

THE CPAP STUDY GUIDE TO VCE ECONOMICS



PART 1 (Unit 3)

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The Unit 3 Study Design

Australia's living standards

The Australian economy is constantly evolving. The main instrument for allocating resources is the market, but government also plays a significant role in resource allocation. In this unit students investigate the role of the market in allocating resources and examine the factors that affect the price and quantity traded for a range of goods and services. Students develop an understanding of the key measures of efficiency and how market systems might result in efficient outcomes. Students consider contemporary issues to explain the need for government intervention in markets and why markets might fail to maximise society's living standards. As part of a balanced examination, students also consider unintended consequences of government intervention in the market.

Students develop an understanding of the macroeconomy. They investigate the factors that affect the level of aggregate demand and aggregate supply in the economy and apply theories to explain how changes in these variables might affect achievement of domestic macroeconomic goals and living standards. Students assess the extent to which the Australian economy has achieved these macroeconomic goals during the past two years.

Australia's living standards depend, in part, on strong economic relationships with its major trading partners. Students investigate the importance of international economic relationships and the effect of these on Australian living standards. Students analyse how international transactions are recorded, and examine how economic factors might affect the value of the exchange rate, the terms of trade and Australia's international competitiveness. Students also analyse how changes in the value of the exchange rate, the terms of trade and international competitiveness affect the domestic macroeconomic goals.

Area of Study 1

An introduction to microeconomics: the market system, resource allocation and government intervention

In this area of study students investigate the role of the market in addressing the key economic questions of what and how much to produce, how to produce and for whom to produce. Students consider the effects of decisions made by consumers and businesses on what goods and services are produced, the quantities in which they are produced, the way they are produced and to whom they are distributed. Students investigate the key factors that affect the level of demand and supply in markets and how these might lead to changing prices, as well as the movement of land, labour and capital resources to those areas of production that generate the most value for society. Students use models to make predictions and consider the role of markets in achieving economic efficiency. They discuss instances where the market fails to allocate resources efficiently and evaluate whether government intervention leads to a more efficient allocation of resources in terms of maximising society's living standards.

Outcome 1

On completion of this unit the student should be able to analyse how markets operate to allocate resources and evaluate the role of markets and government intervention in achieving efficient outcomes.

The Key knowledge includes:

1. the concept of relative scarcity, including needs, wants, resources, opportunity cost and the production possibility frontier (PPF) model, and the three basic economic questions
2. the meaning and significance of economic efficiency, including allocative efficiency, productive efficiency, dynamic efficiency and intertemporal efficiency and their relationship to the PPF model
3. the conditions for a free and perfectly competitive market
4. the law of demand and the theory of the law of demand, including the income effect and the substitution effect
5. the demand curve, including movements along and shifts of the demand curve
6. non-price factors likely to affect demand and the position of the demand curve, including changes in disposable income, the prices of substitutes and complements, preferences and tastes, interest rates, population demographics and consumer confidence
7. the law of supply and the theory of the law of supply, including the profit motive
8. the supply curve, including movements along and shifts of the supply curve
9. non-price factors likely to affect supply and the position of the supply curve, including changes in the costs of production, number of suppliers, technology, productivity and climatic conditions
10. the effects of changes in supply and demand on equilibrium prices and quantity traded
11. the meaning and significance of price elasticity of demand and supply
12. factors affecting price elasticity of demand, including degree of necessity, availability of substitutes, proportion of income and time
13. factors affecting price elasticity of supply, including spare capacity, production period and durability of goods
14. the role of relative prices in the allocation of resources
15. the role of free and competitive markets in promoting an efficient allocation of resources and improved living standards
16. types of market failure, including public goods, externalities, asymmetric information and common access resources
17. the role and effect of indirect taxation, subsidies, regulations, advertising and direct provision as forms of government intervention in the market to address market failure
18. one example of a government intervention in markets that unintentionally leads to a decrease in one of allocative, productive, dynamic or intertemporal efficiency.

