the Miracle and the Mellow. Listed below are the total costs for the year: **15**

Cost	£
Materials for production:	
Steel	20,000
Plastics	15,000
Hoses and other parts	20,000
Prebuilt engines	1,625,000
Total	1,680,000
Direct labour	2,720,000
Indirect labour	70,000
Power for factory	25,000
Power for offices	5,000
Administration salaries	450,000
Rent for factory	300,000
Rent for offices, for administration only	100,000
Depreciation for factory machines	120,000
Depreciation for office equipment	50,000
Materials for office (stationery etc)	10,000
Materials for maintenance (oil, spare parts etc.)	15,000

The company has the following cost centres, with costs shown as below:

	Production	Maintenance	Administration	Total
Number of employees	60	2	15	77
Material cost	£1,680,000	£15,000	£10,000	£1,705,000
Labour cost	£2,720,000	£70,000	£450,000	£3,240,000
Floor area (m^2)	1000	500	800	2300
Depreciation of machines and equipment	£100,000	£20,000	£50,000	£170,000
Employee hours	100,000	30,000	24,000	154,000
Machine power (kW)	105	20	5	130

Both production and maintenance are in the same factory, however administration is the only occupant of a separate office space.

Below is the data for each product:

Product	Number produced	Direct material cost (£)	Direct Labour cost (£)	Hours in production
Mellow	50	8,000	12,000	500
Marvel	130	5,000	8,000	300
Miracle	180	3,500	6,000	200

i) Produce an *Overhead Analysis Sheet* showing the indirect costs for each of the three cost centres, and how those would be attributed to the production cost centre, and an overhead recovery rate based upon hours of production.

Marks

ii) Calculate the full cost of each type of product.

MARK SCHEME

0-3 Marks	*4–5 Marks*	*6-8 Marks*	*9-10 Marks*	*11-15 Marks*
Has basic awareness of how to produce an overhead analysis sheet, with little- to no correct calculations.	***Has limited awareness of how to produce an overhead analysis sheet, with few correct calculations.***	***Has adequate awareness of how to produce an overhead analysis sheet, with some calculation errors.***	***Has sound, informed awareness of how to produce an overhead analysis sheet, with most calculations being correct.***	***Has comprehensive, well-informed awareness of how to produce an overhead analysis sheet, with correct calculations and minimal errors.***
Demonstrates a basic ability to calculate an overhead recovery rate, with little- to no correct calculations.	***Demonstrates a limited ability to calculate an overhead recovery rate, with few correct calculations.***	***Demonstrates an adequate ability to calculate an overhead recovery rate, with some correct calculations.***	***Demonstrates a coherent ability to calculate an overhead recovery rate, with most calculations being correct.***	***Demonstrates a comprehensive ability to calculate an overhead recovery rate, with little- to no errors in the calculations.***

Indicative content:

Cost	*Basis of apportionment*	*Production*	*Maintenance*	*Administration*	*Total*
Indirect Labour	*Given*		*£70,000*	*£450,000*	*£520,000*
Power for factory	*Power consumed*	*£21,000*	*£4,000*		*£25,000*
Power for offices	*Given*			*£5,000*	*£5,000*
Administrative salaries	*Given*			*£450,000*	*£450,000*
Rent for factory	*Floor area*	*£200,000*	*£100,000*		*£300,000*
Rent for offices	*Given*			*£100,000*	*£100,000*
Depreciation	*Given*	*£100,000*	*£20,000*	*£50,000*	*£170,000*
Materials	*Given*		*£15,000*	*£10,000*	*£25,000*
Total		*£321,000*	*£209,000*	*£1,065,000*	*£1,595,000*
Total of non-production		*£1,274,000*			
Total costs of production		*£1,595,000*			
Overhead recovery rate	*100,000 total production hours*	*£15.95*			

Marks

The motorbikes are made from materials of differing costs, so it may be appropriate to use the material cost of each motorbike as a basis of apportionment. This would reflect the potential for more expensive or difficult to work materials being used in the premium products.

Labour cost could be used as a basis of apportionment rather than hours to reflect the differing levels of skill used by each labourer on the motorcycles being made.

Full cost

	Hours to produce	*Overheads*	*Prime cost*	*Total*
Mellow	***500***	***£7,975***	***£20,000***	***£27,975***
Marvel	***300***	***£4,785***	***£13,000***	***£17,785***
Miracle	***200***	***£3,190***	***£9,500***	***£12,690***

Total 25 Marks

Questions continue on the next page

Marks

Question 4

a) ABC Limited makes one product, 'the Basic'. In the last month, it sold 10,000 Basics and made 8,900 of them. This left 1,100 Basics in inventory. Its profit using absorption costing was £55,000. **6**

Last month it had the following fixed costs:

Production Costs	£40,000
Administrative Costs	£15,000
Other fixed costs	£25,000

The standard cost of a Basic meant that ABC Limited had over-absorbed £9,000 of fixed cost.

