NATIONAL JUNIOR COLLEGE
SH2 Preliminary Examinations for General Certificate of Education Advanced Level
Higher 2

ECONOMICS 9757/01

Paper 1

28 August 2017

2 hours 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name and subject class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use an HB pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY OF THE MARGINS.

Answer **all** questions.

Start each question on a new piece of paper.
Start parts (e) and (f) for Question 1 on a new piece of paper.
Start parts (d) and (e) for Question 2 on a new piece of paper.
Fill in the necessary information on the cover pages.

At the end of the examination, fasten all your work securely with the cover pages given.
The number of marks is given in brackets [ ] at the end of each question or part question.

© NJC 2017

Answer **all** questions.

Question 1

Challenges and Outlook of the Copper Market

Extract 1: Miners face challenge tapping copper opportunities

Both Rio Tinto and BHP Billiton, two of the world's top ten copper producers, believe the copper market is oversupplied now but will tighten from 2018, with growing deficits. Demand for copper is expected to be steady, given that it has a wide range of applications such as electrical wiring and pipes, and is forecast to be widely needed as China shifts towards more consumer-led growth.

But the complexity and expense of mining projects means the larger miners may not be in a position to generate a quick acceleration of copper output. Rio took a step forward in December to build Resolution, a US copper mine expected to be one of the world's largest. Rio owns 55% of the project, with BHP owning 45%. Yet obtaining all the permits for Resolution could easily take Rio another five to seven years.

Because receiving approval for mines is so laborious, Rio and others have walked away from some projects, even if the copper resources involved are substantial. Since 2013 Rio and Anglo American, another major mining company, have both given up on Pebble, a huge copper deposit in Alaska that is controversial for its potential effect on fisheries, for example.

Another challenge for miners is the expense involved in building mines. Glencore, another major copper miner, sold its Las Bambas project in 2014 to MMG, a subsidiary of China's Minmetals, for about $7 billion. MMG said in October that the remaining 25% of construction would cost between $2.7billion and $3.2 billion. BHP, which owns Olympic Dam, an Australian mine, abandoned an expansion plan in 2012 because of the likely cost.

Source: Adapted from: *The Financial Times*, James Wilson, 6 January 2015

Extract 2: The outlook for copper

The price of copper has fallen steadily in recent years. The sharp slowdown in industrial activity in China is disastrous for copper producers, since China consumes 45% of their output. Its attempt to shift from an investment-led economy to a consumer-led one has raised fears of a structural decline in the amount of copper it will need.

One recent disappointment has been the delay in the roll-out of electricity infrastructure in inland Chinese cities. Analysts at BHP say such infrastructure accounts for the biggest share of copper consumption in China. Yet a crackdown on corruption at state-run energy companies slowed the grid-laying projects during the first half of the year. What is more, China is increasingly using aluminium for its thick power-distribution cables, rather than copper – a cheaper option, even if aluminium is a poorer conductor and is more prone to corrosion.

Yet the outlook for China is not all pessimistic. As incomes increase, the "intensity" of copper use is likely to grow. Nascent industries such as wind and solar power and electric vehicles, all of which are copper-intensive, may also boost future demand.

Before then, supply must fall to balance the market. Some estimate that the industry will still churn out about 500,000 tonnes of excess copper this year. The oversupply will get worse: it takes several years to build a mine, so firms which had invested heavily in copper mines during the boom years now find their mines starting to come into operation. As a result big new increments of supply have hit the market in the past year or two, just at the wrong time. Glencore, one of the five largest mining companies in the world, announced last month that it would close mines in the Democratic

Republic of Congo and Zambia, cutting supply by about 400,000 tonnes over 18 months – some 2% of the world's annual output. Besides Glencore, it is reported that other mines producing a further 170,000 tonnes a year have been idled so far this year.

But only the most expensive supplies are being removed from the market. Many firms are instead slashing costs to keep production going. The industry's fragmentation makes it unlikely that producers will agree to rein in output. Investment bank, Goldman Sachs, notes that the top five copper producers have about 35% of the market. While some firms are trying to cut output to reduce costs and stem the price slide, other firms are expanding their output to increase market share. In some cases, it is cheaper over the long run to keep mines running at a loss for a while, to maintain security and retain staff, rather than to close them down.

Within a few years, however, many analysts expect natural constraints to put a floor under prices. The quality of ore in copper mines decreased during the boom. Water shortages make copper more expensive to extract. Mine depletion in Chile and Peru has driven companies towards new deposits laced with arsenic that require costly cleaning. And workers and environmentalists increasingly raise their voices against lousy pay and deteriorating environmental conditions. Higher costs make it less likely copper production will increase, which should eventually help stabilise the market. Chinese demand may also be supplemented by growth in other emerging markets, such as India, which currently consumes just 2% of the world's copper.