Area of Study 2

Domestic macroeconomic goals

In this area of study students investigate Australia's domestic macroeconomic goals supporting living standards, including strong and sustainable economic growth, full employment and low and stable inflation (price stability). Using the five-sector circular flow model of the macroeconomy, students consider the role of key economic agents and examine the factors that affect the business cycle. Students examine how each of the goals is measured and the potential consequences associated with the level of achievement of each goal. Students identify and analyse contemporary aggregate demand and aggregate supply factors that may have influenced the level of achievement of domestic macroeconomic goals over the past two years and consider how the level of achievement of the goals may affect living standards.

Outcome 2

On completion of this unit the student should be able to analyse key contemporary factors that may have affected domestic macroeconomic goals over the past two years, evaluate the extent to which the goals have been achieved and discuss the effects on living standards.

The purpose of economic activity:

The nature and purpose of economic activity

19. the difference between material and non-material living standards and factors that may affect living standards, including access to goods and services, environmental quality, physical and mental health, crime rates and literacy rates
20. the five-sector circular flow model of income, including the role of households, businesses, government, financial institutions and the external sector in an open contemporary macroeconomy
21. the business cycle and its causes
22. the meaning and importance of aggregate demand and the factors that may affect the level of aggregate demand in the economy, including disposable income, interest rates, consumer confidence, business confidence, the exchange rate and rates of economic growth overseas
23. the meaning and importance of aggregate supply and the factors that may affect the level of aggregate supply in the economy, including quantity and quality of the factors of production, costs of production, technological change, productivity growth, exchange rates and climatic conditions, and other events including government regulations and disruptions to international supply chains

The domestic macroeconomic goals

24. the meaning of the goal of strong and sustainable economic growth
25. measurement of the rate of economic growth using growth in real Gross Domestic Product (GDP)
26. consequences of not achieving the goal of strong and sustainable economic growth and its effect on living standards, including environmental degradation, external pressures, high inflation if growth is too high, and high unemployment if growth is too low
27. the meaning of the goal of full employment, including the NAIRU (natural rate of unemployment)
28. classifications within the labour force, including employed, unemployed, hidden unemployed, long-term unemployed, underemployed and frictional unemployment
29. measurement of the labour force, including the participation rate, the unemployment rate and the labour force under-utilisation rate
30. the difference between cyclical and structural unemployment
31. the consequences of not achieving the goal of full employment and its effect on living standards, including the impact on GDP and tax revenue if unemployment is too high and the effects on inflation if unemployment is too low
32. the meaning of the goal of low and stable inflation (price stability)
33. the distinction between inflation, disinflation and deflation
34. measurement of the inflation rate using the Consumer Price Index (CPI), including the difference between the headline and underlying (core) rate of inflation
35. causes of inflation, including demand inflation and cost inflation
36. consequences of not achieving the goal of low and stable inflation (price stability) and its effect on living standards, including erosion of purchasing power, development of a wage-price spiral, distortion of spending and investment decisions, lower returns on investment, loss of international competitiveness if it is too high, and delayed consumption and unemployment if it is too low
37. aggregate demand and aggregate supply factors that have affected the level of achievement or non-achievement of the goals of strong and sustainable economic growth, full employment and low and stable inflation over the past two years.

Area of Study 3

Australia and the international economy

Australia is an open economy. Students examine the reasons for international trade, such as the exchange of goods and services and the movement of savings and investment capital, and how these transactions might affect living standards. Students describe how international transactions are recorded. Students analyse the effects of movements in the exchange rate, the terms of trade and changes in international competitiveness on the achievement of the domestic macroeconomic goals and living standards.

Outcome 3

On completion of this unit the student should be able to analyse the factors that may affect the exchange rate, terms of trade and Australia's international competitiveness, and discuss their impact on Australia's international transactions and the achievement of the domestic macroeconomic goals and living standards.

The Key knowledge includes:

38. the gains from international trade, including lower prices, greater choice, access to resources, economies of scale, and increased competition and efficiency
39. the balance of payments and its components
40. cyclical and structural influences on Australia's current account balance
41. the composition and cause of net foreign debt and net foreign equities
42. the exchange rate, its meaning and measurement and the factors affecting its value, including relative interest rates, commodity prices and the terms of trade, demand for exports and imports, foreign investment, relative rates of inflation, credit ratings and speculation
43. the terms of trade, its meaning and measurement and the factors that may affect the terms of trade, including commodity prices and production costs in trading partners
44. international competitiveness and the factors that may affect international competitiveness, including productivity, production costs, availability of natural resources, exchange rates and relative rates of inflation
45. the effect of movements in the terms of trade and the exchange rate, and changes in international competitiveness on the domestic macroeconomic goals and living standards

Chapter 1 [Unit 3 AOS 1] An introduction to microeconomics

The concept of relative scarcity, including needs, wants, resources, opportunity cost and the production possibility frontier (PPF) model, and the three basic economic questions.

