

**VICTORIA JUNIOR COLLEGE**  
**2011 JC2 PRELIMINARY EXAM**  
**H2 ECONOMICS – PAPER NO. 9732/01**

16 September 2011

8:00 – 10:15 am

**READ THESE INSTRUCTIONS FIRST**

Write your name and class on all the work you hand in.

Write in dark blue or black pen.

You may use a soft pencil for diagrams.

Do not use staples, paper clips, glue or correction fluid on the work that you hand in.

Answer **all** questions.

The number of marks is given in [ ] at the end of each question or part question.

At the end of the examination, fasten your work securely, by question, using the strings provided.

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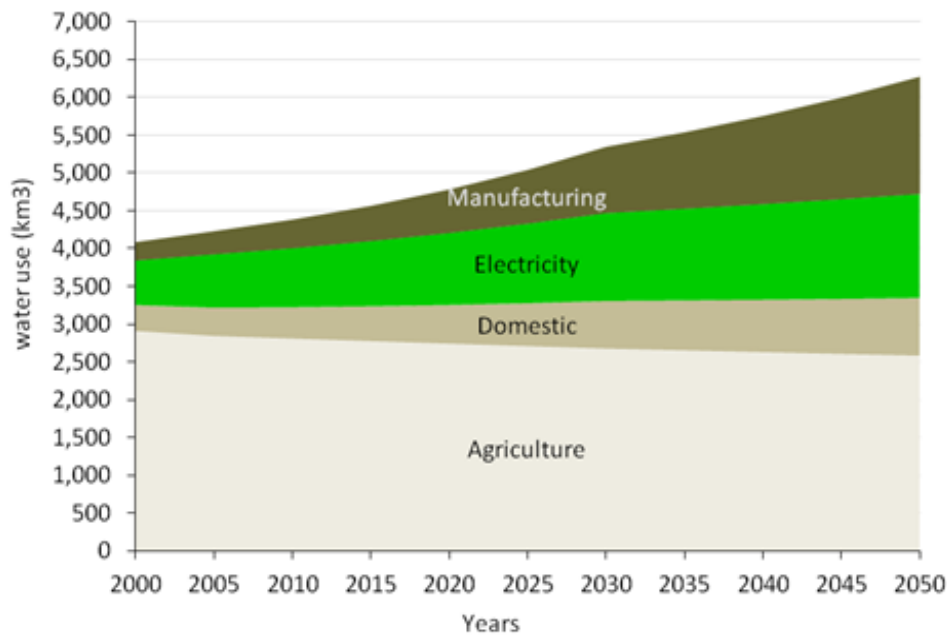
This document consists of **9** printed pages.

Answer **all** questions.

### Question 1

## Water: Scarcity or Shortage?

**Figure 1: Projected world water use: By sector**



Source: OECD Environmental Outlook Baseline

### Extract 1

Drinkable water, a basic human need, is a scarce natural resource, just like oil and gas. Water may become the most precious natural resource as the world's population grows. Of principal concern is our failure to recognize and accept that there is a finite supply of water. Over half of the world's population could be living in areas where water is projected to run short by 2030. This would be a result of a number of factors such as the increased demand for food and agricultural products and the cultivation of biofuel crops. Studies have shown that demand for water increases significantly as the world population expands and economies grow, which further intensifies the competition and conflicts among water users for the limited supplies of water.

Source: Adapted from various reports from World Bank, 2009

### Extract 2

To mitigate and adapt to water scarcity, there have been some policy responses such as preserving or improving the quality of the available resource. This is done through enhanced pollution abatement and wastewater treatment. While most developed countries have tackled surface water pollution problems through regulation, pollution from diffuse sources continues, particularly from agriculture.

