

INTERNATIONAL
BACCALAURÉAT
BACHILLERATO



BACCALAUREATE
INTERNATIONAL
INTERNACIONAL

M02/370/H(2)M+

MARKSCHEME

May 2002

BUSINESS AND MANAGEMENT

Higher Level

Paper 2

1. (a) **Using your own figures and worked examples, show how the LIFO method of stock valuation may lead to a lower profit and tax liability for *Chissano Prints*, than using the FIFO method.** **[5 marks]**

The candidate needs to prepare comparative profit and loss accounts to show the effects of using LIFO and FIFO methods of stock valuation on net profit *e.g.*

Stock purchases

January 200 @ \$ 50
 February 200 @ \$ 60
 March 200 @ \$ 60

Sales

March 500 blouses @ \$ 100

FIFO

	\$
Sales (500 × \$ 100)	50 000
Cost of sales	
200 @ \$ 50	10 000
300 @ \$ 60	18 000
	<u>28 000</u>
Profit	<u>22 000</u>

LIFO

	\$
Sales (500 × \$ 100)	50 000
Cost of sales	
500 @ \$ 60	30 000
Profit	<u>20 000</u>

As a result the profit figure is \$ 2 000 lower. If the tax level is say 25 %, then the tax liability will be \$ 500 less.

[4 to 5 marks]

Relevant financial calculations are made clearly distinguishing between LIFO and FIFO and showing the effect on profit. For **[5 marks]** all figures are explained, the tax liability is considered and the format is accurate.

[2 to 3 marks]

There is an understanding of the concepts of LIFO and FIFO. Figures may not be fully explained or absent.

[1 mark]

There is an attempt to show the difference between LIFO and FIFO, although the supporting figures may be confused and/or inaccurate.

- (b) **Discuss the relative advantages and disadvantages for *Chissano Prints* of the merger and franchising options, and consider which of the *two* options the firm should select.** **[6 marks]**

Mergers

Advantages

- survival
- a fast form of growth
- economies of scale, lower costs and higher profits
- synergy $1 + 1 = 3$
- greater market power and a larger customer base
- diversification and reduced risk
- control of supply and retail channels through vertical integration
- access to new technologies.

Disadvantages

- loss of management control by Winnie Chissano
- changes to the corporate culture to adapt to the new merged organization requiring possible change to core values
- potential arguments and disagreements between the two parties
- difficulty of employees adapting to new working approaches and management styles
- possible rationalisation leading to redundancies
- diseconomies of scale and bureaucracy leading to slower decision making
- loss of customers who saw personal service and individuality as a vital element of their purchase decision.

Franchising

Advantages

- a fast form of growth at a lower cost and less risk than organic growth
- economies of scale, lower costs and higher profits
- greater market power and larger customer base than organic growth
- diversification and reduced risk
- control of the business remains with Winnie Chissano
- keeps the business entrepreneurial and flexible to market change.

Disadvantages

- less control over the business as franchisees may not following guidelines and poor service standards may adversely affect reputation
- growth is not as quick as through a merger
- possible cash flow issues as the business expands.

Both options offer growth, wider customer base and lower costs through economies of scale. The merger option would result in faster growth, but may dissipate the competitive advantages *Chissano Prints* has from its unusual prints and personal service. Mass production may not be appropriate for such a business and the target audience may be very different. Franchising will allow Winnie to maintain control of the business, achieve growth, but retain the firm's individuality and USP.

[5 to 6 marks]

Relevant advantages and disadvantages of mergers and franchising are discussed in some depth and the choice between the two options considered. Discussion is clearly focused on the issues raised in the question data.

[3 to 4 marks]

Advantages and disadvantages of mergers and franchises are discussed. The points or development of points may be slightly limited. The choice may be missing.

[1 to 2 marks]

A rather generalised answer, which may lack development and/or may not address the issues of choice.

- (c) (i) **Outline *three* reasons for the negative reaction of the staff to the proposed merger and the management consultant's proposals.** **[3 marks]**

Staff are fearful for the following reasons:

- possible redundancy
- greater individual demands and expectations
- changes in routine, working structures, teams and the environment
- anxiety about the unknown
- monetary consequences
- threats to the individual's status or power.

[3 marks]

The answer addresses three of the above with some development and/or examples.

[2 marks]

Three appropriate reasons are listed without development or examples. Two reasons are given which are developed and/or examples given.

[1 mark]

Two appropriate reasons are listed without development or examples offered. One appropriate reason is given which is developed or an example given.