What is an economy?

An economy is a system that allocates scarce resources to satisfy the needs and wants of a society. It is any place or region around the world where production of goods and services takes place, spending on those goods and services occurs and income is made from the selling of those goods and services. Put simply, an economy is a place where production, income and expenditure (referred to as economic activity) occurs. In Australia alone we have several economies: the Australian economy, the Victorian economy, the NSW economy, etc.

Relative scarcity

Economics is the study of how scarce resources (such as land and labour) are allocated by key participants to best satisfy the needs and wants of society. Decisions must be made because every nation demands countless goods and services that require resources (or factors of production) to produce them. However, a nation's resources are limited when compared to the demands placed upon them, creating an imbalance, typically referred to as **relative scarcity**.

RELATIVE SCARCITY

Demands placed on resources
[unlimited wants]

>

Resources available to satisfy demands
[limited resources]

Economic resources

Typically, our resources fall into four major categories:

1. Land and natural resources (e.g. forests, minerals, water, etc.)
2. Capital resources (e.g. machinery, robotics, trucks, etc.)
3. Labour resources (e.g. workers such as teachers, managers, etc.)
4. Entrepreneurial resources (e.g. Melanie Perkins, Bill Gates, etc.)

All of these resources exist around us in various forms within our economy. They all have one important characteristic in common: they are all key inputs in the production process. Every business will have examples of all four 'factors of production' working to produce goods and/or services.

Exam Tip: A past examination asked students to explain the following statement: 'Economics studies how scarce resources are allocated among competing uses.' It is easy to read too much into a question like this and to forget that it is simply about scarcity and how this economic problem ultimately defines the study of economics. If asked a similar question this year, all students need to do is explain how the unlimited wants/needs (or 'uses for resources') require decisions about how to allocate resources in the production of goods and services.

Given that all resources (which are relatively limited or scarce) can be valued by money, and all demands for goods and services are typically valued in monetary terms, **scarcity simply means that we don't have enough money to purchase all of the goods or services that we desire**. Accordingly, every one of us encounters the problem of relative scarcity every day. We must therefore make a choice about how we should best use our resources (or money) to satisfy our demand for goods and services.

Exam Tip: Do not be confused about the role of money. It is not a resource in itself and you should not argue that money is one of our scarce resources.

Opportunity costs

When we decide to use our resources (or money) in some way, it necessarily involves us foregoing, or giving up, the opportunity to use those same resources (or money) in some other way. This is because resources are relatively scarce and have alternative uses. Accordingly, the **opportunity cost** of decision making can be defined as the value that could have been derived if the next best alternative was chosen or the (net) benefits that have been forgone when making an economic decision. For example, the Victorian government has substantial (but limited) funds at its disposal to use for society's benefit. If it chooses to spend \$125b

on constructing a Suburban Rail Loop, it foregoes or sacrifices the opportunity to use that same \$125b for investment in health, education, other infrastructure or renewable energies. The opportunity cost in this example is the benefit that could have been derived from the investment in health, education, transport infrastructure or renewable energy, whichever was considered the next best option for the State of Victoria.

Exam Tip: Question 4a of the 2022 exam required students to outline the potential opportunity costs of consuming sugar for an individual. It is important not to refer to the opportunity cost as the 'tooth decay' or 'cost of dental repairs', which are both examples of the 'costs' associated with excessive sugar consumption. The best students will have referred to the sacrifice or foregoing of the value of the net benefits that would have been enjoyed from consumption of the next best alternative (e.g. healthier teeth stemming from the consumption of sugar free products).

