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ADVANCED  
General Certificate of Education  
January 2010

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## Business Studies

### Assessment Unit A2 3e

*assessing*

Module 1 to 5  
Objectives and The Business Environment,  
People in Organisations, Accounting and Finance,  
Marketing and Operations Management

[A2T51]

MONDAY 1 FEBRUARY, AFTERNOON

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#### TIME

1 hour 40 minutes.

#### INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number on the Answer Booklet provided.  
Answer the **one** question.

#### INFORMATION FOR CANDIDATES

The total mark for this paper is 63, which includes a maximum of 3 marks for quality of written communication.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

# Global Warming

## Introduction

- 1 Global warming may be defined as an increase in the average temperature of the earth's atmosphere that has been caused by the build-up of greenhouse gases. Over time, this increase in temperature may cause climate change and result in rising sea levels, a change in water supplies and changes in crop yields. Global warming could also affect human health, harm wildlife and damage fragile ecosystems.
- 2 Global warming is forcing the world to contemplate changing the way it does business. A more sustainable global economy may emerge as countries and companies try to combat the challenges posed by climate change. Once regarded as irrelevant to economic activity, environmental problems are causing a drastic rewrite of the rules for business, investors and consumers.
- 3 It is claimed that humans are to blame for global warming which has resulted in animals, plants and ecosystems dying off at a rate not seen since the last great extinction event 65 million years ago. Even though human existence depends on healthy thriving forests, rivers, oceans and all the other ecosystems, they are all being sacrificed for consumer goods, lifestyle and profit.
- 4 The world economy depends on oil and coal to produce goods and services such as plastics, medicine, clothes, food and transport. However, it is argued by many that it is this oil and coal usage that is the cause of global warming. To combat global warming there have been calls for a reduction in the consumption of these products and less use of oil and coal.
- 5 Despite these calls, it is argued that society will not stop using oil and coal since lifestyles, wealth, power and success depend on these two fossil fuels. Additionally, some would argue that if the amounts of these fuels used are reduced, there will be little overall impact, as the same amount will be used up, except over a longer period of time. Some scientists would go even further, claiming that coal and oil are not the cause of global warming. They insist there are other causes of climate change, such as volcanic activity.

## Conflict amongst Nations

- 6 Nevertheless, most nations do accept that global warming is a result of industrialisation and the burning of coal and oil. This has led to global debates as to how the problem should be tackled and controlled.
- 7 America could reduce its greenhouse gas emissions dramatically by reducing its dependence on burning coal, which generates 55% of America's electricity. A fuel switch, from one fossil fuel to another, from coal to natural gas, could reduce emissions by between 40% to 60%. However, many Americans are against such a move as it could be costly and would be ineffective unless similar actions are implemented worldwide. Many members of American Congress say they will only support mandatory emissions at home if other nations act also.
- 8 China has emerged as a major contributor to global warming and there have been calls for it to take measures to reduce its emissions. With 1.3 billion people and a large industrial base,

China is the world's largest source of heat-trapped gases from coal, oil and gas, just ahead of America. China argues that its emissions are a result of the world demand for their products and therefore the burden should not fall solely on its shoulders. Some research estimates that at least 25% of emissions from China are caused by its export industry. Additionally, China has said in clear terms that it will not reduce emissions until it has "modernised" and its people enjoy a high standard of living similar to that enjoyed by Americans. To achieve this, China is building a new coal-fired power station every two weeks to meet the needs of its growing economy.

- 9 The Director of the Department of Climate Change in China's National Development and Reform Commission has argued that China should not have to take responsibility for the 25% of its emissions that result from making products for the rest of the world.
- 10 India and Brazil have made a similar commitment to raising the standard of living for their own people by choosing to profit from activities such as the clearing of rainforests. The economically and politically powered Middle-East oil countries, such as Saudi Arabia, would need to reduce oil production by 80% to meet the forecast targets. This would have major impacts on the national income and economic growth of these countries.
- 11 On a micro scale, a cut in emissions would mean a reduction in extraction levels. Therefore companies such as Shell who have multi-billion dollar incomes would need to accept a cut in profits. This reduction in supply is likely to increase the price of oil.
- 12 Politicians around the world say they are concerned about global warming and will act to prevent it. It is argued that such action will help future generations enjoy a better and healthier environment. However, this would lead to a deterioration in current lifestyles as a result of lower economic growth. It is also argued that there is no benefit in acting for future generations as governments should be more concerned about the present. It has been estimated that necessary steps to reduce emissions would cost at least \$150 billion a year. Pressure groups argue that as little as \$70–\$80 billion could give developing world inhabitants access to basics such as health, education, water and sanitation. Furthermore, technological advances may reduce greenhouse gases in the future and help solve the global warming problems.

### **An Economic Opportunity?**

- 13 Combating climate change may not be a question of who will carry the burden but could instead be viewed as an economic opportunity. A group of researchers from the University of Cambridge have concluded that even very strict reductions in emissions could create a macroeconomic benefit, if governments go about it the right way. There is some evidence that tougher greenhouse gas targets and regulation may actually increase benefits through improved innovation and distribution of low carbon technologies, along with increased revenues from taxes.
- 14 Some companies have also realised that they could actually make money out of becoming more environmentally friendly. The chemical giant DuPont cut its greenhouse gas emissions by 72% between 1991 and 2007, saving £1.5 billion.

- 15 The World Bank has calculated that 39 countries have lost 5% or more of their wealth because of unsustainable forest harvesting, depletion of non-renewable resources and damage from emissions.