- (ii) **Using relevant examples, explain the process of implementing the proposed internal changes within *Chissano Prints* and detail methods of overcoming or minimizing resistance among the staff to the changes.**

[6 marks]

The process needs to include elements of the following:

- identify the changes required
- set out the strengths and weaknesses of the organization
- analyse the internal and external environment
- carry out a force field analysis
- outline the desired outcomes of the change by setting measurable targets
- identify the key individuals who must carry out the change
- identify the key obstacles to change and how resistance may be overcome
- identify the processes of change
- review the change against desired outcomes.

Overcoming resistance to change:

- involve those affected by change at every stage of the change process
- explain why the changes are necessary and the consequences of not changing and win support for the changes
- changes are adapted to take into account suggestions and to address problems
- communicate all changes and developments to overcome fear of the unknown
- outline the beneficial aspects of change *e.g.* earning potential, training opportunities, employment opportunities
- employ a theory Y approach to management.

[5 to 6 marks]

A structured process to implementing change is explained which contains suitable examples. The process includes appropriate and detailed methods of overcoming or minimizing resistance to change.

[3 to 4 marks]

The process is essentially a list of things that have to be done, although they must be clearly related to the information in the stimulus materials. Some sensible ideas to overcome or minimise resistance are given.

[1 to 2 marks]

The process is merely a list of things that have to be done. The ideas to overcome change are brief and unstructured and for one mark may be missing.

2. (a) Identify *three* personal characteristics, which could be included in a person specification to support the recruitment of a 3M management trainee. **[3 marks]**

- Innovative and creative
- Risk taker
- Self starter
- Team player and individualist
- Entrepreneurial
- Flexible
- Excellent communicator
- Problem solver
- Inspirational
- *or other alternative and appropriate suggestions*

Award **[1 mark]** for each appropriate personal characteristic from the above list up to a maximum of **[3 marks]**.

- (b) (i) Describe 3M's corporate culture and assess how this corporate culture encourages innovation and new product development. **[4 marks]**

The culture is:

- entrepreneurial, promoting risk taking
- team and person orientated and empowering
- blame-free culture.

Employees are encouraged to take risks and mistakes are accepted as long as lessons are learned. Delegation and empowerment promote personal initiative and improves motivation.

[3 to 4 marks]

The culture is accurately described and the discussion links this to the generation of ideas and new product development.

[2 marks]

The culture is described, but lacks precision and/or detail. There is an attempt to link this to innovation and new product development.

[1 mark]

A limited response.

- (ii) **Analyse how 3M's corporate culture is likely to influence its organizational structure and communication systems.** **[5 marks]**

3M's entrepreneurial and empowering culture is likely to have the following effects:

- a flat hierarchy with few levels of hierarchy and wide spans of control
- matrix structures and team / project management
- significant delegation and decentralisation
- two-way communication
- limited rules and regulations - free rein
- wheel or circle communication nets
- informal relationships.

[4 to 5 marks]

A clear and concise analysis highlighting the influences of the entrepreneurial and empowering culture on both organization structure and communication systems, using appropriate examples and business terminology.

[2 to 3 marks]

There is an attempt at analysis, but this tends to the descriptive. For **[3 marks]**, the response must include the use of business terminology.

[1 mark]

A limited response.

(c) You are the Human Resources Director at 3M. Produce a memorandum (memo) for all operational managers detailing:

- (i) six practical suggestions to put into operation the ideals for organization and work climate stated in Figure 1, and
- (ii) how benchmarks (standards) could be set up and used to measure and reward performance. *[8 marks]*

Award *[1 mark]* for a suitable memorandum (memo) format including “to, from, date, and subject”.

Possible practical suggestions

- Dignity and worth of individuals:
 - develop open two-way communication systems which involve individuals in decision making, such as quality circles, open door policies, suggestion schemes, regular team meetings, appraisal.
- Encourage individual initiative
 - individuals are encouraged and trained to be creative and given the appropriate environment and freedom to experiment
 - communication systems are set up to allow rapid and regular transfer of ideas through appropriate forums and communication channels
 - individuals may work from home or remote locations and are provided with adequate technologies to do so.
- Challenge individual capabilities
 - regular in-service training and staff development programmes linked to organizational and individual objectives e.g. professional examinations and qualifications, sponsored degrees, training courses
 - job enrichment, enlargement and empowerment. Rotate staff around different functions and location. Regular appraisal for promotion.
- Provide equal opportunities
 - departments to audit human resources to ensure equality of opportunity in recruitment, remuneration and promotion with regard to sex, ethnic diversity, disability and age
 - rewards such as bonuses are evaluated against objective, job-related criteria.