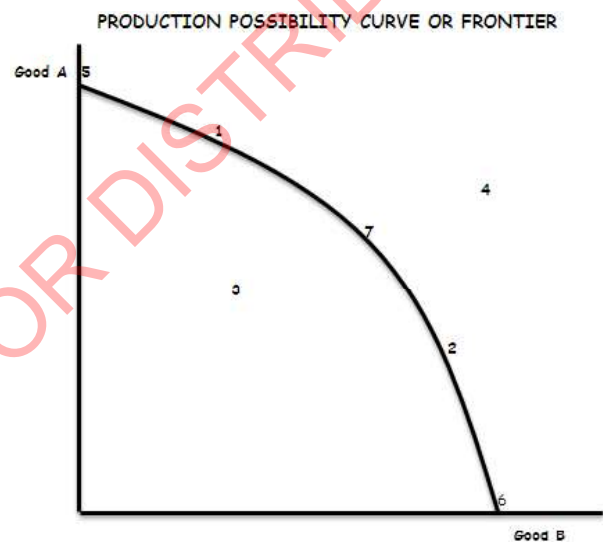
The Production Possibility Frontier (PPF)

This is also referred to as the Production Possibility Curve (PPC). It is an abstract tool used by economists to highlight concepts such as:

- opportunity cost;
- productive capacity;
- productive or technical efficiency (or inefficiency);
- allocative efficiency;
- dynamic efficiency; and
- intertemporal efficiency.

It relies on a number of simplified assumptions, the key ones being:

- only two goods are being produced in an economy;
- all resources or factors of production can be used in the production of either good; and
- if all resources are being used efficiently, the economy's productive capacity must 'bounded' by the curve (i.e. you cannot produce beyond this point at the current time).



Points to note about the PPF are as follows:

- A movement from one point to another means a country is allocating more to the production of one good and less to another (this happens every minute in economies around the world) which necessarily involves a sacrifice of the production of another good (i.e. opportunity cost).
- Points outside the curve (like point 4) are not achievable today, but are achievable in the future via an increase in the quantity or quality of resources.
- Points inside the curve are neither technically/productively or allocatively efficient.
- Point 1, 2, 5, 6 and 7 are equally efficient in the respect that the economy is producing the maximum volume of goods and services possible with its available resources (that is, technical or productive efficiency is being achieved).
- There are many points (in addition to 1 and 2) along the PPC that are equally efficient in a productive sense.
- Only one point on the curve (it could be 1 or 2 or any other point that is not marked) is efficient in terms of what is best for the economy or country (and this usually represents that point where consumers' aggregate or total satisfaction is maximized typically referred to as the point of **allocative efficiency**).
- The speed or pace at which an economy can move from one point on the PPC to another can reflect the level of 'dynamic efficiency' existing in the economy.
- The point of production on the PPC can also reflect the level of 'intertemporal efficiency' that exists in an economy.

The way in which the PPC can be used to highlight the different types of efficiency is covered under the heading 'An efficient allocation of resources'.

Exam Tip: In the current Study Design (2023) students are now required to 'construct and interpret' a PPF model. Students should be able to construct a PPF from hypothetical data and 'interpret' a move from one point on the PPF to another. Students also need to be able to explain the 4 types of efficiency in relation to the PPF model.

The three basic economic questions

Relative scarcity gives rise to three basic economic questions faced by every economy. What to produce? how to produce it? and for whom it should be produced for?

1. What to produce?

This is concerned with how we allocate our scarce resources. Should we produce bananas or oranges? Capital goods (e.g. factory equipment) or Consumption goods? Petrol powered cars or solar powered cars? Military weapons or better hospitals? Coal fired electricity or solar electricity?

2. How to produce?

Again, this is an allocation question and asks what combination of scarce resources will we use to produce those goods and services that we have decided to produce? Do we use more labour than capital (labour intensive)? More capital than labour (capital intensive)?

