



ST ANDREW'S JUNIOR COLLEGE

Weighted Assessment 1 (WA 1)

General Certificate of Education Advanced Level

Higher 1

ECONOMICS

8843

45 minutes

READ THESE INSTRUCTIONS FIRST

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

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

At the end of the test, fasten all your work securely together with the question paper provided.

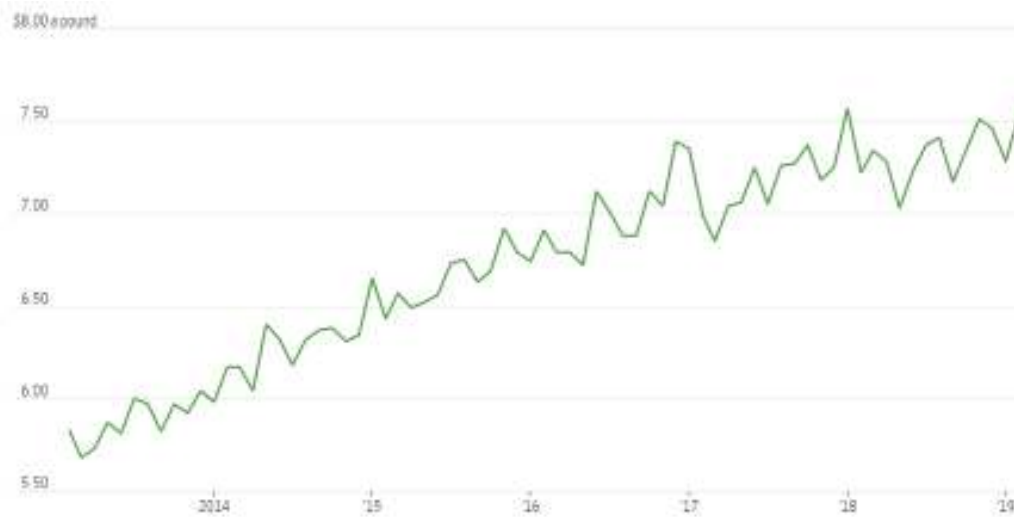
The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **4** printed pages

Answer all questions

Question 1: The buzz about Honey

Figure 1: Global Price of Honey (cents per pound)



Source: Bee Culture Magazine

Figure 2: Global Price of Sugar (cents per pound)



Source: Refinitiv

Extract 1: You'll need a lot more money to buy that jar of honey

Honey prices are starting to sting.

Global honey prices are at their highest levels in years, due to a new wave of consumer going for natural sweeteners and declining bee populations that are hampering mass production.

Honey has been used as a sweetener for centuries. But in recent years, it has become popular with people looking for healthier alternatives to cane sugar and high-fructose corn syrup. It is consumed in beverages, pastries, cereals and other foods. In addition, it is being used more as an ingredient in shampoos, moisturizers and other personal-care products that companies market as naturally made.

The rising demand for honey comes as beekeepers are struggling to increase production. Global honey production has been relatively threatened over the past five years, according to Norberto García, the Argentina-based president of Apimondia's scientific commission on beekeeping economy. Apimondia is an international federation of beekeepers.

Beekeepers have been particularly afflicted by beehive colony collapses, a situation where a majority of worker bees disappear for unknown reasons. It is documented that bee populations in several nations suffered severe declines in the decade after colony collapse disorder was identified in 2006. Workers bees are females that gather nectar and pollen from flowers. They toil inside hives, making wax and feeding larvae, other bees and the queen. The nectar is stored inside a bee's body and is passed around until it ends up as honey. Some scientists believe bee populations have declined because of a disease caused by a parasite called the Varroa mite, in addition to pesticide usage.

In Austin, Texas, Mark Bradley is a part-owner of a company that produces honey for farmers markets and small supermarkets in the area. He said that while he'd like to expand, it is hard to find areas suitable to house beehives. "There is nothing but cotton or corn or soybeans for miles," which means there isn't much wild forage on which bees can hunt for pollen, Mr. Bradley said.

Source: Adapted from The Wall Street Journal, 22 May 2019

Extract 2: The importance of bees to humans, the planet, and food supplies

Bees are essential for the health of people and the planet. Honey and other products have medicinal properties, and the role of bees as pollinators makes them vital for food supplies.

There are around 20,000 known bee species worldwide, and over 4,000 are native to the United States. Humans only manage a few of these, and most species are wild. As well as valuing bees for their honey, people have come to recognize the importance of bees in promoting food security and variety in plants and animals.

In recent years, it has become clear that honey may not be the most important reason to protect bees. This is because bees play a crucial role in pollination, where they use the hairs on their bodies to carry large grains of pollen between plants.

Around 75% of crops produce better yields if animals help them pollinate. Of all animals, bees are the most dominant pollinators of wild and crop plants. They visit over 90% of the world's top 107 crops.

In other words, bees are essential for the growth of many plants, including food crops.

Source: Medical News Today. updated May 18 2021

Extract 3: One local honey company is growing its honey business

One Singapore company specialising in the production and sale of honey, 13 Honey, has successfully emerged during COVID-19. This year, its cumulative orders from the Japanese market have reached \$12 million, as compared to last year's orders of below \$2 million.

Since its establishment five years ago, the company has expanded from one factory to six. Most uniquely, the company has its own bee farms to ensure that the bees meet the requirements and that the honey is produced in an environmentally friendly way.

Although 39-year-old Mr Javier Lau, CEO of 13 Honey, founded the company only five years ago, he has been involved in beekeeping for 12 years. In an interview with Lianhe Zaobao, he said that he had spent the previous seven years studying and learning about beekeeping.

Are the bees kept in Singapore? "No, there will be complaints if I kept bees here!" Mr Lau joked. Beekeeping is not an easy task as looking after bees well is complicated, expensive and time-consuming. There is a lot to learn, including all the legal requirements that come with bees. There's no guarantee of success either. Your bees may still die, or just not prosper.

However, he did not back down from the challenges. He discovered that the market for honey is huge because honey can be exported to various countries. Besides, as the world's first natural sweetener, honey has had 6,000 years of history. Today, honey is widely used in food preparation and medical treatment all over the world in different cultures as well as for different age groups and lifestyles. Honey does not follow general product life cycles and will not become obsolete. Therefore, he was absolutely confident about the prospects of beekeeping and honey products. Moreover, he emphasised that honey exceeds its commercial value and that bees, one of the most important pollinators in nature, are critical for food sustainability. He hopes to share this knowledge with as many people as possible.

Adapted from: www.jtc.gov.sg

Questions

- (a)(i) With reference to Figure 1, describe the trend in the global price of honey from 2013 to 2019. **[1]**
- (ii) With reference to Extract 1, and using a demand and supply diagram, account for the general trend in the global price of honey. **[4]**
- (b) With reference to Extract 2 and using a Production Possibility Curve (PPC), explain how the declining bee population would affect the production of honey and food crops. **[3]**
- (c)(i) Identify the economic relationship between cane sugar and honey. **[1]**
- (ii) With reference to Figure 2, explain how this economic relationship accounts for the general trend in global prices of sugar during the period from 2013 to 2019. **[3]**
- (d) Explain the factors a rational honey manufacturer should consider when making his decision on whether to expand his business and comment on whether he should do so. **[8]**

[Total Marks: 20]

