The Institute of Chartered Accountants of Nigeria (ICAN)

FOUNDATION LEVEL EXAMINATION

2019

Mock Exam

Management Information

Answers

Section A: 20 marks

A1 **C**

If inventory levels increase in a period, absorption costing shows a higher profit than marginal costing.

Difference in profit = Change in inventory × Absorption rate per unit
= (850 - 400) × ₦8
= ₦3,600

Marginal costing profit = ₦85,000

Absorption costing profit = ₦85,000 + ₦3,600
= ₦88,600

A2 **C**

	1	2	3	Total
Optimal production plan	600	6,000	4,000	
Kg material required per unit	5	5	3	
Kg material available	3,000	30,000	12,000	45,000

A3 **D**

An airline company, a railway company and a firm of accountants are all considered to be service industries.

A4 **D**

A5 **A**

	Activity level units	Total cost in ₦
High	10,000	800,000
Low	5,000	500,000
Difference	5,000	300,000

Variable cost per unit = ₦300,000/5,000 units = ₦60

Total cost at high activity level = ₦800,000

Variable cost (10,000 × ₦60) = ₦600,000

∴ Fixed cost = ₦(800,000 – 600,000) = ₦200,000

A6 **C**

Σxy is NOT calculated by multiplying the total value of x and the total value of y.

Σxy is calculated by multiplying x by y for each data pair and then summing the individual results of 'xy'.

A7 **B**

Statements (1) and (3) are correct.
Statement (2) is not correct. A variable cost is a cost that is the **same amount** (not a variable amount) per unit for every unit of activity.

A8 **D**

A flexed budget is similar to a flexible budget, but it is not the same. Flexed budgets are prepared at the **end** of a budget period and they look back at what costs, revenues and profits should have been in a period, based on actual activity levels. In comparison, flexible budgets are forward-looking and are prepared at the beginning of a budget period when the original budget is prepared. Flexible budgets are prepared to show the actual results that would be expected at a number of different activity levels.

A9 **B**

	Output	**Total cost**
	Units	₦
High: Total cost of	21,000	715,000
Low: Total cost of	18,500	640,000
Difference: Variable cost of	2,500	75,000

Variable cost per unit = ₦75,000/2,500 = ₦30 per unit

Substitute in the 'high' equation:

Total cost for 21,000 units = ₦176,000

Fixed cost = ₦715,000 – (21,000 × ₦30) = ₦85,000

Fixed cost at output levels > 25,000 units = ₦(85,000 + 20,000) = ₦105,000

Estimated total cost of 28,000 units = ₦105,000 + (28,000 × ₦30) = ₦945,000

A10 **D**

Costs of maintenance equipment are an indirect cost because maintenance work cannot be identified directly with a cost unit.

A11 **A**

The driver's salary is a selling and distribution overhead. The delivery of the products to customers takes place after the sale of the product has occurred.

A12 **D**

In the linear cost equation y = a + bx,

a = fixed cost (₦3) and b = variable cost per unit (₦2).

A13 **A**

A14 **B**

A15 **A**

A16 **D**

Firewalls detect and prevent unauthorised access. Computer viruses deliberately corrupt computer systems. Passwords are defined as a series of characters that must be presented to a computer before it will allow access to the system.

A17 **C**

A18 **B**

A19 **C**

A20 **D**

Section B: 80 marks

Question B1

(a)

Marginal costing

	Units	Cost per unit	₦
Sales	21,000	1,100	23,100,000
Cost of goods sold			
Opening inventory	950	300+300+45	612,750
Production for the year	22,150	648.5 (W1)	14,364,275
Closing inventory	2,100	648.5 (W2)	(1,361,850)
			(13,615,175)
Variable selling and administration cost	21,000	157.89 (W2)	3,315,690
Contribution			**6,169,135**
Fixed costs			
Production (W2)			(6,777,900)
Selling & administration (70% × 10,000,000)			**(7,000,000)**
Net loss			**(7,608,765)**

Absorption Costing

	Units	Cost per unit	₦
Sales	21,000	1,100	23,100,000
Cost of goods sold			
Opening inventory	950	300+300+45+333.33	929,414
Production for the year	22,150	954.50 (W5)	21,142,175
Closing inventory	2,100	954.50 (W5)	(2,004,450)
			(20,067,139)
Gross profit			**3,032,862**
Variable selling and administration cost	21,000	157.89	(3,315,690)
Selling & administration (70% × 10,000,000)			**(7,000,000)**
			(10,315,690)
Net loss			**(7,282,829)**

