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**GLOBAL PERSPECTIVES**

**9766/01**

Paper 1 Written paper

**October/November 2014**

**1 hour 30 minutes**

RESOURCE BOOKLET

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**READ THESE INSTRUCTIONS FIRST**

This Resource Booklet contains Documents 1 and 2 which you should use to answer the questions.

You should spend approximately 10 minutes reading the documents before attempting to answer the questions. This is allowed for within the time set for the examination.



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This document consists of **3** printed pages and **1** blank page.

The documents below consider an issue related to Buildings and their Environmental Impact. Read them **both** in order to answer **all** the questions on the question paper.

**Document 1:** adapted from *LEED – Impact on New Construction* by Jeff Schaefer. This was published in 2008 as an internet article by an information manager for a construction company in the US which has won awards for green building.

\*Leadership in Energy and Environmental Design (LEED) is a nationally accepted organization promoting the construction of high performance green buildings. LEED buildings are awarded points for sustainability for things like energy-efficient lighting, and plumbing which saves water. This ensures the buildings are environmentally compatible, provide a healthy work environment and are profitable. In this day and age more and more people are becoming environmentally conscientious. What does that mean for those who are in the construction field? It means they need to be on the cutting edge of green technology.

Buildings which have been certified by LEED are commanding higher rental rates and greater occupancy than non-green buildings. This trend cannot help but have an impact on the investment community. The supply of green buildings while gradually increasing is not keeping up with demand for them.

Recycled construction materials and energy efficient appliances also have an impact on the point rating system. In the political climate of today's world, as the earth's natural resources are being depleted at an alarming rate, the construction industry is being compelled to look at alternatives to traditional construction materials and styles.

More and more legislation is being passed that has an environmental impact for new construction. LEED certification and other energy efficiency ratings seem to be the future of construction projects. It's important to not only build beautiful buildings but buildings that are energy efficient, healthy for their occupants and do not harm the environment.

Those of us who use these buildings can feel good about the part we are playing to help the environment and to preserve what is left of the environment after years and years of taking natural resources for granted. Green technology, as it continues to catch on, will generate additional jobs and challenge conventional wisdoms. Look what happened in the auto industry with the electric cars. Initially they didn't really 'catch on' despite the fact that many who had the opportunity to test drive them wanted to keep them. Instead they were basically scrapped because of big business. Now more and more companies are looking for ways to create cars that are more environmentally friendly.

Interest in green technology will stimulate job-market growth, and open up new business venues as it continues to catch on. Just like any other market, competition is healthy and a monopoly is not. Increasing public awareness is crucial to the continued expansion of LEED certification and the advancement of green technology in construction projects.

\*LEED: A US certification process introduced by a group of like-minded construction companies, it is not an official US government body.

**Document 2:** adapted from *Top Green-building System is in desperate need of Repair* by Auden Schendler. This article was published in *Grist Magazine*, a US publication focused on environmental issues, 2005.

Auden Schendler is Vice President of sustainability at Aspen Skiing Company. He is the author of *Getting Green Done: Hard Truths From the Front Lines of the Sustainability Revolution* (2009).

LEED is a design process that should, in theory, produce buildings that conserve resources, reduce operating costs and pollution, help address global warming, improve marketability and durability, preserve the ozone layer, protect occupant health, and improve worker productivity. When the program was launched, the hope was that it would transform the design and construction of commercial buildings. But LEED's early bloom is fading. Green building has a robust future, but this certification system may not. LEED is broken.

The program's results thus far have been sorely disappointing. Since 2000, LEED has certified only 285 buildings. By contrast, over the same time period, the U.S. Department of Energy's Building America program helped builders design and erect more than 20,000 new homes, with a minimum 30 percent reduction in energy use for heating, cooling, and hot water at no net cost.

We are concerned that LEED has become expensive, slow, confusing, and unwieldy; it is a death march for applicants administered by a soviet-style bureaucracy that makes green building more difficult than it needs to be. An avalanche of reports insist that green building – and LEED certification in particular – does not cost more than conventional building. These reports are wrong. The second you start a green-building project, it costs more than conventional construction. In the real world, LEED certification typically adds 1 to 5 percent to the budget. The myth that going green costs nothing is damaging to clients who discover the reality deep into the process.

The result:

- an explosion of LEED-accredited architects and engineers chasing lots of money but designing few buildings
- a discouraged group of professionals who want to build green, but can't afford to certify their buildings
- mediocre "green" buildings where certification, not environmental responsibility, is the primary goal
- a few super-high-level eco-structures built by ultra-motivated (and wealthy) owners that stand like the Taj Mahal as beacons of impossibility.

The danger is that LEED certification will cannibalize funds that otherwise could be used to improve a building.

The idea behind LEED is laudable. The execution, so far, has been disappointing. A respondent to a 2004 survey said, 'In a recent building, we received one point for spending an extra \$1.3 million for a heat-recovery system that will save about \$500,000 in energy costs per year. We also get one point for installing a \$395 bicycle rack'. While this is an extreme case, it points to a real problem.

In the final analysis, the world needs green buildings a lot more than green buildings need LEED certification. If LEED continues to cost too much in dollars, time, and effort, we are not going to stop building green projects, we'll just stop certifying them.

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*Copyright Acknowledgements:*

Document 1 © adapted: Jeff Schaefer; *LEED – Impact on New Construction*; <http://ezinearticles.com/?LEED-Impact-on-New-Construction&id=1144826>; April 2008.

Document 2 © adapted: Auden Schendler; *Top Green-building System is in desperate need of Repair*; <http://grist.org/article/leed/>; 2005.

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