ABC Limited's management has noticed that there is space in the factory which could be used to make a new product 'the Excellent', which would cost £100,000 for a new machine, and increase fixed production costs by £20,000, being the depreciation on the new machinery.

The factory changes will have no effect on the variable costs of making a Basic. Management will increase the price of a Basic to £35, which it anticipates will reduce demand to 7,000 units.

With a selling price of £50, it is expected that 3,000 units of the Excellent can be sold.

The table below summarises the changes for the next month

	Basic	Excellent
Selling price	£35	£50
Variable materials	£8	£14
Variable Labour	£4	£8
Other variable costs	£4	£5
Number to be produced	8,000	5,000
Number to be sold	7,000	3,000

Calculate the profit for 'the Basic' which would have been made in the past if marginal costing had been used instead of absorption costing.

Marks

Marks as shown in table.

	Units	***£/unit***	***£***	***MARKS***
Actual fixed production overhead			***80,000***	
Amount over-absorbed			***9,000***	***1***
Absorbed fixed production overhead			***89,000***	***1***
Absorption rate				
Number of units	***8,900***			
Absorption rate per unit		***10.00***		***1***
(errors carried to here gain full credit)				
Inventory change numbers – needed to calculate full absorbed cost				
Sales	***10,000***			
Production	***8,900***			
	(1,100)			***1***
Absorption costing profit			***55,000***	
Profit difference				
Unit numbers	***(1,100)***			
Absorption rate per unit		***10.00***		
Add back absorbed fixed cost			***11,000***	***1***
(any errors above used correctly later gain full credit)				
Marginal costing profit			***66,000***	***1***

Marks

b) i) Calculate the original selling price of each Basic (its selling price before the increase). **4**

Original cost of a basic:			***MARKS***
	Units	***£***	
Marginal costing profit		***66,000***	
Original fixed costs		***80,000***	
Total cost		***146,000***	***1***
Number of basics sold	***10,000***		
Contribution per Basic		***14.60***	***1***
Variable costs per basic		***16.00***	***1***
Selling price per basic		***30.60***	***1***

ii) Calculate the profit that ABC Limited is expecting to make, using a *marginal costing basis.* **5**

Expected profit under marginal costing, not all is required, shown for completeness/clarity. Marks as shown, any errors carried to here but treated correctly gain full credit:

	Basic	***Excellent***	***Marks***
Opening inventory (units)		***0***	
Production (units)	***8,000***	***5,000***	
Sales (units)	***7,000***	***3,000***	
Sales price per unit	***£35.00***	***£50.00***	
Variable costs	***16***	***27***	
Contribution per unit	***£19.00***	***£23.00***	***1***
Number of units	***7,000***	***3,000***	
Contribution	***£133,000***	***£69,000***	***1***
Total contribution	***£202,000***		***1***
Total fixed costs (increased by £20,000)	***(£100,000)***		***1***
profit	***£102,000***		***1***

Marks

c) Explain TWO (2) potential positive and TWO (2) potential negative effects of the changes **and** recommend a potential action that could be taken to reduce the risk of ONE (1) of the negative effects identified. **10**

MARK SCHEME

0-2 Marks	***3 Marks***	***4-5 Marks***	***6 Marks***	***7-10 Marks***
Has basic awareness of the advantages and disadvantages relating to the potential changes.	***Has limited awareness of the advantages and disadvantages relating to the potential changes.***	***Has adequate awareness of the advantages and disadvantages relating to the potential changes.***	***Has sound, informed awareness of the advantages and disadvantages relating to the potential changes.***	***Has comprehensive, well-informed awareness of the advantages and disadvantages relating to the potential changes.***
Provides basic interpretation and evaluation a potential action that could reduce the risk of a negative effect.	***Provides limited interpretation and evaluation a potential action that could reduce the risk of a negative effect.***	***Provides consistent interpretation and evaluation a potential action that could reduce the risk of a negative effect.***	***Provides critical interpretation and evaluation a potential action that could reduce the risk of a negative effect.***	***Provides consistently critical interpretation and evaluation a potential action that could reduce the risk of a negative effect.***

<u>Indicative content:</u>

Positive:

- ***The company is significantly more profitable, moving from £66,000 to £102,000 for a £100,000 investment***
- ***It can increase the contribution margin on the existing product and offset the risk of losing sales with the new product***
- ***Lever the brand and get customers to 'upgrade' to the new product***
- ***It helps reposition the company in a higher margin/luxury market***

Negative:

- ***Increasing prices can lead to a larger than expected drop in sales volume, or other brand and image management issues such as poor publicity***
- ***Introducing a new product may compete with the extant one***
- ***The new product may have significant initial marketing or other hidden costs not explored by management***
- ***It is unclear how confident the management is in its projections***

Potential Actions:

- ***Investigate market prices, and the elasticity of pricing to establish a likely effect.***
- ***Investigate if the company should move to a more luxury brand image, or if it should stratify brands similar to Volkswagen Group to try and separate customers.***
- ***Hold focus group meetings with customers to see what they would think of the changes.***

Total 25 Marks

Marks

Question 5

a) Decision Limited is considering purchasing a new machine. It has identified two potential machines, both of which produce the same products to the same quality but have different costs of operation. They would both have to be paid for in cash in the first year of operation. **15**

The costs of the two potential machines for the same level of output are shown in the table below:

		Machine A (£)	Machine B (£)
Purchase Cost		210,000	300,000
Running costs	Y1	10,000	1,000
	Y2	11,000	1,000
	Y3	12,000	1,000
	Y4	15,000	1,000
	Y5	17,000	1,000
Raw material use	Y1	4,000	3,000
	Y2	5,000	3,000
	Y3	6,000	3,000
	Y4	7,000	3,000
	Y5	8,000	3,000

Decision Limited's policy is to depreciate machines to a *zero-residual value* over five years.

The sales from production from either machine are expected to total £60,000 in the first year, increasing by 5% year-on-year.

i) Prepare a *cash budget* for each machine for the first five years showing the total cash paid or received
AND
Prepare a separate budget for the first five years showing the total profit or loss made
Based on your budgets, you should explain which machine would be the **best** investment for Decision Limited **and** discuss any other considerations for the directors of Decision Limited when purchasing either machine.

Marks

MARK SCHEME

0-3 Marks	*4–5 Marks*	*6-8 Marks*	*9-10 Marks*	*11-15 Marks*
Demonstrates a basic ability to prepare a cash budget with little- to no correct calculations.	*Demonstrates a limited ability to prepare a cash budget with few correct calculations.*	*Demonstrates an adequate ability to prepare a cash budget with some calculation errors.*	*Demonstrates a coherent ability to prepare a cash budget with most calculations being correct.*	*Demonstrates a comprehensive ability to prepare a cash budget with little- to no errors.*
Demonstrates a basic ability to prepare a profit budget with little- to no correct calculations.	*Demonstrates a limited ability to prepare a profit budget with few correct calculations.*	*Demonstrates an adequate ability to prepare a profit budget with some calculation errors.*	*Demonstrates a coherent ability to prepare a profit budget with most calculations being correct.*	*Demonstrates a comprehensive ability to prepare a profit budget with little- to no errors.*
Has basic awareness of the factors affecting investment decisions.	*Has limited awareness of the factors affecting investment decisions.*	*Has adequate awareness of the factors affecting investment decisions.*	*Has sound, informed awareness of the factors affecting investment decisions.*	*Has comprehensive, well-informed awareness of the factors affecting investment decisions.*

Machine A (all figures in £)

	Y1 (£)	*Y2 (£)*	*Y3(£)*	*Y4(£)*	*Y5(£)*
Revenues	*60,000*	*63,000*	*66,150*	*69,458*	*72,930*
Running costs	*(10,000)*	*(11,000)*	*(12,000)*	*(15,000)*	*(17,000)*
Raw Material Use	*(4,000)*	*(5,000)*	*(6,000)*	*(7,000)*	*(8,000)*
Machine purchase	*(210,000)*				
Cash change	*(164,000)*	*47,000*	*48,150*	*47,458*	*47,930*

Marks

Total cash improvement - £26,538
Machine B (all in £)

	Y1 (£)	Y2 (£)	Y3(£)	Y4(£)	Y5(£)
Revenues	*60,000*	*63,000*	*66,150*	*69,458*	*72,930*
Running costs	*(1,000)*	*(1,000)*	*(1,000)*	*(1,000)*	*(1,000)*
Raw Material Use	*(3,000)*	*(3,000)*	*(3,000)*	*(3,000)*	*(3,000)*
Machine purchase	*(300,000)*				
Cash change	*(244,000)*	*59,000*	*62,150*	*65,458*	*68,930*

Total Cash improvement = £11,538

Profit budget
Machine 'A' Profit:

	Y1 £	Y2 £	Y3 £	Y4 £	Y5 £
Revenues	*60,000*	*63,000*	*66,150*	*69,458*	*72,930*
Running costs	*(10,000)*	*(11,000)*	*(12,000)*	*(15,000)*	*(17,000)*
Raw Material Use	*(4,000)*	*(5,000)*	*(6,000)*	*(7,000)*	*(8,000)*
Depreciation	*(42,000)*	*(42,000)*	*(42,000)*	*(42,000)*	*(42,000)*
Profit	*4,000*	*5,000*	*6,150*	*5,458*	*5,930*