(b) **Profit reconciliation:**

Marginal costing loss			**(7,608,765)**
	MC	AC	
Opening inventory	612,750	929,414	316,664
Closing inventory	1,361,850	2,004,450	(642,600)
			(325,936)
Absorption costing loss			**(7,282,829)**

W-1: Budgeted production in 20X4

	Units
Units to be sold	21,000
Budgeted closing inventory (10% of 21,000,000)	2,100
	23,100
Opening inventory (closing inventory at end of X3)	(950)
Production	**22,150**

W2: Variable cost per unit for 20X4

		₦
Raw material	(5 × 0.95 × 60 × 1.04)	296.40
Raw material inspection	(5 × 0.95 × 2)	9.50
Labour	(4 × 0.85 × 75 × 1.1)	280.50
Labour incentive cost	30% × (4 × 0.15 × 75 × 1.1)	14.85
Variable production overheads	15 × 1.05 × 3	47.25
Variable production costs		648.50
Variable selling and admin. costs	(30% × 10,000,000)/19,000	157.89
		806.39

W3: Fixed production cost for 20X4

		₦
Annual fixed production overheads	(6,000,000 × 1.08)	6,480,000
Training consultant cost		297,900
		6,777,900

W4: Absorption rate per unit 20X4

Fixed production overheads (W3)	**₦6,777,900**
Budgeted production	22,150
	₦306

W5: Fixed production cost per unit for 20X4

	₦
Variable production costs	648.50
Fixed production cost per unit (W4)	306.00
	954.50

Question B2

(a) Note: It is assumed that the trade receivables at the beginning of quarter 1 (₦40,000) represent 40% of sales in Quarter 4 of the previous year. Sales in the previous quarter were therefore ₦100,000 (= ₦40,000/0.40). From these sales, 38% (= ₦38,000) will be received in cash in quarter 1 and 2% (= ₦2,000) will be bad debts.

	Q1	Q2	Q3	Q4
	₦	₦	₦	₦
Receipts:				
From trade receivables (W1)				
38% of previous quarter sales	38,000	45,600	30,400	27,360
60% of this quarter sales	72,000	48,000	43,200	67,200
Total receipts	110,000	93,600	73,600	94,560
Payments:				
To suppliers of materials:				
Purchases in previous quarter	9,600	10,416	7,344	8,803
Purchases this quarter	24,304	17,136	20,541	23,498
Wages	11,550	8,190	9,786	11,172
Fixed overhead	45,000	48,000	47,000	50,000
Capital expenditure	-	50,000	-	-
Total payments	90,454	133,742	84,671	93,473
Receipts minus payments	19,546	(40,142)	(11,071)	1,087
Opening cash balance	22,000	41,546	1,404	(9,667)
Closing cash balance	41,546	1,404	(9,667)	(8,580)

Workings

W1: Sales budget:	**Q1**	**Q2**	**Q3**	**Q4**
Units	6,000	4,000	3,600	5,600
x ₦20	₦120,000	₦80,000	₦72,000	₦112,000
Received in:	₦	₦	₦	₦
Quarter 1	72,000			
Quarter 2	45,600	48,000		
Quarter 3		30,400	43,200	
Quarter 4			27,360	67,200
Bad debts (2%)	2,400	1,600	1,440	

W2: Production budget:	**Q1**	**Q2**	**Q3**	**Q4**
	units	units	units	units
Closing inventory	1,000	900	1,960	1,680
Sales in the month	6,000	4,000	3,600	5,600
	7,000	4,900	5,560	7,280
Opening inventory	1,500	1,000	900	1,960
Production in the month	5,500	3,900	4,660	5,320
Wages budget: ₦2.10 per unit	₦11,550	₦8,190	₦9,786	₦11,172

W3: Material purchases	Q1 kilos	Q2 kilos	Q3 kilos	Q4 kilos
Closing inventory	3,200	2,900	2,600	2,300
Required for production (4 kilos per unit)	22,000	15,600	18,640	21,280
	25,200	18,500	21,240	23,580
Opening inventory	(3,500)	(3,200)	(2,900)	(2,600)
Purchases	21,700	15,300	18,340	20,980
Purchases (₦1.60/ kilo)	₦34,720	₦24,480	₦29,344	₦33,568
Payable in:				
Quarter 1	₦24,304			
Quarter 2	₦10,416	₦17,136		
Quarter 3		₦7,344	₦20,541	
Quarter 4			₦8,803	₦23,498

(b) The variable cost per unit = (4 kilos × ₦1.60) + (0.3 hours × ₦7) = ₦8.50.