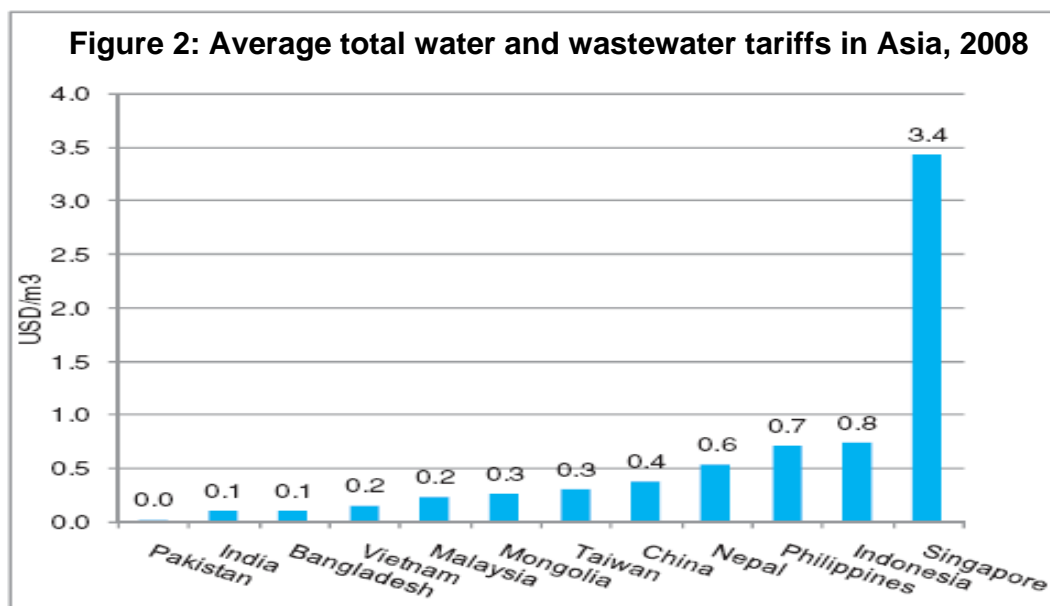
Another way is to manage its demand. The cheapest new source of water has often been water gained through conservation. Demand management changes the nature of needs for water supply infrastructure. Improving conservation can reduce the need for new and expensive water supply projects, which require high capital intensity, large initial outlays and long payback periods.

Climate change and over-use of water will mean that nearly one in every two people will live in water-stressed areas by 2030. This has given the private sector the opportunity to be involved in the development of technology for water provision. New studies say that putting the right price on water will give people the incentive to waste less, pollute less, and invest more in water supply infrastructure. Indeed, households and industries in many countries increasingly pay the true cost of the water they consume to ensure that the water management is realistically financed and sustainable. This is done through water tariffs. Many developed countries have successfully reduced water use per capita in recent years. This indicates that appropriate pricing can lead to a decoupling of water use from economic and population growth.

For most households in developed countries, such water tariffs are not a significant burden as they typically account for less than 1% of household income. However, in many of the poorest developing countries, water bills may represent a more significant portion of the income. Research on several countries in the last 35 years found that the price elasticity of demand estimates has a range of  $-0.1$  to  $-0.2$ .

Subsidies are therefore often justified in terms of keeping water affordable for poor households, but there is mounting evidence that they are often not well targeted and not very effective since these households are frequently not connected to water distribution and sanitation networks. Hence regulation with the relevant incentives for efficiency and fairness must be in place as human and financial resources are limited.

*Source: Adapted reports from Organization for Economic Cooperation and Development 2009*



*Source: GWI, 2008.*

### **Extract 3**

For years, water has been imported through three pipelines from neighbouring Malaysia. The issue is becoming increasingly acute ahead of the expiry of two long-term supply deals that guarantee deliveries of Malaysian water for less than one cent per 1,000 gallons - one until 2011, the other until 2061.

As a first step, a few large reservoirs are being constructed to harvest as much rain as possible. In addition, desalination plants that turn salt water into drinking water provide 10% of Singapore's current needs. Desalination plants can provide a wide range of outputs to cater for small isolated communities or for irrigation. However, users cite energy costs and environmental issues as concerns. With greenhouse gas production and discharge of concentrated brine into the marine environment, satisfactory dilution of the concentrate needs to be achieved to avoid increasing local levels of ocean salinity to unacceptable levels, especially in sheltered waters.

But the real breakthrough has come from NEWater, a government-initiated project, produced in water reclamation plants from so-called "used" water. The plants use cleaner and more energy efficient technology to produce water that is almost as clean as distilled water.

Also, as demand is curbed by high water taxes and efficient technologies, and Singaporeans are constantly exhorted to conserve every drop, Singapore has managed to find the right balances between water quantity and water quality considerations; water supply and water demand management and strategic national interest and economic efficiency.

