

**ADVANCED SUBSIDIARY GCE UNIT
BUSINESS STUDIES**

Business Behaviour

WEDNESDAY 10 JANUARY 2007

2873

Morning

Time: 1 hour 15 minutes

Additional materials: Answer Booklet (8 pages)



INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the spaces provided on the answer booklet.
- Answer **all** the questions.
- If you use extra sheets of paper, fasten the sheets to the answer booklet.
- Read each question carefully and make sure you know what you have to do before starting your answer.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is 60.
- You will be awarded marks for the quality of written communication where an answer requires a piece of extended writing.

This document consists of **8** printed pages.

Answer **all** questions.

- 1 (a) ECV is considering an investment project supplying vending machines to schools in the Stockport area (lines 52–53).

Net Annual Cash Inflows of the Project

End of Year	Net Annual Cash Inflow (£)
0	(200,000)
1	80,000
2	80,000
3	80,000
4	100,000
5	100,000
6	100,000

- (i) Calculate the Payback period. [2]
- (ii) Calculate the Accounting Rate of Return (ARR). [4]
- (b) To what extent are Investment Appraisal techniques (Payback and ARR) helpful to ECV in deciding whether or not to supply vending machines to schools? [10]
- 2 “...we could try to carry out some market research to help us identify specific trends about snack demands in different types of business.” (Lines 40–41)
- Evaluate appropriate methods of market research that ECV might use. [16]
- 3 Nima Kumar has proposed that ECV should pay a bonus to all workers if there are no accidents over a three month period.
- To what extent is this proposal likely to be effective in reducing accidents? [16]
- 4 Discuss how ECV might improve its operational efficiency. [10]

East Cheshire Vending plc (ECV)

Peter Bentley is Managing Director of vending machine company, ECV plc, based in Macclesfield, Cheshire. The product offered by the vending machine industry has changed greatly in recent years. Gone are the days of bland machines that dispense crisps and sweets, require the right change and serve only three types of hot drink – tea, coffee and something looking like hot chocolate. These days vending machines can offer a global dining experience, with customers just as likely to find Danish pastries, croissants, paninis and freshly made salads, as well as cappuccinos, lattes and espressos made fresh from the bean. 5

However, Peter still feels that this highly competitive industry is stifled by a stigma of the past. At a recent training day for his sales team of four he said, “Ask most people if they would prefer a coffee and snack from Costa Coffee or the same from a vending machine at a much lower price, I know they’d avoid the machine option. It is a hurdle we must overcome if we are to increase our turnover from around £2 million, where it has been stuck for the last few years. There is no reason why the drinks and snacks available in vending machines can’t be as good as any of the well-known coffee house brands. I want it to be the sales team’s target for the next 12 months to work with branded suppliers such as Nescafe and Kenco, to help our customers recognise that branded products in vending machines will increase the quality of what comes out of the machine.” 10 15

It is the food and drinks that are sold in the vending machines that are particularly vital to ECV’s future (see Figure 1). Following the sales meeting, Peter met with ECV’s Marketing & Sales Manager, Jacqui Holmes. 20

Peter began by emphasising what he had said in the meeting, “If we are to increase our pre-tax profits above the £100,000 mark, then we need to increase profit margins. This will be much easier if we can do more deals on branded products where there is more added value for us.”

“Not all clients are willing to pay for these names though,” replied Jacqui. “Nearly 90% of our customers are businesses looking to supply staff with drinks and snacks, often on a subsidised basis. They are unwilling to buy top of the range.” 25

“But isn’t there recent evidence that those businesses willing to invest in refreshments for their employees can actually see a boost in staff morale?” said Peter.

“Yes,” replied Jacqui, “it has also been found that different types of workers prefer different snacks. For example, staff in call centres prefer snacks that can be eaten over a longer period of time in small amounts; in firms where there are more women than men cereal bars and low fat crisps are more popular than chocolate – although I personally find that last fact hard to believe!” 30

Peter had an idea. “Wouldn’t it be great if we could go into our customers’ businesses and find out this sort of information to ensure that we put the right vending machine with the right contents into place? We could certainly increase margins if the machines were providing exactly what the end customer wants. It could be part of the service we offer to each client.” 35

“I think it might be too big a job to personalise every one of our deals,” suggested Jacqui, “but we could try to carry out some market research to help us identify specific trends about snack demands in different types of business.” 40

Another area which Peter is currently investigating is the fast growing market for vending machines in schools. Until recently the majority of schools dealt directly with the major suppliers such as Mars and Coca-Cola. They offered either free or heavily subsidised machines, in return for space being committed to their products. However, with increased efforts being made to encourage healthy eating and reduce obesity in school children, more schools and local education authorities are looking to deal with independent suppliers such as ECV that do not have fixed contracts, giving schools more chance to offer healthier selections. 45