Production volume = (5,500 + 3,900 + 4,660 + 5,320) units = 19,380 units.

Budgeted profit and loss account for the year	**₦**	**₦**
Sales (19,200 units at ₦20)		348,000
Minus Variable cost of sales		
Opening inventory (1,500 × ₦8.50)	12,750	
Production (19,380 × ₦8.50)	164,730	
	177,480	
Minus: Closing inventory (1,680 units x ₦8.50)	14,280	
		163,200
Contribution		184,800
Minus:		
Fixed overhead	190,000	
Depreciation (5% × ₦550,000)	27,500	
Bad debts written off (2% of sales)	7,680	
		225,180
Budgeted net loss		₦(40,380)

Question B3

(a) Budgeted profit

Per unit	₦
Selling price	4,000
Direct materials ((10,000 kgs/5,000 units) × ₦500)	1,000
Direct labour (0.5 hours × ₦400)	200
Production overhead (₦10,000,000/ 5,000 units)	2,000
Standard production cost per unit	(3,200)
	800
In total	
Sales volume (units)	5,000
	4,000,000
Administration overhead	(3,000,000)
Budgeted profit	1,000,000

(b) Actual profit

	₦
Sales (4,900 units × ₦4,500)	22,050,000
Direct materials (10,600 kgs × ₦600 per kg)	6,360,000
Direct labour (5,400 units × 0.55 hours per unit × ₦380 per hour	1,128,600
Production overhead	10,300,000
	17,788,600
Closing inventory ((5,400 units – 4,900 units) × ₦3,200 per unit)	(1,600,000)
	(16,188,600)
	5,861,400
Administration overhead	(3,100,000)
Actual profit	2,761,400

(c) Reconciliation of budgeted profit to actual profit

	₦	₦	₦	
Budgeted profit			1,000,000	
Sales volume variance			(80,000)	(A)
Sales price variance			2,450,000	F
			3,370,000	
Cost variances	(F)	(A)		
Direct materials price		1,060,000		
Direct materials usage	100,000			
Direct labour rate	59,400			
Direct labour efficiency		108,000		
Fixed production overhead expenditure		300,000		
Fixed production overhead volume	800,000			
Total cost variances	959,400	1,468,000	(508,600)	(A)
			2,861,400	
Administration overhead expenditure variance (A)			(100,000)	
Actual profit			2,761,400	

Workings

Sales price variance

	₦	
4,900 units should sell for (× ₦4,000 per unit)	19,600,000	
4,900 units did sell for (× ₦4,500 per unit)	22,050,000	
Sales price variance	2,450,000	F

	units	
Actual sales volume (units)	4,900	
Budgeted sales volume (units)	5,000	
Sales volume variance in units	100	(A)
Standard profit per unit	₦800	
Sales volume variance (profit variance)	₦80,000	(A)

Materials price variance:

	₦	
10,600 kgs of materials should cost (× ₦500)	5,300,000	
10,600 kgs of materials did cost (× ₦600)	6,360,000	
Material price variance	1,060,000	(A)

Materials usage variance

	Kgs	
5,400 units should use (× 2 kg per unit)	10,800	
5,400 units did use	10,600	
Material usage variance in litres	200	F
Standard price per kg	₦500	
Material usage variance in ₦	₦100,000	F

Direct labour rate variance	₦	
2,970 hours (5,400 units × 0.55 hrs per unit) should cost (× ₦400)	1,188,000	
2,970 hours did cost (× ₦380)	1,128,600	
Direct labour rate variance	59,400	F

Direct labour efficiency variance	hours	
5,400 units should use (× 0.5 hours)	2,700	
5,400 units did use (× 0.55 hours)	2,970	
Efficiency variance in hours	270	(A)
Standard direct labour rate per hour	₦400	
Direct labour efficiency variance in ₦	₦108,000	(A)

Fixed overhead expenditure variance	₦	
Budgeted fixed production overhead expenditure	10,000,000	
Actual fixed production overhead expenditure	10,300,000	
Fixed overhead expenditure variance	300,000	(A)

Fixed overhead volume variance	Units	
Budgeted production volume in units	5,000	
Actual production volume in units	5,400	
Fixed overhead volume variance in units	400	F
Standard fixed production overhead cost per unit	₦2,000	
Fixed overhead volume variance in ₦	₦800,000	F

Question B4

(a) **Decision support system**

A decision support system (DSS) is a set of related computer programs and data required to assist with the analysis and decision-making within an organization.