*Source: BBC News; 6 May 2008*

## Questions

- (a) i) Compare the trends of projected water use in Figure 1. [2]
- ii) With the aid of economic theory and materials provided, predict the trend of the price of water in the next few decades. [4]
- (b) Explain the economic justification for governments to intervene in the provision of water treatment. [4]
- (c) To what extent does “**putting the right price on water**” (Extract 2) achieve the two microeconomic objectives of efficiency and equity? [8]
- (d) Distinguish between the concepts of ‘*shortage*’ and ‘*scarcity*’. [4]
- (e) Examine the relative effectiveness of the methods adopted by countries to tackle the problem of shortage of clean water. [8]

**Total: 30m**

## Question 2

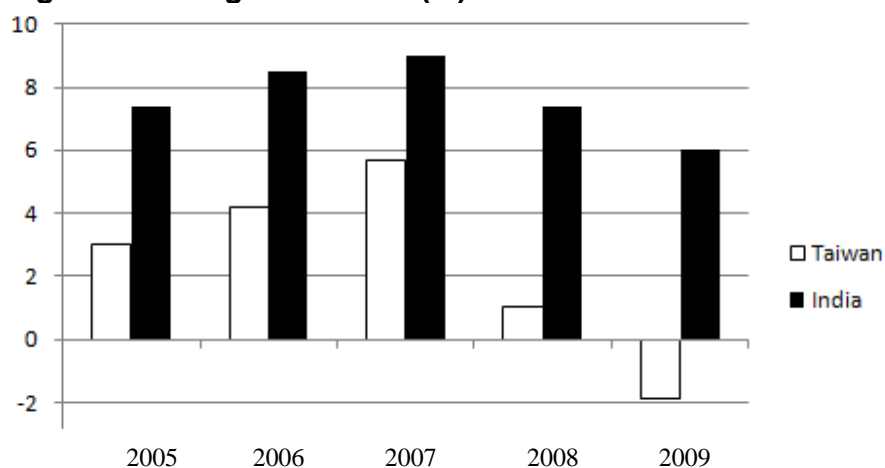
### Global Recession

**Table 1: Composition of GDP of selected countries in 2009 (% of GDP)**

	Taiwan	India	USA
Consumption	54.6	63.6	70.8
Government spending	12.8	12.3	17.3
Gross fixed capital formation	18.7	30.7	14.6
Exports	69.5	20.4	11.1
Imports	55.6	27.0	13.8

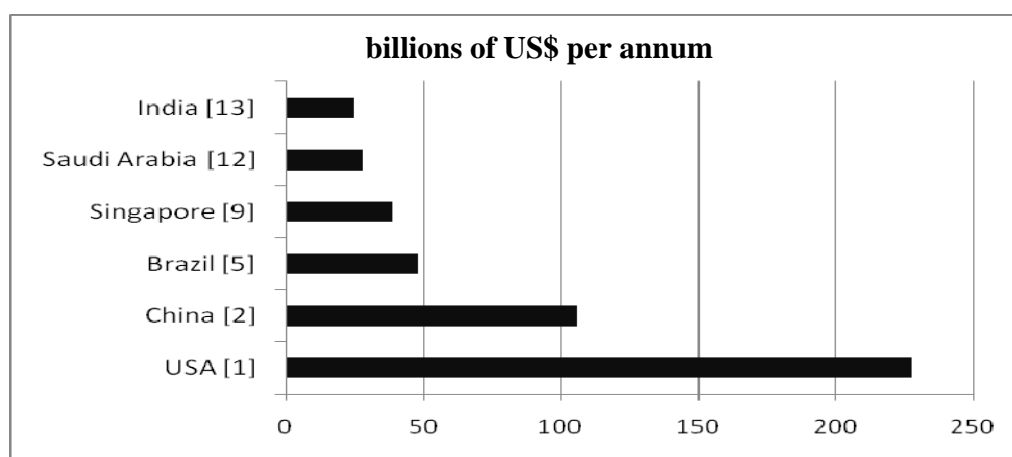
Source: UN Statistics Division

**Figure 3: GDP growth rates (%) of Taiwan and India**



Source: UN Statistics Division

**Figure 4: Top Receiving Countries of Global FDI in 2009 (selected countries)**  
[The number in brackets after the name of the country refers to the ranking]



Source: <http://www.unctad.org>

## **Extract 4**

### **Taiwan's GDP slumps as export demand falls**

Taiwan has tumbled into recession, suffering a record annual fall in output at the end of last year to become East Asia's worst-performing economy. Official data on Wednesday showed Taiwan's gross domestic product shrank 8.36 per cent year-on-year in the last quarter of 2008, highlighting the exposure of Asian exporters to the slump in world demand. Exports are expected to drop by a fifth this year from the aftermath of the global recession, with consumption and investment levels projected to fall sharply too.

To revive its battered economy, the government has already announced a NT\$500 billion (US\$14.4bn) two-year stimulus package that would boost GDP by 2.77 per cent, which includes infrastructure projects and measures to boost employment. In addition, to make up for the shortfall in external demand, each of the island's 23 million residents received a NT\$108 voucher that can be used just like cash—except that it must be spent by year-end. While cash payments may end up getting saved, these vouchers force recipients to spend their handout.

