

AUSTRALIAN ECONOMICS AND BUSINESS STUDIES COMPETITION

Economics Competition

Question Paper

Thursday, 7 May 2015

Instructions:

1. Do not open this booklet until instructed by your teacher.
2. You have **fifty minutes** to answer all **forty questions**.
3. **Pencils and erasers only**. No calculators or rulers are allowed.
4. Read all instructions in the Response Sheet provided.
5. Mark your answers using **pencil only** on the Response Sheet.
6. All questions are of equal value.
7. Choose the **most correct** option to the question and colour in the corresponding oval on the Response Sheet.
8. **One mark** will be awarded for each correct response.
9. Avoid random guessing, as **one quarter** of a mark will be deducted for each incorrect answer.
10. **Please make sure you fill in your name correctly on the response sheet. Any mistakes you make will appear on your certificate.**



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Question 1

Which of the following is true regarding frictional unemployment?

- a. Frictional unemployment generally lasts longer for unskilled workers than skilled workers.
- b. Frictional unemployment varies seasonally.
- c. Frictional unemployment can be beneficial to the economy provided it leads to workers finding jobs that match their skills.
- d. Frictional unemployment cannot be affected by government policy.

Question 2

Who is the current governor of the Reserve Bank of Australia (RBA)?

- a. Joe Hockey
- b. Ian McFarlane
- c. Glenn Stevens
- d. Janet Yellen

Question 3

Which of the following is not an exchange rate system?

- a. Floating
- b. Fixed
- c. Controlled
- d. Managed Flexible Peg

Question 4

Which of the following organisations was formed with the primary objective of reducing poverty in developing countries by promoting foreign investment?

- a. World Trade Organisation
- b. United Nations
- c. International Monetary Fund
- d. World Bank

Question 5

Which of the following is not true regarding the price elasticity of demand for a product?

- a. The price elasticity of demand increases if there are substitutes available.
- b. The price elasticity of demand is higher for necessities than luxuries.
- c. The price elasticity of demand is higher if a greater proportion of income is spent on the product.
- d. The price elasticity of demand affects the total revenue received by the product's producer when the price of the product changes.

Question 6

Developed and international financial markets are an important feature of globalisation. What have these financial markets helped facilitate?

- a. International trade
- b. Financial contagion
- c. Foreign direct investment
- d. All of the above

Question 7

Which of the following is not a role of the RBA?

- a. Holding Australia's reserves of gold and foreign currency.
- b. Ensuring that financial institutions can fulfil their commitments to deposit holders.
- c. Regulating the monetary system.
- d. Acting as the sole issuing authority for Australian currency.

Question 8

If margarine and butter are close substitutes; a decrease in the market price of butter will have the effect of:

- a. Shifting the demand curve of margarine to the right.
- b. Shifting the demand curve of margarine to the left.
- c. Shifting the supply curve of margarine to the left.
- d. Shifting the demand curve of butter to the left.

Question 9

Governments often protect inefficient industries in the economy. Which of the following is not a valid reason for protectionist policies in the long-run?

- a. Preventing foreign competition from dumping goods onto the market that would increase supply and eliminate domestic competition.
- b. Lowering unemployment.
- c. Trying to keep an economy self-sufficient.
- d. Protecting domestic industries from goods made overseas with cheap labour.

Question 10

Which of the following variables are used in the calculation of the Human Development Index (HDI) of a country?

- a. Gross domestic product, life expectancy at birth and adult literacy rate.
- b. Economic growth rate, interest rate and life expectancy at birth.
- c. Life expectancy at birth, gross national income per capita and education index.
- d. Gross domestic capital per capita, interest rate and unemployment rate.

Question 11

The official unemployment rate is not a perfect measure. It omits some classes of unemployment. Which of the following are weaknesses with the official measure?

- a. The official measure does not take into account underemployment.
- b. The official measure cannot take into account seasonal variations.
- c. Frictional unemployment is not included in the official measure.
- d. Both a. and c.

Question 12

Which of the following may be caused by stimulating the economy through a budget deficit?