DSS were initially developed to overcome the rigid nature of management information systems.

The characteristics of decision support systems include:

- DSS assists managers at the tactical level when they are required to make intelligent guesses
- A DSS uses formula and equations to enable mathematical modelling
- DSS are real-time systems enabling managers to solve problems through queries and modelling
- User inputs queries and variables for the model through a user interface
- Contains a natural language interpreter for querying the system
- The user interface is integrated with data management and modelling software from the key components
- Spreadsheet packages can become the tool for the development of a decision support system.

(b) **Web hosting**

(i) **Up-time percentage**

'Down-time' describes the period when a website is unavailable due to a problem with the Web server. This is a bit like a shop being closed – no-one can enter to view the goods, make purchases or communicate with the owner. The inverse is called 'up-time'.

Up-time is often measured in "nines". Five nines means the Website is available 99.999% of the time which equates to being 'down' for just over five minutes per year. Three nines (99.9% availability) equates to being 'down' for nearly nine hours per year!

(ii) **Storage space**

Many straightforward basic sites consume less than a couple of hundred megabytes of disk space. This would even accommodate product catalogues and a handful of downloadable documents such as user or technical manuals.

However, if extensive audio, video and image libraries are required then significantly more space will be needed. It is not unusual for Web hosts to offer in excess of 650 gigabytes in their basic package.

(iii) **Technical support**

The standard of technical support offered by a company's Web host is one of the most important factors for an organisation to consider. For example, the Internet is a 24/7/365 shop for businesses so will technical support be available similarly throughout the year offering real-time solutions.

Web hosts typically offer a range of services in increasing cost from email support to messenger (chat) and phone. Companies with less experience of running their website will generally benefit from investing in phone support.

(iv) **Number of domains**

Many companies might start off with a single domain name that identifies their website. However, multiple domain names either pointing to the same website (to enhance the success from user searches or even misspelt searches) or indeed representing different parts of a more diversified business may well become relevant. Obviously the more domain names supported the higher the cost.

Consider for example the number of domain names associated with the Google search engine, a few examples being:

- Google.co.uk (UK version)
- Google.com.ng (Nigeria version)
- Google.com.hk (Hong Kong version)

(c)

(a) **Breakeven point in naira**

$$= \frac{\text{Fixed cost}}{\text{Contribution margin}} = \frac{6{,}300{,}000}{40\%\ \text{W1}} = \ ₦15{,}750{,}000$$

W1:	**₦**
Selling price	22,500,000
Less: variable expense	13,500,000
Contribution Margin	9,000,000
Contribution margin % ($^{9,000,000}/_{22,500,000}$)	40%

Margin of safety

$$= \frac{\text{Current sales} - \text{breakeven sales}}{\text{Current sales}} = \frac{22{,}500{,}000 - 15{,}750{,}000}{22{,}500{,}000} = \ 30\%$$

(b) **New CM ratio**

	₦
Selling price	22,500,000
Less: variable expense (₦13,500,000 + 5,000 x ₦600)	16,500,000
Contribution margin	6,000,000
Contribution margin %(₦6,000,000 / ₦22,500,000)	26.67%

Break even point in units

$$= \frac{\text{Fixed cost}}{\text{Contribution per unit}} = \frac{6{,}300{,}000}{6{,}000{,}000\ \div 5{,}000} = \ 5{,}250\ \text{units}$$

New selling price

Let S = new selling price per unit

S = Variable costs per unit + 0.4S

S = (₦16,500,000 ÷ 5,000) + 0.4S

∴0.6 S = ₦3,300

∴S = ₦5,500

(c) **No. of units to be sold next year to earn a profit of ₦3,150,000**

Selling price	₦4,500	
Less: variable expenses	₦1,650	(₦16,500,000 / 5,000 x 50%)
Contribution margin	₦2,850	

$$= \frac{\text{Fixed cost} + \text{Target profit}}{\text{Contribution per unit}} = \frac{(2 \times 6{,}300{,}000) + 3{,}150{,}000}{6{,}000{,}000 \div 5{,}000} = 5{,}526 \text{ units}$$

Question B5

(a) **Individual departments v database**

The PKL company has followed part of the IT development path described by Nolan. The company has already passed through the initiation, contagion and control steps and now appears to be on the way towards integration, administration and strategic development.