Source: Adapted from:*The Economist*, 1 Oct 2015

Extract 3: Fed move adds to pressure on commodities

Prices of most commodities fell after the US Federal Reserve's decision to raise interest rates compounded their long term woes. Low interest rates had helped stoke the commodities boom as companies tapped cheap money to vastly expand production. Now commodities markets are suffering, with the interest rate hike adding to a multitude of industry-specific problems - a toxic combination of oversupply and weak demand from a slowing Chinese economy.

The biggest immediate effect of the Federal Reserve's decision to raise interest rates came through the strengthening US dollar. That makes internationally traded commodities from oil to copper, which are priced in US dollars, more expensive for holders of other currencies. But down the road, analysts foresee more pain from rising rates as companies struggle with increased financing costs and emerging market demand takes another hit. Investors fear that the Fed's rate increase might further sap demand from once insatiable emerging economies, such as India and China. Investors have already withdrawn a net $500 billion from emerging markets in 2015, the first annual outflow in decades, compounding falls in their currencies as capital leaves their shores and make commodities more expensive.

Source: Adapted from *The Wall Street Journal*, 17 December 2015

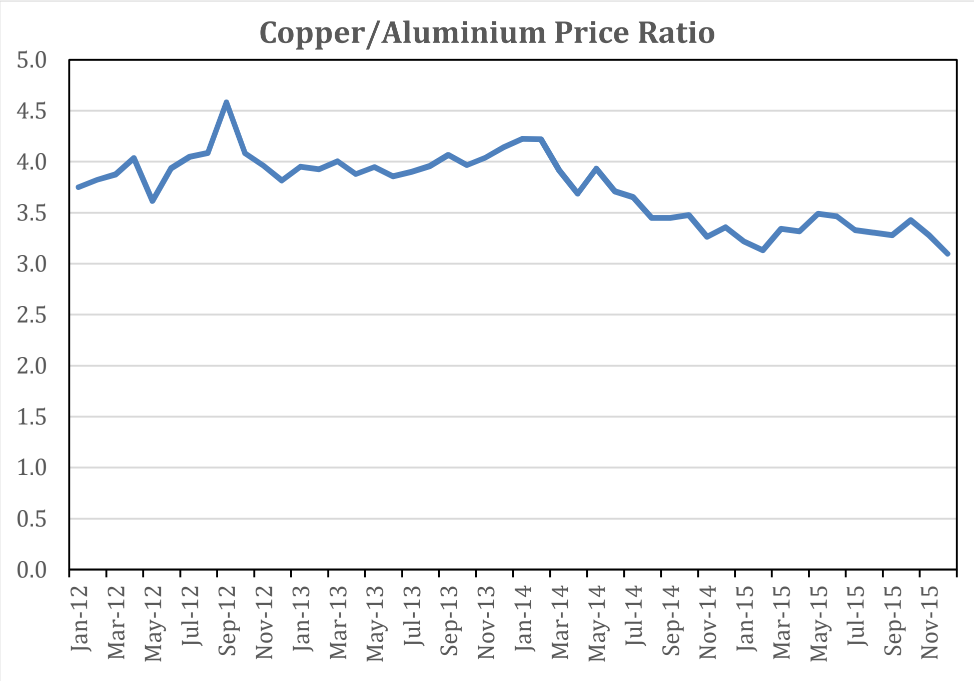
Extract 4: Village protest against dam built by copper miner in Chile

Black flags hang from the doors of the one-storey red brick houses in Caimanes, a village that lies in the hills north of Santiago on the course of the Pupio stream. The banners are the sign of a bitter environmental protest against a nearby dam, which holds waste from a copper mine -- one of Chile's largest -- high up in the Andes. Last November, a group of up to 150 villagers took matters into their own hands and blocked access to the dam, which was said to pollute the village's water supply and pose an environmental threat in case of flooding or an earthquake.

The battle between the people of Caimanes and the owner of the Los Pelambres mine has become a symbol of social change in Chile, which produces 30% of the world's copper. The government of Chile is committed to tackling inequality and as part of that is demanding higher standards from mine owners. But it is happening against a backdrop of slowing growth in China, the world's biggest copper market. Prices of the metal -- which makes up 13% of Chile's economic output and 50% of its exports -- fell to their lowest levels in five years just as the protesters kept guard outside the town. Copper mining made up 20% of the country's tax revenues in 2010 and employed some 1.1 million people in 2013. The shift in policy in Chile is being driven by a greater focus on the environment, in some cases, at the expense of economic growth and employment.