All benchmarks should be objective and open. They should be established using best practice from successful firms and organisations and related to internal and external circumstances. Targets should be realistic, but challenging. Rewards should be related to performance and idea / profit / sales generation.

[6 to 7 marks]

The suggestions clearly relate to the philosophies laid out in Figure 1 and provide at least one practical suggestion in each category. The benchmarks relate to organizational objectives and suggest measurement criteria.

[3 to 5 marks]

Suggestions relate to the philosophies, but may not cover all categories and/or may lack practical application. Benchmarking is referred to, but this may be vague.

[1 to 2 marks]

A descriptive approach lacking in detail and clarity and which may not address many of the issues required.

3. (a) **Discuss the advantages and disadvantages of mass (flow) production.** [5 marks]

Advantages

- the high initial costs can be spread over thousands or millions of units, thus reducing unit cost, through technical and purchasing economies of scale
- the labour required is low skill and easily recruited and trained
- mass output.

Disadvantages

- it requires a mass market, long production runs, and high and stable demand;
- the system is efficient but inflexible
- the work may be boring and repetitive for production line employees, and there is little opportunity for employee input into the process
- it may mean holding large volumes of stocks
- the production processes are interdependent and the line is vulnerable to disruption by any delays or stoppages at any point
- the products may need to be standardised
- setting up the line may be expensive.

[4 to 5 marks]

A comprehensive and developed discussion, highlighting the main advantages and disadvantages of mass production, supported by relevant examples.

[2 to 3 marks]

Relevant advantages and disadvantages are identified, but the answer may lack development or breadth, particularly for **[2 marks]**.

[1 mark]

The answer is brief and little more than a list.

(b) **Explain how just-in-time manufacture and the use of modern technologies, allows Stoves to customize their products, whilst still producing in bulk.** [5 marks]

Old production lines require mass production of standardised products. The line would need to be stopped to make alterations to features or specifications. Automation has linked production lines to computers and flexible robots. Computer aided design and manufacture have allowed firms to produce more flexibly. The cookers will still have standardised features, but varying options can be accommodated. Orders taken remotely in shops, or over the telephone/internet can be transferred to the factory and the appropriate set up prepared. Machines on the line are adaptable and work to designs specified by the operating programmes.

Production can be pulled through by specific customer order. Just-in-time manufacture can be applied as those components that are needed, can be delivered as required by the production line, minimizing costs of stockholding.

[4 to 5 marks]

Just-in-time manufacture is explained and linked to suitable modern technologies, such as CAD and CAM. There is a clear and detailed explanation using appropriate terminology as to how these allow *Stoves* to mass customize their cooker range.

[2 to 3 marks]

There is an attempt to explain just-in-time manufacture and to identify relevant modern technologies. This may lack some clarity or depth and may not fully address the concept of mass customisation.

[1 mark]

A limited and generalised response.

- (c) **Analyse the effects on *Stoves plc*'s liquidity and marketing of making cookers to order.**

[4 marks]

Automated lines like that of *Stoves* utilising just-in-time technologies and lean production, minimises stocks of raw materials, work-in-progress and finished goods. As the finished product already has a buyer, it can be delivered immediately, reducing the need for large warehousing and minimizing the risk of damaged or obsolete stock. Capital is not tied up in stock to the same extent and is therefore released for other purposes, thus improving the firm's liquidity and cash flow.

The mass customisation process allows customers to order a cooker adapted to their own specifications and different to other cookers. This allows the product to be more targeted to specific market segments. Added value and features can generate additional income through premium pricing and can create competitive advantage.

[4 marks]

A clear analysis of the effects of mass customisation method on liquidity and marketing is made linking into lower stockholding and improved capital availability. The ability to target products more efficiently is identified and its importance emphasised and analysed.

[2 to 3 marks]

Issues of liquidity and marketing are addressed, but the answer tends to the descriptive, with less development and illustration.

[1 mark]

A limited and generalised response.

- (d) **Evaluate production and promotion strategies, which may provide additional competitive advantage for Stoves' cookers over other brands.** **[6 marks]**

Possible production and promotion approaches:

- image creation through promotional methods developing differentiation and brand loyalty and aiming at higher income segments
- unique and additional specifications and options offered
- emphasis on design and aesthetics
- cellular and lean production
- improved management of distribution chains reducing time to market and cutting costs
- advertising campaigns
- on line ordering and web site development
- exhibitions and PR activity.