Until the integration step is reached, each department will tend to have developed its own applications; data will not be shared between departments to any extent and the separate systems in each department may not even be capable of communication with each other. Integration implies that the separate systems will link together and that data can be shared. Administration implies that the database stage has been reached and that the data must be administered and guarded carefully as it is of such importance to the organisation.

On another level the planned changes can be looked on as a change from a decentralised to a centralised system and there are well-known characteristics of each of these types of IT organisation.

Advantages of individual IT systems

Individual IT systems imply a decentralised data processing environment and this is likely to have the following advantages:

(i) IT development is likely to match exactly each department's specific requirements. The IT applications will be tailor-made for each processing application and are likely to have evolved into efficient systems.

(ii) Each department has its own IT personnel who are dedicated to serving just that department. Therefore, any problems or system changes required are likely to be dealt with promptly by staff who understand the department's processing needs well. Systems development appears to be responsive to user needs.

(iii) Processing power (hardware capabilities) will have evolved with the departments and their software. Response times are likely to be acceptable to users.

(iv) As processing is carried on locally, each department can decide on its own processing priorities.

(v) Ownership of the data, for example what data is held and under what circumstances it can be changed, will be well understood and its design will reflect each department's requirements.

(vi) Because data is held and processed locally, there is likely to be local pride in its accuracy and integrity. Users feel responsible for their data and this will tend to increase its accuracy.

(vii) Separate systems will be resilient to processing failure. Hardware breakdowns, software errors, computer viruses and unauthorised access will normally be

confined within each department. Data held in other departments will be unaffected.

Disadvantages of individual IT systems

(i) Duplication of effort can occur. For example, two departments may each independently develop software which performs the same processing tasks.

(ii) The same information may be held in more than one department. This increases the processing needed and data which should be the same can begin to diverge and become inconsistent.

(iii) Information will be difficult to share between departments. It might be held in different formats on incompatible systems. It is almost certain that different departments will need to be able to access and use data held in other departments. For example, if the company wants to run a large marketing campaign it will need to access all customer records. If it wants to raise and post invoices it will have to have access to the sales ledger, nominal ledger and stock files.

(iv) Processing will be restricted and limited simply because of the technical difficulties of using data drawn from different systems. Processing should be driven by business needs not inhibited by system constraints.

(v) There is likely to be a wide variety of processing and security standards; some departments will have high standards, others low. As the importance of IT grows it will be important to ensure that standards are maintained at a high level. If processing is centralised into a database system, it will be easier to impose uniform standards. There is a chance that because there are many separate IT departments each with its team of experts, the average level of skill will be lower than if IT is centralised. Then, the company may be able to enjoy economies of scale which will allow fewer but more highly skilled staff to be employed. For example, organisations which have a large database system are likely to employ a database administrator who will monitor the contents of access to and development of the database.

(vi) Security of processing and data can be more difficult in individual or distributed systems. Many people have access to the data, programs and hardware. For example, backups of data should be taken regularly. However, it may be difficult to ensure that all departments are diligent in this; centralising the data and most of the processing in one place under the control of dedicated experts will make it easier to ensure that regular backups are taken.

(b) **Problems with amalgamation**

The following problems are likely to be encountered when the company attempts to amalgamate the company's data into one central database:

(i) Security. All the company's data will be held in one place. It is vital that the company designs and enforces stringent security measures to protect the important resource which will have increasing strategic importance. The security measures should include physical access controls, user access controls (for example passwords), back-up procedures, disaster action plans, and anti-virus software.

(ii) A feeling in user departments of a lack of control and degradation of IT service. If user departments have been satisfied with their individual arrangements they may resent control and custody of the data being removed to a central department.

(iii) The design of the database must therefore be carried out very thoroughly. Ideally, no department should find that a facility that it had found useful becomes unavailable when the central database is established.