Source: Adapted from: *The Financial Times*, 27 April 2015

Figure 1



Source: London Metal Exchange

Questions

(a) Compare the price of copper relative to the price of aluminium over the period from September 2012 to November 2015. [2]

(b) Using a demand and supply diagram, explain why the price of copper "has fallen steadily in recent years" (Extract 2). [5]

(c) With reference to the data, what evidence is there to suggest that the market for copper could be oligopolistic in nature? [3]

(d) Explain how the US Federal Reserve's decision to raise interest rates would affect the demand for copper in the world. [2]

(e) Suppose you are an analyst with an investment bank, assess the factors that would affect the price of copper in the future and justify your forecast for the price of copper in the next 2 to 3 years. [8]

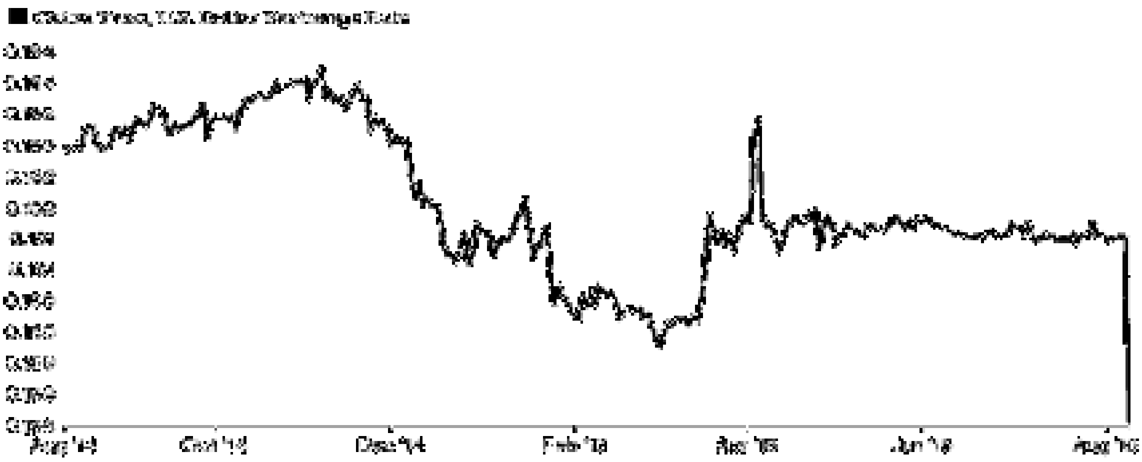
(f) Using economic analysis, discuss whether the government of Chile should intervene to restrict mine production in order to achieve its economic objectives. [10]

[Total: 30]

Question 2

A volatile world

Figure 2: US dollars to 1 China Yuan



Source: Bloomberg

Extract 5: China calls the shots in Asia's currency war

As fears of a global currency war grow, all eyes in Asia are on China’s next move. "It's no longer inconceivable that China will go for a weaker currency," said Frederic Neumann, HSBC's co-head of Asian economics research.

The urgency with which Asian central banks are cutting interest rates is an indication of not just the deflationary forces they are seeing but also recognition that if China weakens the yuan, their policy options will be severely limited. Indonesia was the latest to surprise the world with an interest rate cut, joining Singapore, India and China, all of whom have unexpectedly eased monetary policy this year. Bank Indonesia's rate cut was in some ways a reminder of how critical China's yuan is to the region's policy making. The weakening of the Chinese Yuan, coupled with the potential rise of US interest rates could cause steep falls in the Asian currencies and a flight of foreign capital. Capital outflows can be destabilising, causing property prices to collapse further and trigger a vicious cycle of bad debts and defaults in the banking sector.

Deflationary pressures in China are stoking expectations that it could follow Japan and other European nations by easing policy to put a floor under domestic prices, he said. Such moves have triggered major weakening in the Japanese yen, euro and other currencies.

With most Asian countries either selling their exports to China or competing with the Chinese for a share of declining global demand, the race to have competitive currencies could become intense.

Still, analysts reckon things would get ugly only if China makes some kind of dramatic move, such as moving away from shadowing the dollar to tracking a broader basket of currencies. That could spark currency volatility and weakness and massive capital outflows.

"China's currency has become an anchor for the region and we just hope the Chinese will not throw the anchor overboard and cut everyone loose," said Neumann.

Source: Adapted from Vidya Ranganathan, *Reuters*, 19 February 2015

Extract 6: BRIC's huge impact on global sustainability

The world's four largest developing economies, Brazil, Russia, India and China (BRICs), have a huge impact on global sustainability. These four countries, with a combined population of 3 billion people and a GDP of $16 trillion, will have a huge direct impact on global emissions.