- I. Higher current account deficit
- II. Crowding out in the private sector
- III. Low Inflation
- IV. Low unemployment

- a. II and IV only.
- b. II, III, and IV only.
- c. I, II and IV only.
- d. I, II, III and IV.

Question 13

Which of the following is not a reason why bonds issued by the Australian Government are not classified as money?

- a. Bonds are not a store of value.
- b. Bonds are not a unit of account.
- c. Bonds are not a medium of exchange.
- d. Bonds are not accepted in return for goods purchased in the open market.

Question 14

Assume the RBA has only two objectives: keeping inflation at 3% and smoothing the fluctuations in the business cycle. In which scenario(s) will the RBA be forced to choose between these objectives?

- a. When inflation is at 5% and the economy is in a sharp downswing.
- b. When inflation is at 5% and the economy is in a sharp upswing.
- c. When inflation is at 1% and the economy is in a sharp downswing.
- d. Both b. and c.

Question 15

Which of the following statements regarding tax structures is true?

- a. A regressive tax structure creates an incentive effect for people to work harder in order to increase their income levels.
- b. A progressive system of taxation increases the level of income inequality.
- c. A progressive system of taxation involves an increasing marginal rate of tax but a constant average rate of tax.
- d. Proportional taxes are commonly used in Australia.

Question 16

Suppose education has positive externalities, and is therefore undervalued by consumers in a market. If the externality were incorporated into the market, which of the following is true?

- a. Equilibrium price and quantity would both rise.
- b. Equilibrium price would rise and equilibrium quantity would fall.
- c. Equilibrium price would fall and equilibrium quantity would rise.
- d. Equilibrium price and quantity would both fall.

Question 17

Suppose the government's budget moves from a deficit of \$20 billion to a deficit of \$10 billion due to a change in the rates for the various tax brackets in the income tax system. The budget stance is now _____ and this is due to a change in _____.

- a. Expansionary, Automatic stabilisers
- b. Contractionary, Automatic stabilisers
- c. Expansionary, Discretionary policy
- d. Contractionary, Discretionary policy

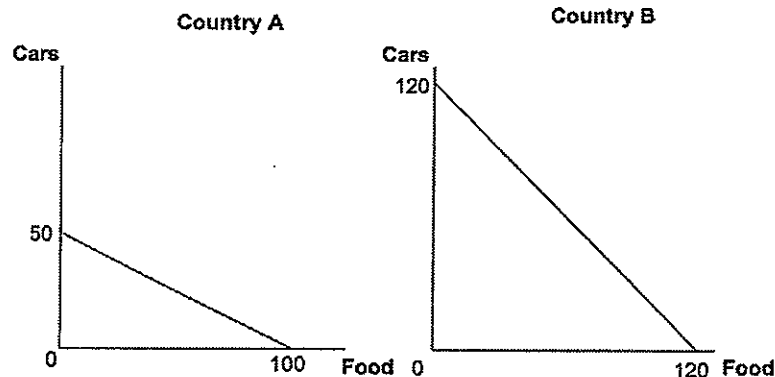
Question 18

A library in Ecoland is freely available for access to all members of the public. However, due to limited space and staffing capabilities, the librarian limits the number of visitors at any given time to a maximum of 20 people. The library's resources can be described as:

- a. Excludable and rival
- b. Rival but non-excludable
- c. Excludable but non-rival
- d. Non-excludable and non-rival

Question 19

The diagram shows the production possibility curves for Country A and Country B, in the production of cars and food. Which of the following statements is not true?



- a. Country B has an absolute advantage in the production of food.
- b. Country B has a comparative advantage in the production of food.
- c. Country A has a comparative advantage in the production of food.
- d. Country B has an absolute advantage in the production of cars.

Question 20

Gross Domestic Product (GDP) per capita is often considered to be the preferred measure of a country's economic development in comparison to GDP. Which of the following statements is not true when evaluating the reasons for the use of GDP per capita over GDP?