3. For whom to produce?

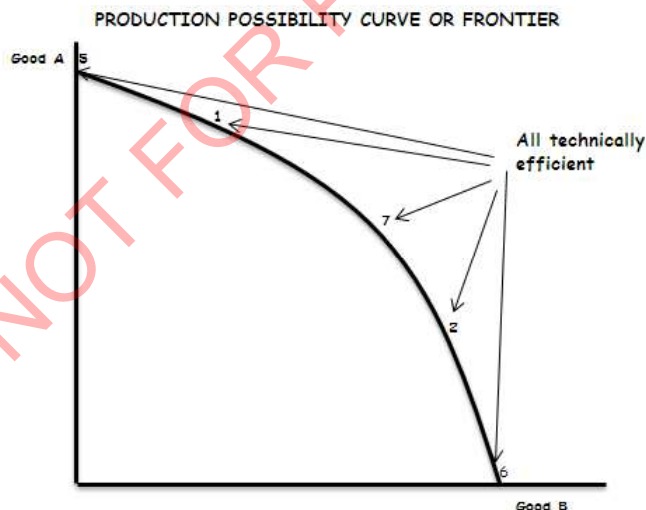
This is really concerned with how the goods and services are allocated or distributed to society. If left to free markets (i.e. markets without government intervention), those with greater economic power (e.g. the wealthy) will have greater access to goods and services and some members of society (e.g. the poor) will be unable to purchase some essential goods or services (e.g. health care).

The overriding consideration for governments when seeking solutions to the above questions is how do we maximise welfare and living standards? In Australia, we primarily use a market based economy to allocate resources, where buyers and sellers come together to exchange goods and services based on price (a market). Producers that seek to maximise profits will need to produce goods and services that satisfy the needs of consumers (consumer sovereignty). The market will effectively determine the way most resources are allocated in the Australian economy via the market mechanism (also referred to as the price mechanism).



The meaning and significance of economic efficiency, including allocative efficiency, productive efficiency, dynamic efficiency and intertemporal efficiency and their relationship to the PPF model

Technical or productive efficiency

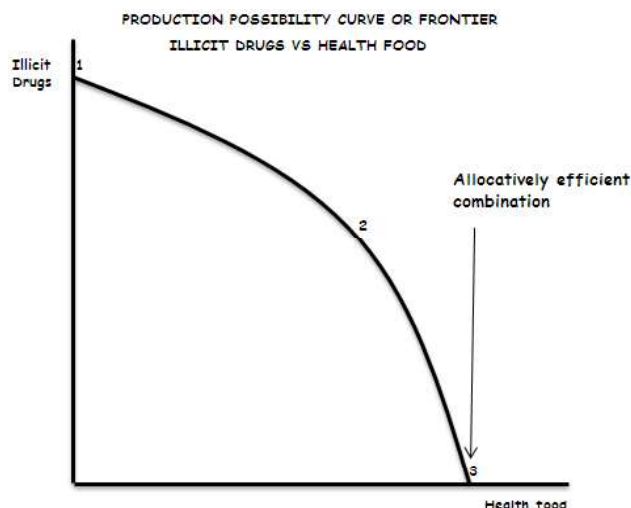


Technical or productive efficiency occurs when an economy is producing its maximum possible output and fully utilising its resources. To achieve productive efficiency:

1. Firms must be producing at the lowest possible long run (average) costs and will mean output from the available resources has been maximised.
2. Firms must be maximising productivity. e.g. getting the most out of their resources.
3. Ensuring there is no wastage of resources e.g. there is no unemployment or idle/ underutilized capital and land resources.

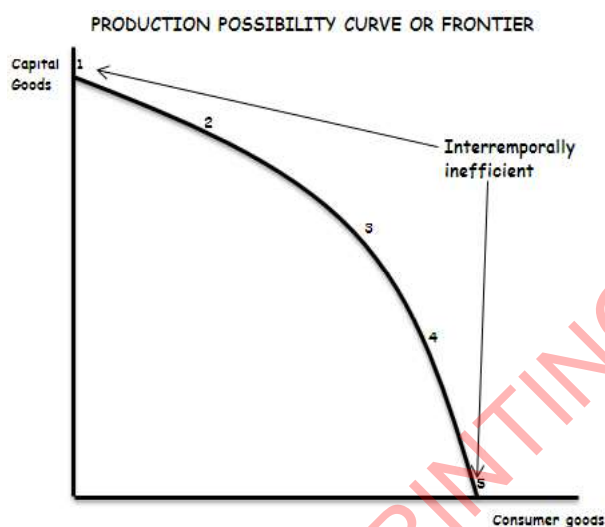
It is represented by the economy producing at any point along the PPF. All points along the PPF are technically efficient, regardless of what combination of goods and services are produced. E.g. points 5,1,7,2,6 are all productively efficient.