ECV's Finance Manager, Ken Beard, has been looking at the financial projections for a possible investment into the school-based sector of the vending machine business. ECV has a company policy of only investing in projects with a minimum ARR of 18% p.a. when calculated over a six year period. A consortium of schools in nearby Stockport has approached ECV to provide a total of 15 vending machines. Ken has estimated that the contract will have an initial total start up cost of £200,000. In preliminary discussions with ECV's senior managers, Ken has recognised an enthusiasm from most departments to proceed with this project, especially as all financial projections look good. However, Ken has been emphasising to anyone who will listen that, just because investment appraisal figures look good, it does not automatically mean that all risk and uncertainty has been removed. Another issue is the objections from the maintenance department about having to carry out on-site repairs in schools. 50 55

Ken is also conscious that ECV is still coming to terms with its most recent investment project – a new operations centre opened in early 2006 (see Figure 2) – that has been built on one of the many new industrial estates in Macclesfield. Despite the transfer of the old machinery from ECV's previous site, the centre is still being brought 'up to speed'. The centre contains a workshop where vending machines in need of significant repairs are taken to be worked on by ECV's team of four highly skilled maintenance engineers. 60 65

The operations centre also has a warehouse which is packed with confectionary, cereal bars, cans and bottles of water and soft drinks, as well as the dry ingredients for hot drinks. Many of these products have specific storage requirements concerning temperature and humidity. ECV employs a full-time Warehouse Manager, Stephanie Nealgrove, who is in charge of over 20 permanent and casual employees, many of whom have worked for ECV on and off for the past five years. It is the warehouse workers job to package up orders for customers. 70

Stephanie joined ECV when the operations centre was opened, having previously worked in a warehouse for one of ECV's competitors. She has recently returned from a week long course on improving safety in the workplace. She attended the course thinking that she could then do something about the already worryingly high accident rate in the warehouse (see Table 1). Stephanie was surprised that Ken Beard needed a lot of convincing to authorise her attendance on the course. She disagreed with his comment that "£3,000 could be better spent on worker bonuses". She was also disappointed that she had received no response yet from any of the managers to the memo she wrote on returning from the course (see Appendix 1). 75

Stephanie's line manager is Nima Kumar, ECV's Operations Manager. He could understand what Stephanie was trying to achieve and quietly supported it. However, he was more concerned about trying to address Peter Bentley's target to increase profit margins. Nima felt the way in which he could best contribute to this was by attempting to reduce ECV's costs. It would appear that the recent opening of the new operations centre had only made ECV's operational efficiency worse (see Table 2). 80 85

Figure 1 – ECV’s Income Streams by Value (2005-06)

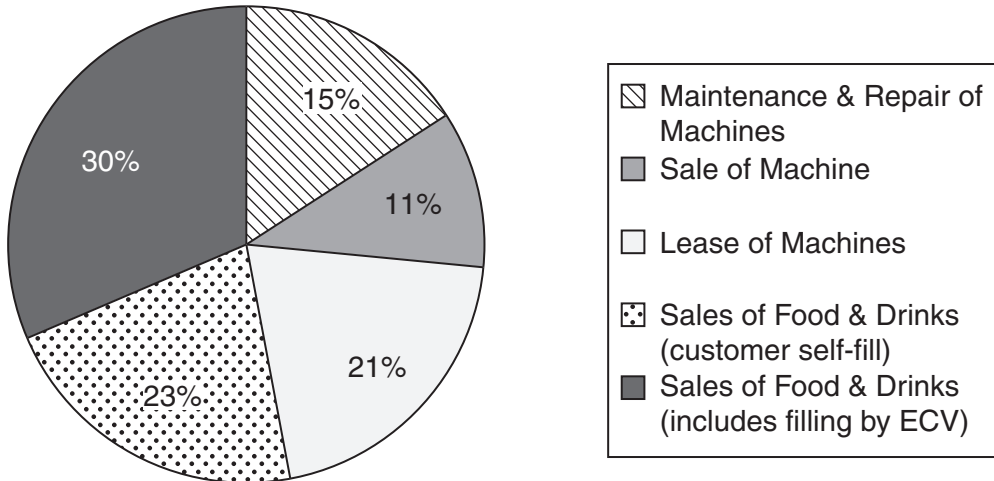
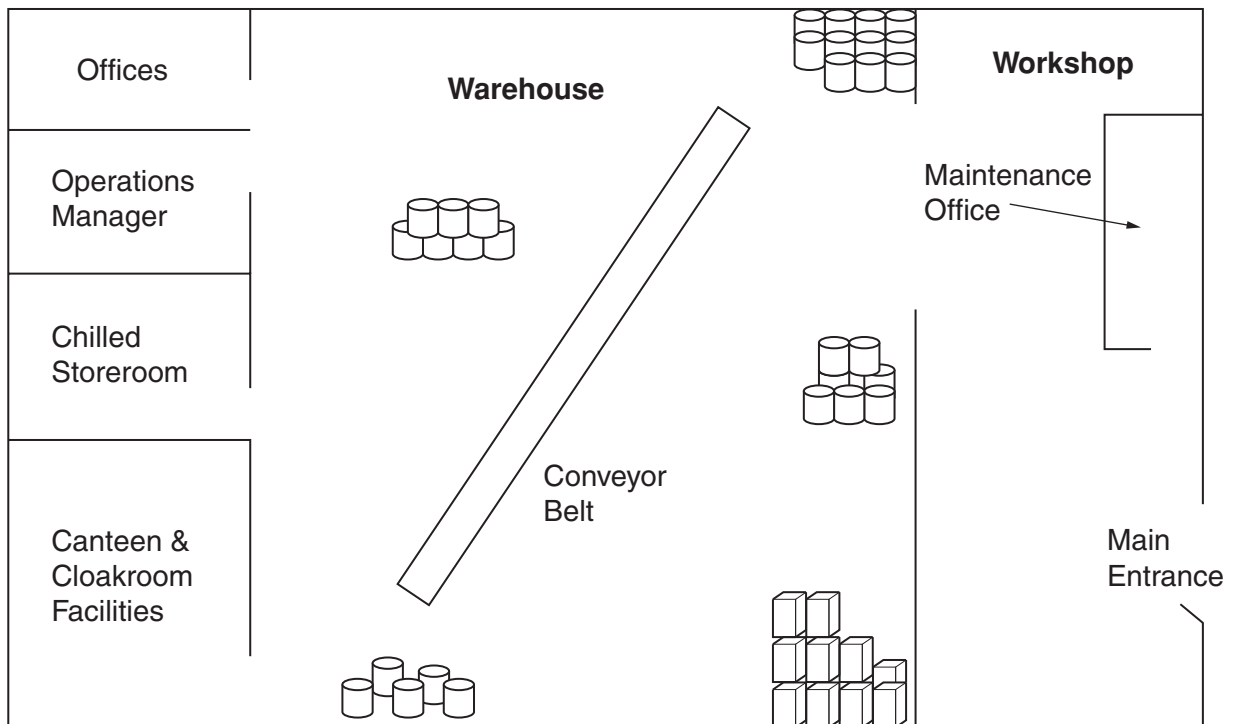