It is likely that *Stoves* would wish to maintain its position at the top end of the market. Any promotional effort will seek to emphasise value added and/or product uniqueness. Clearly, the focus will be on quality and reliability. Any initiatives will need to be cost-effective and assessed.

[5 to 6 marks]

Promotion and production approaches are discussed and evaluated, which link into the superior image and customer focused aspects of Stoves' cookers.

[3 to 4 marks]

Promotion and production approaches are discussed, with some reference to image and customer focus.

[1 to 2 marks]

A descriptive approach, which although relevant is limited in scope.

4. (a) Use the Boston Consultancy Group matrix to describe the nature of the product portfolios manufactured by the two firms. [4 marks]

The four boxes or quadrants are described in the BCG matrix as:

Problem Child (Question Mark) – low share and high growth

Star – high share and high growth

Cash Cow – high share and low growth

Dog – low share and low growth.

Firm A has 4 problem children, 5 stars, 2 cash cows and 2 dogs.

Firm B has 2 problem children, 5 stars, 4 cash cows and 2 dogs.

[3 to 4 marks]

The quadrants in the matrix are accurately described and a summary of the portfolios of each firm identified.

[1 to 2 marks]

The quadrants are defined in a general sense, possibly not by name, which indicates a general understanding, but in an imprecise way. For [1 mark], there may be no attempt to provide a summary of the portfolios.

- (b) Analyse the present product portfolio of the two firms and suggest strengths and weaknesses of each firm. [6 marks]

Firm A

Strengths

- clearly innovative as it has a large number of question marks and stars. The future looks bright if the stars can be developed further
- it has only two dog products
- one of its stars is close to becoming a cash cow.

Weaknesses

- it may be difficult to give the necessary investment to the stars and question marks, as cash flow is limited by the lack of cash cows
- the two dog products are very close to their death and may be using up valuable resources
- if several question marks fail the firm's future maybe placed in jeopardy
- this is a competitive and dynamic industry – change and competition may change an apparently stable position overnight.

Firm B

Strengths

- it has the ability to invest heavily in its stars and question marks as it has four well performing cash cows providing liquidity and funds for expansion
- the future looks bright if the stars can be developed further
- it has only two dog products and one of these appears to be in recent decline – it may be possible to save it through extension strategies
- two of its stars are close to becoming cash cows
- the cash cows look like they have several years of maturity to go yet.

Weaknesses

- there may be some concern that few question marks are coming through – possibly indicative of lack of investment or poor / unsuccessful development
- this is a competitive and dynamic industry – change and competition may change an apparently stable position overnight
- the two dog products are consuming resources.

It would appear that Firm B is in a much stronger position, particularly in regard to cash flow and future revenue streams. Firm A may need to seek additional finance or partnerships.

[5 to 6 marks]

Both strengths and weaknesses are identified and the present product portfolios are assessed and summarised intelligently.

[3 to 4 marks]

Both strengths and weaknesses are identified. The analysis of the portfolio is rather limited and tending to the descriptive.

[1 to 2 marks]

A brief and limited response, which is likely to be descriptive.

- (c) **Propose marketing strategies for Firm A and Firm B, emphasizing necessary changes to their product portfolios.** **[5 marks]**

The portfolios need to be linked to the marketing mix and financial requirements. Analogies have been suggested for strategies such as sow / grow / harvest / plough. The question marks are the key cash users and the cash cows the main cash generators. Market research and forecasts should form the basis of any market and product strategy.

Firm A

- decisions will have to be made about the fate of the two dog products
- cash flow forecasts must be made to avoid liquidity problems and to ensure adequate cash to fund the development of the question marks and stars
- significant promotion must be carried out for the question marks and the stars. Promotion will need to be a mixture of informative and persuasive
- developing distribution channels and outlets for the stars and question marks will be a priority
- extension strategies may be required for the firm's two cash cows to allow new cash cows to come through and take their place
- pricing decisions will need to be made for the question marks and stars in particular.

Firm B

- decisions will have to be made about the fate of the two dog products. It appears that one of these may be open to an extension strategy
- a focus on research and developing new products may be required, especially as the firm is likely to be cash rich at present
- significant promotion must be carried out for the stars to turn these into cash cows. Promotion will need to be a mixture of persuasive for the stars and reminding for the cash cows. An emphasis on image is likely, both brand and corporate
- developing distribution channels and outlets for the stars will be a priority
- pricing decisions will need to be made for the question marks in particular.