- a. GDP per capita provides an indication of the broad standard of living of individuals in a country.
- b. GDP per capita adjusts for the total population of a country.
- c. GDP per capita provides a reflection of the degree of income inequality within a country.
- d. GDP per capita provides a basis of comparison between the economic performance of different countries.

Question 21

The rate of interest paid by the RBA on balances in banks' exchange settlements accounts (ESAs) is defined to be the target cash rate minus 0.25%. The actual cash rate is the prevailing rate of interest in the overnight money market (OMM) in which banks lend and borrow to finance their daily liquidity needs. If the RBA increases the target cash rate, banks will move money from the OMM to the ESA's, creating a shortage of cash in the OMM which raises the interest rate. If the real cash rate does not rise to the target rate, what will the RBA then do?

- a. Sell government bonds and notes.
- b. Buy government bonds and notes.
- c. Loosen monetary policy.
- d. Both a. and c.

Question 22

Suppose that Australia experiences a rapid increase in demand for its exports due to a mining boom. Concurrently, investment opportunities arise domestically, so that Australian investors retain their funds within the country. Which of the following is not a possible outcome for the Australian dollar?

	Equilibrium quantity traded in the foreign exchange market	Value of the Australian dollar
a.	Decreases	Appreciates
b.	Does not change	Appreciates
c.	Increases	Appreciates
d.	Does not change	Does not change

Question 23

In November 2014, the Federal Reserve of the United States announced that it would discontinue "QE", its bond buying program designed to stimulate the economy. This announcement signalled the strength of the US economy, causing the AUD to fall in value against the USD as investors moved towards US Treasuries. What is the most likely impact on Australia as a result of this change in the exchange rate?

- The current account improves due to an increase in exports.
- The current account worsens due to an increase in imports.
- The AUD value of foreign debt goes down.
- Foreign investors find it more expensive to invest in Australia.

Question 24

Consider the following scenario:

An Australian music artist has produced a new album with a local producer. A radio station in the United States wishes to purchase the right to play songs from this album. Under what component of the Balance of Payments will this sale be recorded?

- Net secondary income on the Current Account
- Non-producing, non-financial assets on the Capital Account
- Direct investment on the Financial Account
- Net goods on the Current Account

Question 25

A decrease in the (income) tax-free threshold in Australia will:

- decrease the average rate of tax.
- increase the average rate of tax.
- increase both the marginal and average rate of tax.
- leave both the average and marginal rate of tax unchanged.

Question 26

Consider the hypothetical economy XYZ. The Gini coefficient of economy XYZ rises from 0.4 to 0.6. Which government policy could have caused this change to occur?

- An increase in the excise tax on fatty foods.
- An increase in the marginal tax rate on the highest tax bracket.
- Decreasing eligibility requirements for unemployment benefits.
- Increasing inheritance tax (i.e. taxes paid by beneficiaries of an inheritance).

Question 27

Assume there are two neighbouring petrol stations. Each station sets its price at the same time each morning and it stays unchanged for the day (i.e., each owner is unaware of the other's action before setting her price). The diagram below shows the payoff for each petrol station, where within the parentheses are listed, in order, the profits of station A and B respectively. Suppose both stations' owners are aware of these potential payoffs.

		Petrol Station B	
		HIGH	LOW
Petrol Station A	HIGH	(60,60)	(10,70)
	LOW	(70,10)	(30,30)

Which outcome is the most likely?

- Both petrol stations set a high price.
- One petrol station sets a high price and the other petrol station sets a low price.
- Both petrol stations set a low price.
- Each of the outcomes is equally likely.

Question 28

Consider the following exchange rates in October 2014 and December 2014. They are quoted in terms of the amount of foreign currency per AUD.

Foreign Currency	Exchange Rate in October 2014	Exchange Rate in December 2014
USD	0.90	0.85
Euro	0.70	0.68
Yen	95	101
NZD	1.11	1.08

Considering the above table, which of the following events do you think might have occurred between October and December?