Allocative efficiency



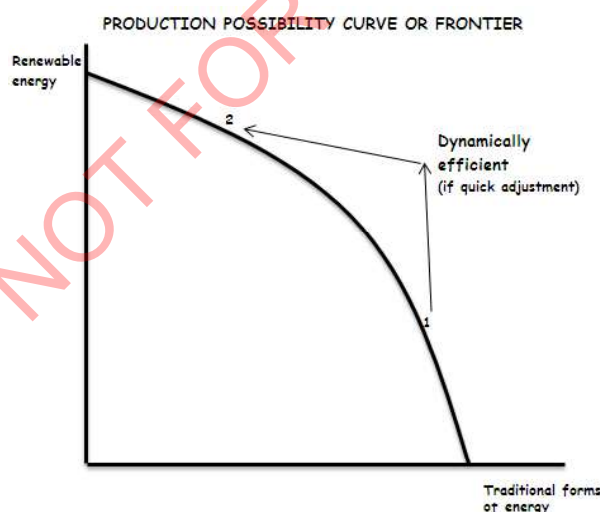
Allocative efficiency represents the most efficient allocation of scarce resources for an economy in the sense that, for any combination of scarce resources, the production of goods and services that occurs is most valued by society. It results in a combination of goods and services being produced that maximises national welfare/living standards. In other words, the most efficient allocation of resources occurs when it is impossible to increase production and living standards by changing the way resources are allocated. For example, using the PPF, in an economy which could choose between health food and illicit drugs. Despite all points of production being technically efficient (i.e. points 1-3), there is only one combination that is in the national best interest. This is point 3. Accordingly, if the economy moved from point 3 towards point 2 (i.e. it allocated some resources to the production of illicit drugs) then the nation's welfare or living standards would decline.

Intertemporal efficiency



Intertemporal efficiency refers to a firm, government or indeed the nation having just the right balance between resources being used for current, as opposed to future use. The establishment of the "Future Fund" (see Unit 4 Budgetary Policy) and the compulsory "Superannuation Guarantee Scheme" are examples of how the government has endeavored to improve intertemporal efficiency. It can be represented by the economy not producing at either extreme on the PPF, when the choices are capital or consumer goods. In other words, too much consumption relative to investment (point 5), or too much investment relative to consumption (point 1), will mean that the economy's use of resources is intertemporally inefficient. The unsustainable use of a nation's resources (e.g. depleting fishing stocks) is a common example of how intertemporal efficiency is not achieved.

Dynamic efficiency



Dynamic efficiency can refer to how firms or industries are able to respond to changing market conditions or changes in technology such that productive or allocative efficiency can be achieved. If the response is quick, then dynamic efficiency is said to be high. It is represented by the speed at which the economy can re-allocate its resources from the production of one good or service to another, or from a sub-optimal combination to one that is **allocatively efficient**. For example, assume that our production possibilities are traditional forms of energy generation (e.g. coal fired power stations) and renewable forms of energy (e.g. wind and solar). Assuming that there are major advances in technology making renewable energy generation much more viable (combined with a clear change in consumer preferences towards renewable energy), then if the country can quickly adapt and move from point 1 to 2 (allocative efficiency), it is 'dynamically efficient'.

Exam Tip: In economics literature, allocative efficiency is sometimes defined as the competitive market situation where firms are forced to price at minimum price (or where marginal cost = average revenue) and where consumer satisfaction is maximised. [This will typically be explored in a first year university or IB Economics course.] As a VCE Economics student, you should focus upon how a nation’s resources are allocated to provide the greatest value to society. In this respect, achieving the most efficient allocation of resources in the economy is the ultimate objective or goal of any government.

If our resources are re-allocated such that production in the economy expands, does this mean that there will be an increase in allocative efficiency?

Usually, an increase in production, *ceteris paribus*, will mean that allocative efficiency has improved. However, if the increase in production has occurred for goods or services that are not in the nation’s collective best interests (e.g. illicit drugs), then allocative efficiency has not been achieved despite the increased production of goods and services. This is why it is important to examine the effect on national living standards or welfare (or value to society) when determining whether an economy has achieved the most efficient use of its resources. [This, of course, relates to market failure, which is covered later in this area of study.]