[5 to 6 marks]

There is a clear distinction made between the two firms and therefore a different emphasis. There is a recognition of cash flow implications. The suggestions are intelligent and well supported and clearly focused on the requirements of the two firms.

[3 to 4 marks]

There is a distinction made between the two firms and a different emphasis to some extent. The strategies may lack development with an overemphasis on general marketing rather than a focus on the two firms.

[1 to 2 marks]

A brief and limited response, which is likely to be descriptive and general.

- (d) Evaluate the importance of innovation and new product development in high technology industries and assess the problems of financing the necessary research and development.**

[5 marks]

Innovation and new product development are crucial in high technology industries as life cycles tend to be short and development costs high. There is a strong tendency to see “me-too” products in these industries, so firms need to protect market share by maintaining unique products through copyright or being “first to market”.

The mortality rate of new products is also high in cutting edge industries and the costs of development added to the failure rate means that R&D costs are likely to be a much higher proportion of costs than for a conventional firm. Development is also highly labour intensive requiring highly skilled staff, who are often in short supply. This adds to the high costs involved. The use of venture capital, joint ventures and start up grants for small firms is therefore crucial. Often banks will not lend the required funds as the projects carry such a high level of risk.

[5 marks]

The importance of innovation and NPD is clearly linked to the nature of the industry and the high costs of development identified and explained. The problem of finance is linked to the risks involved.

[3 to 4 marks]

The importance of innovation and NPD is addressed in general or descriptive terms. The problems of finance is linked to the risks involved for ***[4 marks]***.

[1 to 2 marks]

A more limited response. For ***[2 marks]*** the importance of innovation is recognised, but the unique nature of high technology industries only alluded to.

5. (a) **Describe secondary and primary research methods that A C Nielsen may have used to collect data for its Millennium Report, and suggest possible problems it may have faced gathering such data within China.** **[4 marks]**

Primary research: first hand data gathered directly by an organization for its own specific purpose *e.g.* questionnaires, interviews, focus groups, observation.

Possible problems: cultural differences affecting communication and response, suspicion of intent by respondents who may not be used to replying honestly and with candour; restrictions placed on movement of researchers. Distribution of questionnaires into less developed regions may be difficult or impossible; the size of the population and the need to make sample representative.

Secondary research: second hand data gathered by another organization, that may be useful to others *e.g.* government statistics, books and magazines, television and radio, company reports, market research firm's data, trade associations.

Possible problems: less freedom of information, non access to government records, political control of media, less developed ICT systems making access to data more difficult; commercial systems less developed.

[3 to 4 marks]

A description of primary and secondary research supported by some suggestions as to problems faced when gathering data. These suggestions may be limited in number or detail for **[3 marks]**.

[1 to 2 mark]

An attempted description of primary and secondary research which may lack detail or accuracy. There may be suggestions as to specific problems gathering data, but these are limited in number and/or detail as well as inaccurate or irrelevant.

- (b) **Discuss and assess the possible advantages and disadvantages of foreign firms locating in emerging economies such as China.** **[6 marks]**

Advantages

- huge potential market of 1.3 billion consumers – additional sales and profits and greater economies of scale
- consumer appetite for a wide range of consumer goods as evidenced in the article
- cheaper raw materials, labour and other costs if manufacturing
- cheaper advertising
- opens up the whole of the Asian market *e.g.* ASEAN markets – avoiding trade barriers
- improving political links
- less economic restrictions *e.g.* planning, employee legislation.

Disadvantages

- cultural and language problems – commercial failure as lack of knowledge of markets and consumers *e.g.* little experience of Western products, such as chocolate
- restrictions on behaviour by authoritarian government. Possibly bureaucracy slowing decision making and impeding spontaneity
- need to transfer technology and take Chinese partner – will Chinese companies produce “me-too” products in the future
- some lack of infrastructure and commercial support in some regions
- acceptance of reduced human rights.

It is likely that the immense commercial opportunities and the potential future expansion of the Chinese market would far outweigh any reservations. This is evidenced by the huge growth of inward investment into China and the United States’ desire to court the regime and give it preferred trading status.

[5 to 6 marks]

Both advantages and disadvantages are discussed intelligently and assessed against some objective criteria. Information is taken from the information in the question.