- The Federal Reserve of the United States announced a tightening of monetary policy.
- The Eurozone announced worse than expected financial performance for the year.
- Australian imports from Japan increased significantly due to changes in consumer tastes.
- Australia's wheat exports to New Zealand increased due to a drought in New Zealand.

Question 29

Why do economists rely on real GDP as opposed to nominal GDP?

- Real GDP includes non-monetary factors such as leisure time and environmental quality.
- Decision makers are interested in changes in comparing the quantities of goods sold over time, not their prices.
- Real GDP accounts for lost productivity due to those who have been unemployed long-term.
- Real GDP includes the income of Australians working overseas.

Question 30

Consider the following table for Economy XYZ. Assume that this economy has a floating exchange rate. Furthermore, assume net current transfers are zero and net income is equivalent to – 10% of the financial account.

Components of Balance of Payments	Amount in \$ million
Exports of Goods	650
Imports of Goods	500
Net services	-300
Capital Account	60

Using the table above, which of the following statements is correct?

- a. There is a deficit of \$150 million on the current account.
- b. There is a surplus of \$100 million on the financial account.
- c. Net income is \$15 million.
- d. There is a surplus of \$150 million on the financial account.

Question 31

The multiplier M , is given by the following formula:

$$M = \frac{1}{1 - (c - m)(1 - t)}$$

where c is the marginal propensity to consume, m is the marginal propensity to import and t is the marginal income tax rate.

If Japanese products suddenly become more attractive to Australian consumers, then what should happen to the value of the multiplier, M , in the Australian economy? We assume that the total amount of consumption does not change.

- a. The value of the multiplier should increase.
- b. The value of the multiplier should decrease.
- c. The value of the multiplier should remain the same as the amount of savings remains constant and it is only consumption that is being redirected offshore.
- d. The value of the multiplier should remain the same since the marginal propensity to save is constant.

Question 32

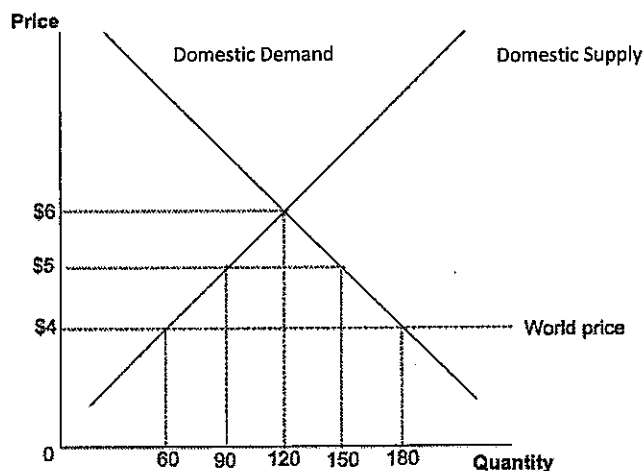
Bob can either go to work, where he will earn \$100, or he can play a game with his friend Dale. The game involves flipping a coin that lands on heads 2/3 of the time and tails 1/3 of the time. If it lands on heads, Bob gets \$3 from Dale. If it lands on tails, Dale gets \$9 from Bob. Bob does not have to play the game. If he does not go to work, he can instead do nothing.

How much would we expect Bob to win in the game and what is his opportunity cost of going to work?

	Bob's expected winnings from the game	Bob's opportunity cost of going to work
a.	\$1 win	\$1
b.	\$1 win	\$0
c.	\$1 loss	\$100
d.	\$1 loss	\$0

Question 33

Consider the tariff diagram below, illustrating domestic supply and demand curves.



The government imposes a tariff of \$2 on top of the current world price. The increase in government revenue is:

- a. \$60.
- b. \$120.
- c. \$240.
- d. None of the above.

Question 34

If the Australian dollar is worth 1.2 New Zealand dollars and 1 Euro buys 0.5 Australian dollars, how many Euros can be bought with 1 New Zealand dollar (in fractional form)?