(iv) If all data is held on a central computer (such as a network file server) and distributed to departments as they need it, there could be problems with the volumes of data that have to be held and transmitted. It is essential that users perceive no degradation in the speed of responses.

(v) There will be a problem of amalgamating data which has been developed at different times and under different methodologies. This problem is obvious where the data is very different (for example, receivables ledger and inventory ledger) but will also be a problem where the data appears to be the same. Files holding names and addresses could have different formats and space designated for each field.

(vi) Duplication of data could arise. For example, two departments could hold information about the same customer but this might not be identified and the customer could appear twice in the final database.

Question B6

(a) **Issues in data conversion.**

(i) **Current manual system to a computer one**

- Set up of master files. The task of file creation can be a daunting task. The resources of the department may not be sufficient or willing to undertake such activities on top of their daily work. The system is unusable until all such data is entered.
- Entry of system derived fields. The operational use of the system may automatically create certain data values. For example, the date-of-last-order on the customer file might be posted into the field on receipt of order. However, at the start of the system this field will be blank in all the established customer records. Thus specially written file creation programs may have to be written to capture historical information into the system.
- The lack of historical data may restrict use. For example, reports running off the date-of-last-order field introduced in the previous section may be of little use until the second or third year of the system's use.

(ii) **Computer system to another computer system**

- Technical feasibility of moving from one system to another. The developer has to investigate whether it is possible to technically take data from one system and put it on the target machine. It may not be possible to move information from an Apple machine to a Hewlett-Packard.
- Data mapping and program testing. If it is possible to move from one machine to another then the developer has to carefully map the fields on the current system to the proposed one. For example, the field delegate-name may currently sit on a course file and this has to be transferred to a student record on the new system. The developer will have to formally map these relationships and write a program to move the data from the old to

the new system. This program has to be tested and the test results carefully examined.

- Dirty data, different field lengths and empty fields. Problems can be caused by the transfer of incorrect data values, differences in field lengths between the new and old systems, and empty fields in the new system that have to be populated by specially designed data creation programs.

(b) **The benefits of outsourcing the new information systems will include the following:**

(i) Freedom to shop around for the best deal

Various suppliers can be asked to tender for the work, with the contract being awarded to the supplier providing value for money and hopefully relevant experience in designing this type of system.

(ii) Minimum diversion of management time and focus from core business activities

The core business of SAL appears to be provision of sewing machines and spares for those machines, not the maintenance or development of IT systems. Outsourcing this development will allow the Board of SAL to remain focused on their core business rather than have to manage an IT project where they lack appropriate knowledge and experience.

(iii) Advantages of contractual terms and conditions in times of dispute

The development of the new system will be governed by the terms of any service contract. If the outsourcing company do not deliver on a part of the contract then they can be asked to complete that phase without additional cost to SAL. Late delivery with in-house systems will normally mean having to allocate additional resources to the project, without any financial remedy from the IT department.

(iv) Access to the latest programming techniques as in house skills may be out of date

As there is only a small IT department in SAL, it is quite likely that the IT skills will be out-of-date. Any programmers and analysts are also unlikely to have time to take on a significant development project. Outsourcing the contract will therefore provide SAL with the necessary skills.

(v) Shorter delivery time

Outsourcing will result in a shorter delivery time because SAL will not have to interview and recruit additional staff to monitor the development.

(vi) Outsourcer may have experience of developing similar systems

Providing a central database with remote access and Extranet access is likely to be a relatively specialised task. However, the outsourcing company may be able to provide relevant experience in this area, which the IT staff at SAL will not have.

The drawbacks of outsourcing may include the following:

(i) Lack of understanding of business objectives

The outsourcing company are likely to focus on implementing the IT system. They may not understand fully the business objectives of SAL and so the system may lack some of the required functionality. Care will be required in defining the systems specification to ensure it meets the requirements of SAL.

(ii) Loss of confidentiality, which could be a source of competitive advantage

Provision of an enhanced service to customers may provide SAL with some competitive advantage. The outsourcing company will need to sign appropriate confidentiality agreements to ensure that loss of confidentiality does not happen.

(iii) Ransom hold of particular supplier for maintenance and upgrades

Given that SAL does not have the expertise in-house to implement the system, the outsourcing company will also be required to maintain the system for SAL. This could give rise to increased costs. Details of expected maintenance and service costs for say five years should also be included in the original quote for the system.