[3 to 4 marks]

Advantages and disadvantages are discussed, although these may be limited in number or depth. Any assessment may be brief, one-sided and/or lacking reference to the information provided.

[1 to 2 marks]

A brief and limited response, which is likely to be descriptive.

- (c) (i) **Define, with examples, the terms tariffs, quotas and unfair trade practices.** [2 marks]

Tariffs: taxes on imports.

Quotas: limits on the number of units imported into a country in order to protect domestic industries *e.g.* Japanese imports into the EU are subject to limits.

Unfair trade practices: any practice, which unfairly discriminates against a non domestic firm *e.g.* laws which foreign companies would find it difficult to obey; unnecessary, costly and time consuming administration.

[2 marks]

The terms are accurately defined or the examples show understanding of the principles.

[1 mark]

The terms are defined in a general sense, which indicates a general understanding, but in an imprecise way.

- (ii) **Explain why organisations, such as the WTO promote free trade.** [2 marks]

Free Trade: is trade conducted without any trading restrictions, such as tariffs. It is promoted as it maximises economic welfare and it encourages location in those countries best suited to production. As a result prices should fall and output increase. Trade may improve relationships between countries and improve prices and choice for customers.

[2 marks]

The reasons for free trade are explained accurately.

[1 mark]

Reasons for free trade are proposed, but are imprecise.

- (d) **Analyse the case for and against joining a regional economic bloc, such as the EU, ASEAN, NAFTA or Mercosur.** **[6 marks]**

A free trade or economic bloc dismantles all restrictions on cross-frontier trade between members, involving the removal of quotas, tariffs and exchange controls.

Advantages

- promotes the trade and availability / choice of traded goods
- prices tend to be lower as a result of increased quantity and zero taxation
- forces domestic producers to become more efficient as they are no longer protected by artificial barriers
- provides a greater opportunity for industrial specialisation and a more economically efficient use of scarce resources
- infant industries within the bloc may be protected
- may bring accompanying closer political and social union
- common external tariff.

Disadvantages

- may create unemployment as domestic firms faced by increased competition, close down
- although goods may be cheaper imported from other members of the trading bloc, they may be even cheaper if imported from non-members
- existing trade agreements or patterns may be destroyed, *e.g.* the UK and Commonwealth countries
- may reduce individual country's sovereignty.

[5 to 6 marks]

The case for and against joining a regional economic bloc is supported by at least three accurate advantages and disadvantages which are well developed and illustrated.

[3 to 4 marks]

The case for and against joining a regional economic bloc is analysed, although the discussion may be imbalanced or the advantages / disadvantages limited in number.

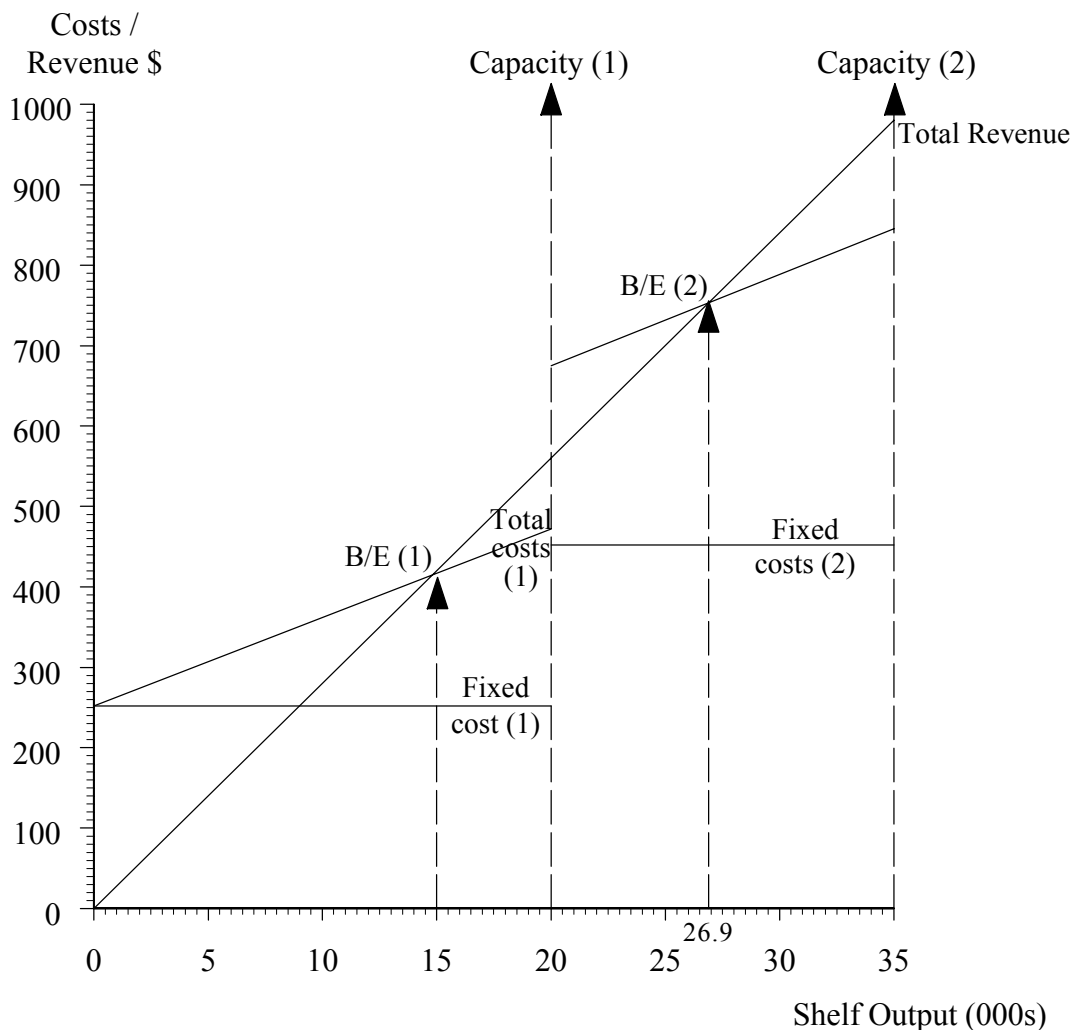
[1 to 2 marks]