India's air pollution is not only far worse than any of the other BRICs, it is so intense that it is reducing plants' ability to photosynthesize sunlight, cutting crop yields in half. In addition, poverty and general lack of access to basic human needs has drawn the lion's share of attention. As a result, much of the sustainable development discussion in India has focused on inclusion and bringing the population into the 21st century. In 2014, Prime Minister Narendra Modi launched the Clean India Mission, aimed at providing access to improved sanitation, and cleanup of the River Ganges, among other targets. Corporations are also committing to invest in education for girls and adopting communities for cleanup.

Building green technology as India expands is one example of the leapfrogging potential that all developing economies can benefit from. For example, information technology company Infosys pioneered an effort to raise the profile of green building technologies among Indian firms. The resulting green building, which earned Leed Platinum certification, uses 38% less energy than its counterpart, and cost 1% less to build.

Source: Adapted from Matthew Weeland, *The Guardian*, 4 May 2015

Extract 7: China and Russia: the world's new superpower axis

Russia and China have lots in common apart from a 2,500-mile border- both economies are dominated by state-run firms and oligarchies.

Both countries share a desire to limit American power; they enjoy a burgeoning trade relationship in which, in essence, hydrocarbons are swapped for cheap consumer goods. Trade has increased sixfold over the past decade. Last year they trumpeted the biggest gas deal in history that was worth $400billion. During Chinese President Xi Jinping's visit to Moscow last month, the two leaders signed a decree on cooperation in tying the development of the Eurasian Economic Union (EAEU) with the "Silk Road Economic Belt" project. Moscow and Beijing declared a goal to coordinate the two projects in order to build a "common economic space" in Eurasia, including a Free Trade Agreement between the EAEU and China. The EAEU is a Russia-led trade bloc established in 2015. It currently has four members: Armenia, Belarus, Kazakhstan, and Russia.

"We are intensively working on combining these two projects and Russia's plans to expand its transport network in the east of the country," said Russian President Vladimir Putin.

China's President, Xi Jinping, has set his sights on a "new silk road", using China's billions to help neighbours and regional allies to develop, indirectly supporting growth at home and the expansion of Chinese soft power. Moscow is also hoping Beijing will help with finance for businesses, after western funds dried up last year. Some Chinese firms have seen the Russian economic wobble as an opportunity to make capital investments in the country.

Last year, China replaced Germany as Russia's biggest buyer of crude oil. "China is the major alternative market and is easily accessible for Russia given the location of energy reserves and the geopolitical partnership, so it's an obvious fit," said Grigory Birg, an analyst at Investcafe.

However, Russia's federal migration service is especially wary of an influx of Chinese migrants across the Russia-China border. It has stated that Chinese could become the largest ethnic group in Russia's far east by the 2020s or 2030s.

Source: Adapted from *The Guardian*, 7 July 2015 and *The BRICS Post*, 12 July 2015

Extract 8: China watches Greece

The European Union is China's largest trading partner. "China is ready to play a constructive role," said the Chinese premier when asked about Greece at a news conference. Already struggling to keep growth steady at home with enormous volatility on stock markets over recent days, China has a lot to lose from the uncertainties that surround the eurozone drama.

It is a major investor in Greek infrastructure, in euro bonds and in the EU economy as a whole. Chinese deals rose from $2 billion (£1.2bn) in 2010 to $18 billion in 2014, according to research by Baker & McKenzie and the Rhodium Group.

China's vision for Eurasia is its "one belt one road" strategy, a plan to wrap its own infrastructure and influence westward by land and by sea.

The land route is the most ambitious project to integrate continental Asia and Europe since Genghis Khan 800 years ago. And the sea route is a thread of Chinese ports and bases all the way from southern China through the Indian Ocean to the Horn of Africa and the Mediterranean.

Which is where Greece matters again. It is China's great southern gateway to Europe.

Source: Adapted from Carrie Gracie, *BBC News*, 30 June 2015

Questions

(a) What was the estimated change in the value of the US dollars in terms of China Yuan from November 2014 to August 2015. [2]

(b) **(i)** With the aid of a diagram, explain the reason for the 'major weakening in the Japanese yen, euro and other currencies (Extract 5)'. [3]

(ii) Explain how major weakening of the Japanese yen could affect its net exports. [3]

(c) Using AD-AS analysis, explain the impact of a 'flight of foreign capital' on Asian economies. [4]

(d) To what extent are the Indian and Russian governments' efforts likely to improve the welfare of the residents in their countries in the long term. [8]

(e) The data provides different possible strategies by China to generate economic growth. Discuss the relative usefulness of the strategies to generate economic growth for China. [10]

[Total: 30]

BLANK PAGE