Figure 2 – Floor Plan of ECV’s Operations Centre



 Storage area for non-chilled dry items - e.g. tea, coffee, crisps, chocolate bars


 Storage area for non-chilled wet items - e.g. cans of soft drinks & bottles of water

Table 1 – Accidents in the Operations Centre, 2006

	Number of reported accidents	Most significant case	Cause of accident (after investigation)
May	5	One of the casual workers had to have one week off with a bad back	Poor lifting technique
June	5	Employee had to attend hospital with eye injury	Unauthorised use of fire extinguishers for a foam fight between two employees
July	9	Broken arm when an employee fell over carrying boxes of crisps	Workshop engineer left tools in middle of floor during tea break
August	10	Foot injury when one of the vending machines was being delivered for repair	Employees unloading the machine were wearing sandals due to the hot weather
September	12	Visiting potential client on tour of warehouse suffered slight concussion	Poorly stacked bottles of mineral water fell from shelving
October	25	Warehouse employee broke foot when run over by fork lift truck.	Driver of fork lift truck did not see colleague due to poorly stacked pallets
November	23	A number of incidents of jewellery and clothing being caught in the new warehouse conveyor belt	Apparent disregard for clearly documented safety procedures

Table 2 – Operational Efficiency Data for ECV's Warehouse

	Average Repair time for vending machines at ECV (working days)	Average Repair time for vending machines – Industry Standard (working days)
July–Oct. 2006*	3.9	n/a
Jan.–June 2006	3.1	1.0
July–Dec. 2005	1.5	1.3
Jan.–June 2005	1.4	1.3
July–Dec. 2004	2.1	1.4
Jan.–June 2004	1.0	1.2
July–Dec. 2003	1.1	1.3
Jan.–June 2003	0.8	1.5

* Latest period of only 4 months

Appendix 1 – Stephanie Nealgrove’s memo on safety in the workplace**MEMO**

To: All Senior Managers
From: Stephanie Nealgrove, Warehouse Manager
Subject: Safety in the workplace
Date: 28/9/06

As you will all know I have recently returned from a week long course in Leeds on safety in the workplace. It was a stimulating and strenuous week with lots of seminars and lectures about an employer’s legal obligations towards its employees and visitors.

Since my appointment earlier in the year, I have grown more and more concerned about the increased number of accidents and the slipshod attitude to safety by most of the workforce. For example, many accidents go unrecorded. I see it as one of my main priorities during 2007 to improve this poor record.

I would like to discuss this matter with all of you as a matter of urgency, so that we can formulate a clear strategy for the future. I am sure you will agree that there will be many benefits for the business, over and above the obvious ones.

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