Total profit = £26,538
Machine 'B' Profit

	Y1 £	Y2 £	Y3 £	Y4 £	Y5 £
Revenues	*60,000*	*63,000*	*66,150*	*69,458*	*72,930*
Running costs	*(1,000)*	*(1,000)*	*(1,000)*	*(1,000)*	*(1,000)*
Raw Material Use	*(3,000)*	*(3,000)*	*(3,000)*	*(3,000)*	*(3,000)*
Depreciation	*(60,000)*	*(60,000)*	*(60,000)*	*(60,000)*	*(60,000)*
Profit/(Loss)	*(4,000)*	*(1,000)*	*2,150*	*5,458*	*8,930*

Marks

Total profit - £11,538

Machine A produces a better profit because of the additional cost and depreciation associated with Machine B. The cash improvement is also less for B owing to the initial asset cost.
a. Machine 'B' is consistently efficient and the running costs and use of raw materials is lower, so it may be better if a longer use than five years is expected
b. Machines may need different levels of training, or installation, so 'hidden costs' of both need to be considered
c. One machine or the other may fit better with existing equipment
d. Machine 'B' may produce better cashflows post year five
e. Machine 'B' may be lower risk due to its consistent cost profile. However, this depends on its potential life.

b) A company has been depreciating its motor vehicles for two years using the straight-line method and a new accountant suggests that this policy is incorrect and that the reducing balance method would be more appropriate. **10**

Discuss the two methods of accounting for depreciation and give a reasoned explanation whether you agree with the new accountant or not. Explain the information which would be provided to shareholders about the depreciation policy and the implications of this following the suggestion made by the new accountant and your conclusion.

MARK SCHEME

0-2 Marks	***3 Marks***	***4-5 Marks***	***6 Marks***	***7-10 Marks***
Demonstrates a basic ability to explain the depreciation methods	***Demonstrates a limited ability to explain the depreciation methods***	***Demonstrates an adequate ability to explain the depreciation methods***	***Demonstrates a coherent ability to explain and discuss the depreciation methods and relevance to the asset class***	***Demonstrates a comprehensive ability to discuss the depreciation methods and their appropriateness***
Has basic awareness of the accounting disclosures in the financial statements	***Has limited awareness of the accounting disclosures in the financial statements***	***Has adequate awareness of the accounting disclosures and why they are needed by shareholders***	***Has sound, informed awareness of the accounting disclosures and the consequences of change in accounting policies***	***Has comprehensive, well-informed awareness of the accounting policies, their changes and implications in the scenario***

End of paper

Marks

Learning Outcomes matrix

Question	Learning Outcomes assessed	Marker can differentiate between varying levels of achievement
1	2	Yes
2	1	Yes
3	3	Yes
4	4, 3	Yes
5	4, 2	Yes

Grade descriptors

Learning Outcome	Fail	Refer	Pass	Merit	Distinction
Analyse the use of accounting in organisations	Has basic awareness of different perspectives or approaches within the area of study	Has limited awareness of different perspectives or approaches within the area of study	Has adequate awareness of different perspectives or approaches within the area of study	Has sound, informed awareness of different perspectives or approaches within the area of study	Has comprehensive, well-informed awareness of different perspectives or approaches within the area of study
Prepare and analyse financial statements	Can basically identify, adapt and use appropriate skills, methods and procedures to reach basic solutions.	In a limited way, can identify, adapt and use appropriate skills, methods and procedures to reach limited solutions.	Can adequately Identify, adapt and use appropriate skills, methods and procedures to reach appropriate solutions.	Can soundly identify, adapt and use appropriate skills, methods and procedures to reach supported and appropriate solutions.	Can coherently identify, adapt and use appropriate skills, methods and procedures to reach well supported and highly appropriate solutions.
Examine the use of costs in organisations	Has basic awareness of different perspectives or approaches within the area of study	Has limited awareness of different perspectives or approaches within the area of study	Has adequate awareness of different perspectives or approaches within the area of study	Has sound, informed awareness of different perspectives or approaches within the area of study	Has comprehensive, well-informed awareness of different perspectives or approaches within the area of study
Examine how accounting is used to support decision-making	Provides basic interpretation and evaluation of relevant information and ideas to address problems that are well defined but non-routine.	Provides limited interpretation and evaluation of relevant information and ideas to address problems that are well defined but non-routine.	Provides consistent interpretation and evaluation of relevant information and ideas to address problems that are well defined but non-routine.	Provides critical interpretation and evaluation of relevant information and ideas to address problems that are well defined but non-routine.	Provides consistently critical interpretation and evaluation of relevant information and ideas to address problems that are well defined but non-routine.