A generalised and descriptive response.

6. (a) (i) Prepare a break-even chart showing the revenues and costs for *Safepac* with and without the extra factory. Show *all* your workings in the form of a table. Identify break-even points on the graph. [7 marks]

Working Output (000s)	FC	VC	TC	TR	Profit/loss	
0	252	0	252	0	(252)	
5	252	56	308	140	(168)	
10	252	112	364	280	(84)	
15	252	168	420	420	0	B/E(1)
18	252	201.6	453.6	504	50.4	
20	252	224	476	560	84	
<hr/>						
25	452	280	732	700	(32)	Original capacity
30	452	336	788	840	52	B/E = 26 900 units
35	452	392	844	980	136	

Breakeven chart for *Safepac* without an extra factory



[7 marks]

The graph is constructed accurately and fully labelled *e.g.* axes and all lines – FC, TC, TR. Full and clear working is shown.

[5 to 6 marks]

There are minor inaccuracies in the graph lines and the profit may not be accurate. However, all the major elements of the break-even graph must be present for **[6 marks]**. There is an attempt to show the working behind the graph.

[3 to 4 marks]

The graph is mostly correct. Incorrect break-even figures may be shown / calculated, but the candidate has a sound grasp of the graphical technique. If working is not shown at all then **[4 marks]** is the maximum mark awarded.

[1 to 2 marks]

Some elements of the graph and/or working are correct, although not well labelled. There may be a lack of understanding of the method required and little explanation of the working.

(ii) Calculate profit earned at the following production levels:

- **present output (18 000 units)**
- **present capacity (20 000 units)**
- **output with new order (30 000 units)**
- **capacity with new factory (35 000 units)**

[3 marks]

Profit at 18000 unit present output	= \$ 50 400
30 000 units	= \$ 52 000
20 000 present capacity	= \$ 84 000
35 000 higher capacity	= \$ 136 000

[3 marks]

All the figures are correct and working shown in a table or separately.

[2 marks]

Two figures are correct with working.

[1 mark]