*Source: The Financial Times, 18 Feb 2009*

## **Extract 5**

### **India maintains sense of optimism and growth**

While most of the world grapples with the global financial crisis, optimism reigns in much of India as its economy continues to grow. India reported that its economy still grew 5.3%, a sharp contrast to the massive retrenchment in other more export-oriented developing economies.

"India's trillion-dollar economy remains a relative bright spot, as we are not as vulnerable as other countries," its Home Minister said. Some commentators have credited India's protectionist policies and its state-dominated financial sector that is virtually unconnected to foreign markets having helped insulate the country from the global turmoil.

That is not to say that the news is all good. Both agriculture and manufacturing contracted somewhat in the last quarter. A report by World Economic Forum also said India could see outflow of capital, particularly FDI from the USA and Europe. However, India's youthful population, domestic demand and business innovation are helping to carry the country; for example, India added a record 15.4 million hand-phone users in January.

*Source: The New York Times, 01 Mar 2009*

## **Extract 6**

### **'Buy American' – Protectionism by another name?**

The US\$787 billion economic stimulus package was finally approved by Congress last week. The plan was to jumpstart economic growth and save between 0.9 and 2.3 million jobs. However, some economists have raised their concerns about the government's ability to finance its huge budget deficit of almost US\$1 trillion.

A debate is also brewing over the so-called "Buy American" provision which stipulates that any products and equipment used in the public works projects should be American-made and not imported. The provision would extend a much-needed lifeline to America's declining industries such as steel manufacturers reeling from the recession and intense competition from China.

However, many economists argue that it could actually backfire, slowing economic growth instead of helping to expand the American job market.

There are also rising worries that the USA is sliding back into protectionism, which worsened the global economic situation during the Great Depression back in the 1930s. Already, some Latin American countries have appeared to be using the deteriorating state of global economic affairs as a pretext to shun prior commitments to open trade and erect tariff and non-tariff barriers, in an attempt to safeguard their domestic industries from foreign competition.

"It's not a good time to initiate protectionist measures in any shape or form," said Kurt Karl, an economist. "It hurts growth, because if you force some industries to use domestic sources only, then that prevents them from getting less expensive materials from overseas."

"We believe it invites reciprocal restrictions on U.S. exports," added a spokesman for General Electric. "Less competition drives prices up. We're in a globalized world - we can't turn back the clock." His sentiments were echoed by several American firms which base their operations outside the US and derive the bulk of their profits from overseas markets.

*Source: CNNMoney.com, 29 Jan 2009*

## **Extract 7**

### **Globalisation: After the Recession**

The world economy has just been through a severe recession marked by financial turmoil, declines in industrial production and global trade. As exports crash worldwide, factories from China to Eastern Europe are closing. With the US financial crisis spreading rapidly across the globe, FDI volumes plummet. According to the World Bank, a record 219 to 241 million people have lost their jobs.

In this climate, globalisation has come under heavy criticism. Many countries, from the US to Asian economies that had earlier benefited from globalisation, are resorting to protectionism to solve their domestic woes. Yet the alternative to global integration holds little attraction. Indeed, while closing an economy may insulate it from shocks, it can also result in stagnation. Export-led growth has seen living standards in the Four Asian Tiger Economies such as Singapore and Taiwan, and more recently, China and India rise greatly, lifting many out of poverty.

The world is now so far down the path of integration that turning back is no longer a viable option. In today's competitive global marketplace, countries need to upgrade and diversify their industries continuously according to their changing endowments and comparative advantages. In this regard, a facilitating role for the government is desirable in developing and developed economies alike, although the appropriate role may be different depending on a country's stage of development.

*Source: YaleGlobal Online, 6 Jan 2010*



**Questions:**

- (a) i) Compare the GDP growth rates between Taiwan and India from 2005 to 2009. [2]
- ii) Based on Extracts 4 and 5 and Table 1, account for the difference in GDP growth rates between Taiwan and India in 2009. [5]
- (b) With reference to the data provided, explain the factors that you would consider to assess the effectiveness of the vouchers to help Taiwan “revive its battered economy”. [5]
- (c) In light of the global recession, assess if government spending or “protectionist measures *in any shape or form*” is more helpful in addressing unemployment in the USA. [8]
- (d) With the help of the data provided, discuss whether globalisation is beneficial to the different economies featured in the extracts. [10]

**Total: 30m**

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