- a. 6/10
- b. 10/6
- c. 24/10
- d. 5/12

Question 35

A firm's accounting profit refers to the difference between its total revenue and total costs whereas the economic profit is the difference between a firm's total revenue and total costs, including the opportunity cost of owner-supplied resources.

Bob runs a bakery where in a given month he pays rent of \$200, spends \$50 on advertising and purchases \$100 worth of ingredients for bread making. Additionally, he has another \$400 of his own funds invested in the form of capital for his shop that could earn him \$40 if invested elsewhere. Due to Bob's expertise, he has been offered a generous \$150 per month to work as a baker for a larger company, which normally only pay their bakers \$120 per month. The total monthly revenue from his bakery is \$600. What are Bob's economic and accounting profits?

	Accounting Profit	Economic Profit
a.	\$150	-\$340
b.	\$250	-\$340
c.	\$150	\$60
d.	\$250	\$60

Question 36

Refer to the following table for data in 2014 for a hypothetical economy.

	Number
Part time employees	4
Full time employees	6
Unemployed	3
Total working age population	20

In the following year, 5 additional people enter the working age population. Out of the 5 people, 1 of them finds part time employment, 2 of them finds full time employment and 2 do not actively seek employment. How does the participation rate and unemployment rate change from 2014?

	Participation Rate	Unemployment Rate
a.	Increases	Increases
b.	Increases	Decreases
c.	Decreases	Increases
d.	Decreases	Decreases

Question 37

The consumption of each household can be modelled by the following equation:

$$C = C_0 + MPC \times (Y - T)$$

where C_0 is autonomous consumption, T is total taxes paid, Y is income, and MPC is the marginal propensity to consume. Savings plus consumption equals income, that is,

$$Y = S + C$$

Given that $MPC = 0.7$, which of the following changes will have the greatest impact on the amount of savings (S)?

- a. C_0 decreases by 200.
- b. Y increases by 300 and T increases by 100.
- c. Y increases by 400 and T increases by 200.
- d. All of the above have the same impact on S.

Question 38

Refer to the table below describing a hypothetical economy:

	CPI	Nominal GDP
Year 1	100	\$100m
Year 2	105	\$105m
Year 3	110	\$110m
Year 4	115	\$115m

How do the inflation rate and real GDP change from Year 2 to 4?

	Inflation Rate	Real GDP
a.	Increases	Remains constant
b.	Increases	Increases
c.	Remains constant	Remains constant
d.	Decreases	Remains constant

For Questions 39 and 40, consider the following scenario. Two oil companies, Secon and Western, each of which currently emits 10 tonnes of carbon dioxide per day. The table below gives the cost of production for each company at various levels of carbon emission.

Company	Carbon Emission (tonnes per day)				
	10	8	6	4	2
Secon	\$150	\$250	\$450	\$800	\$1450
Western	\$200	\$225	\$300	\$400	\$740

Question 39

Suppose that the government proposes a plan to implement a tax of \$150 per tonne an attempt to cut emissions. How much carbon will be emitted by Secon and Western if the tax is implemented?

- a. 8 tonnes by Secon and 6 tonnes by Western.
- b. 4 tonnes by Secon and 2 tonnes by Western.
- c. 6 tonnes by Secon and 6 tonnes by Western.
- d. 6 tonnes by Secon and 4 tonnes by Western.

Question 40

However, the two firms lobby the government, complaining that the \$150 per tonne tax is unreasonable. The government then formulates an alternative option where they cap the total carbon dioxide emission by both companies at 12 tonnes. As the government is unaware of the companies' production costs, it plans to auction off the emission rights to the two companies to maximize market efficiency. If all emission rights must be sold and at the same price, what will be the price the two companies are willing to pay for the rights?

- a. \$40/tonne
- b. \$60/tonne
- c. \$80/tonne
- d. \$100/tonne

2015

AUSTRALIAN ECONOMICS AND BUSINESS STUDIES COMPETITION

About the Organisers

This Competition is run annually by a non-profit organisation within the UNSW Business School. The aim is to stimulate high school students' interest in business and economics, and lay the path for potential careers in the business world, government and academia.

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