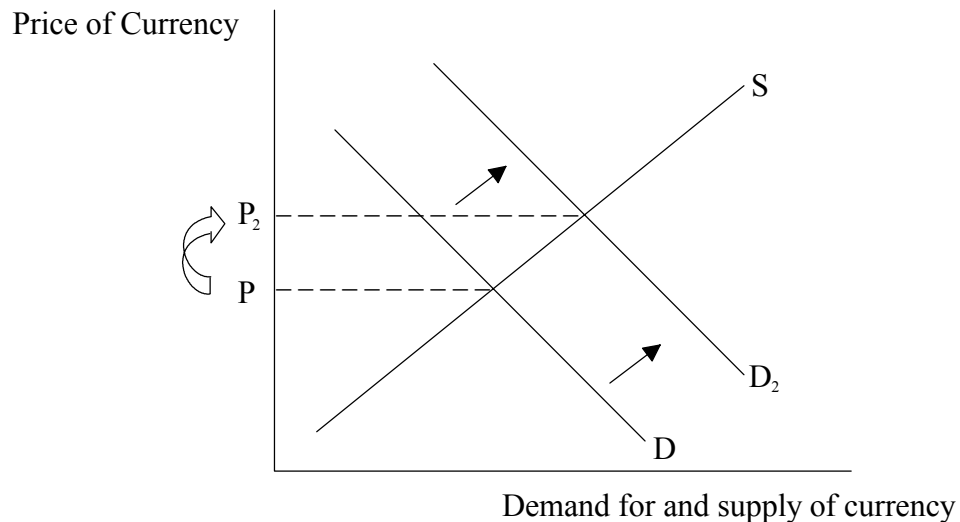
Figures are all inaccurate but there is logic in the attempted calculation or one figure is correct.

(b) Explain the relationships between interest rates, inflation and exchange rates.

[5 marks]

The interest rate is the cost of money. As interest rates go up, consumers and firms will borrow less and may be encouraged to save more. Firms may put off investment projects as they cost more. As demand falls, the level of prices in the economy falls as does the inflation rate.

The interest rate is the reward for saving in banks. If interest rates increase in one country relative to another, there is an incentive to invest in the bank offering the higher rate of interest. If the bank is in the other country, that country's currency must be purchased first. This puts up demand for that currency, whilst increasing supply of the currency exchanged. The rules of supply and demand say that as the demand for a currency increases its price will rise, whilst it will fall if demand drops or supply increases.



In the case of the European currency against the Indian rupee, it would be expected that the European currency would fall in value as demand drops and the rupee will appreciate in value. (Other currencies can be used.)

There is also a relationship between inflation and exchange rates. As inflation in one country rises relative to another, it makes its goods appear more expensive. Demand will fall, and therefore demand for that country's currency will also drop. The value of the currency should fall.

[5 marks]

There is an explanation of the relationship between the three economic concepts, although it is not necessary that this includes a diagram or as much detail as above. It must be clear that the relationship is firmly understood.

[3 to 4 marks]

There is an explanation of the relationship between the three economic concepts, although this may lack clarity at times.

[1 to 2 marks]

There is an attempt to explain the relationship between the three economic concepts, but the explanation is mostly inaccurate and/or merely a description of the concepts.

- (c) Evaluate the option of subcontracting manufacture to the Indian firm. [5 marks]

The Indian Offer:

$$840 \text{ Indian rupees per display unit} = \frac{840}{40} = \$ 21 \text{ per case.}$$

At sales of 30 000 units

Total revenue	30 000 × \$ 28.00	\$ 840 000
Total variable cost	30 000 × \$ 21.00	\$ 630 000
New fixed costs		<u>\$ 140 000</u>
Total costs		<u>\$ 770 000</u>
Total profit		<u>\$ 70 000</u>

Arguments for subcontracting to India:

- the profit earned from subcontracting profit is nearly \$ 20 000 higher than the present profit at 18 000 units and \$ 18 000 more than the profit at 30 000 units
- future European costs, such as labour may rise more quickly than Indian costs.

Arguments against subcontracting to India:

- profit with the existing facility, but at 20 000 unit capacity is \$ 84 000, \$ 14 000 higher
- profit at 35 000 unit capacity with extra European facility is \$ 136 000, \$ 66 000 higher
- if the European Central Bank cuts interest rates, then the likely effect will be to reduce the value of the European currencies, making imports from India potentially more expensive
- any interest rate fluctuation creates some uncertainty in international trade
- transferring production will have human resource implications for *Safepac*'s staff – it may mean redundancies
- quality control may be more difficult
- the Indian firm may eventually cut *Safepac* out of the deal.

The arguments against subcontracting appear strong at the present moment, but changes in exchange rates, inflation and other economic factors may affect long term appraisal of such an option.

[5 marks]

There is a clear analysis with judgement made on the option. Information from the question is used to support the discussion.

[3 to 4 marks]

There is an analysis of the issues, but a judgement may not be made. The information employed to support discussion may omit some relevant factors.

[1 to 2 marks]

There is an attempt to examine the issues, but they are descriptive and possibly unclear.