### **Do Nothing?**

- 16 While the debate on whether tackling climate change will be a burden or a boost to economies is still ongoing, research has shown that doing nothing can have significant and often unexpected economic costs. A recent forestry study has shown that a shift in production from trees such as the Norway spruce, which prefer a colder climate, to more heat tolerant trees like oak would create significant net losses in the value of forestland in Europe. Forecasts suggest that by the year 2100, large areas of Europe will be covered by Mediterranean oak which has low economic productivity. This will have implications for firms in the primary sector.

### **Do The General Public Care?**

- 17 Sceptics argue that sensational headlines such as “Global Warming is even worse than we thought” will not convince the public particularly if they don’t see it themselves. For the average person, global warming remains a distant prospect. Politicians are reluctant to impose costs on their citizens and businesses through environmental policies and “green taxes” if those same people can vote them out of office at the next election. Additionally, businesses may have to buy emission permits which could lead to higher costs. If this is the case they will either try to absorb them, become uncompetitive and fail (leading to both lower tax revenues and higher welfare costs for the state) or put their prices up and let consumers pay.

### **\*Tymerland plc**

- 18 Fears of global warming have resulted in some companies rethinking their business model. One firm that is doing this successfully is Tymerland plc. Tymerland plc is one of the United Kingdom’s largest wood products suppliers, with an annual turnover of £50 million. The company, which is based in Northern Ireland, supplies a wide range of wood products including construction timber, wood for fencing, and wooden pallets. Tymerland plc employs 500 workers directly, while an additional 200 people are engaged in timber harvesting and haulage activities.
- 19 One measure that Tymerland plc has implemented is an initiative that uses surplus sawdust and woodchips to generate electricity. The electricity and heat produced supplies almost all of Tymerland plc’s requirements, saving nearly £400 000 in energy costs.
- 20 This measure resulted in Tymerland plc receiving an award recognising the company’s attempts to act in an environmentally friendly manner. This award led to widespread media coverage and raised the company’s profile even further. However, while accepting that the company is moving in the right direction, some pressure groups have called on Tymerland plc to implement further measures to reduce greenhouse gases.

21 The Board of Directors has met on several occasions to discuss possible ways to take the company forward. Several board members are in favour of the company becoming more environmentally friendly, whereas others feel that the impact on profitability of such a move would concern shareholders. Tymberland plc's Transport Manager has just completed research into how the company could distribute its products in a more environmentally friendly way. The main proposals from this include:

- Using bio-diesel to fuel company vehicles. (Fuel made from vegetable oils or animal fats.)
- Investing in aerodynamic "teardrop" trailers to deliver products. These are 6% more fuel efficient than traditional trailers.
- Working with suppliers to improve the efficiency of deliveries, including increasing the use of rail transport.
- Minimising the use of airfreight whilst balancing the need to trade with developing countries.

Although the transport manager claims that these measures will save Tymberland plc money in the long term, it will cost £300 000 to implement them.

### Conclusion

22 Global warming has caused great worldwide debate. Politicians and scientists have not been able to agree on how to solve the problem, and even more fundamentally, whether a problem exists in the first place. Despite these conflicting views it is evident that the world is facing major environmental change. How individual nations and companies such as Tymberland plc tackle this issue may affect everyone.

\* Tymberland plc is a fictitious organisation.

[http://www.americanprogress.org/issues/2007/09/podesta\\_nast.html](http://www.americanprogress.org/issues/2007/09/podesta_nast.html)  
<http://www.miamiherald.com/news/world/AP/story/953196.html> Posted on Monday, 03.16.09  
<http://www.azocleantech.com/Details.asp?newsID=4923> Published Date: 15/3/2009  
<http://news.bbc.co.uk/1/hi/sci/tech/7929174.stm> Page last updated at 09:47 GMT, Tuesday, 10 March 2009  
<http://www.climateimc.org/en/forum/2007/11/16/global-warming-versus-economy-economy-wins>  
<http://www.dailymail.co.uk/news/article-557374/The-REAL-inconvenient-truth-Zealotry-global-warming-damage-Earth-far-climate-change.html>

Answer the **one** question.

- 1 The Northern Ireland Sustainable Development Strategy, published in May 2006, commits Northern Ireland to a reduction of 25% in greenhouse gas emissions below 1990 levels by 2025. The success of this may be supported by a more recent report showing that Northern Ireland's greenhouse gas emissions have fallen since 1990. However, it has been argued that the figures may have been due to inconsistencies in data collection methods rather than real reductions in emissions.

Interestingly, during 2007, the then Environment Minister for Northern Ireland, Sammy Wilson MLA, refused to "blindly accept" the need to make significant changes to the economy to stop climate change. "I am opposed to any attempts to impose or raise green taxes, which is an illogical way to combat a 'problem' which is in reality an unproven theory driven by the green lobby and supported by scientists who exaggerate and in many cases distort data in order to give the illusion that there is a serious problem".

<http://www.northernireland.gov.uk/news/news-doe/news-doe-september-2007/news-doe-180907-htm>  
[http://news.bbc.co.uk/1/hi/northern\\_ireland/759810.stm](http://news.bbc.co.uk/1/hi/northern_ireland/759810.stm),  
[http://www.sammywilson.org/the\\_issues.html](http://www.sammywilson.org/the_issues.html)

You are a consultant employed by Tymberland plc. You have been asked to prepare a formal report entitled "Green Transport – The Way Forward".

The aim of the report is to investigate the impact on various stakeholders of the business of the Transport Manager's proposed expenditure of £300 000. You should analyse and evaluate whether Tymberland plc should go ahead with the proposals within the context of the global warming debate.

Your report should:

- draw on information given in the case study and any other relevant information or issues you have considered
- show your knowledge and understanding of business
- be in the correct format
- make appropriate recommendations

[60]

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**THIS IS THE END OF THE QUESTION PAPER**

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