The most efficient allocation of resources can also be described as an allocation that is **PARETO EFFICIENT** in the sense that a move away from this position would result in the net benefits for society to diminish. The most efficient allocation of resources also implies that a nation has achieved the highest levels for the different types of efficiency: **allocative efficiency, technical (productive) efficiency, intertemporal efficiency and dynamic efficiency**. Accordingly, government policies will not only be developed to address the misallocation of resources (or market failures) that naturally occur in market capitalist economies, but to boost ‘efficiency’ levels within our markets and industries.

QUICK QUIZ 1: DISTINGUISHING BETWEEN EFFICIENCIES

Types of efficiency		Outline a distinguishing factor between the two types of efficiency (think about how each efficiency relates to the PPF)
Allocative	Dynamic	
Allocative	Productive	
Allocative	Intertemporal	
Dynamic	Productive	
Dynamic	Intertemporal	
Productive	Intertemporal	

The conditions for a free and perfectly competitive market

A market is a place where buyers and sellers (demand and supply) come together to allocate resources. In an open market economy like our own, the market or price mechanism, is the main instrument for allocating these scarce resources.

In order to better understand how consumer and producer behaviour influences markets and resource allocation, economists typically create theories and models to simplify the real world. The market structure that usually forms the basis for demand and supply analysis is called “**perfect competition**”. While there is no market in the world that is ‘*perfectly competitive*’ (but some do come close, such as some agricultural markets and the foreign exchange markets), the model of a perfectly competitive market is a useful tool that enables predictions to be made about how resources such as labour and capital move around in an economy.

A “free” market is one without any government intervention. This means the government doesn’t impose any rules, regulations, taxes, or subsidies on that market. Of course, there are few, if any, markets that are free from government intervention, perhaps the closest example is the market for cryptocurrencies where governments have been slow to regulate.

A perfectly competitive market requires the following conditions/characteristics or assumptions:

- A large number of buyers and sellers
- Perfectly homogenous products (i.e. no product differentiation – the products in the market are identical);
- Freedom of entry into the market by sellers
- Freedom of exit out of the market by sellers
- Buyers and sellers possess perfect information about the products
- Buyers seek to maximise satisfaction (utility) and sellers seek to maximize profit
- Resources (e.g. labour) are perfectly mobile.

Extension: The nature of perfectly competitive markets

The nature of a perfectly competitive market is one where production takes place at the lowest possible cost (technical efficiency) and that consumers would be able to purchase those goods and services they desired (consumer sovereignty) at the lowest possible prices (they have perfect information). Competition would ensure that firms priced their products at their ‘marginal’ costs of production. This means that any further price reduction would result in insufficient profits being earned (or perhaps even losses), thereby encouraging firms to exit the market. This means that a perfectly competitive market structure would see consumers getting the best deal possible, in terms of paying the lowest possible prices and receiving the highest possible quality. This situation in economics is typically referred to (in a narrow sense) as ‘allocative efficiency’, where the markets do a perfect job at satisfying the demands of consumers.

Exam Tip: In perfectly competitive markets, businesses can only earn ‘normal profits’ in the long run. This means that the profit is just enough to provide incentive for the business to remain a going concern. Profit levels below ‘normal profits’ will encourage firms to exit the industry. Profit levels above ‘normal profits’ (sometimes called ‘super-normal profits’) will encourage entry of firms into the industry, thereby working to reduce industry profits back towards normal levels. Note that students are not required to demonstrate an understanding of normal/abnormal profits in the current VCE Economics course.

Exam Tip: The key skills listed in the Study Design requires students to be able to ‘evaluate the role of free and competitive markets in achieving an efficient allocation of resources’. In addition, the key knowledge points indicate the need for students to demonstrate an understanding of ‘one example of a government intervention in markets that unintentionally leads to a decrease in one of allocative, productive, dynamic or intertemporal efficiency’. This highlights that ‘unregulated markets’ will not always lead to resources being allocated in a way that best satisfies the needs and wants of society. Markets will require government intervention that is designed to rectify these ‘market failures’. However, government intervention will, at times, have unintended consequences that we will consider after first examining how markets allocate resources via the price mechanism.

REVIEW/APPLICATION QUESTIONS 1 - Introduction

1. Outline two different ways of explaining the problem of relative scarcity.
2. Distinguish capital resources from labour resources and provide three examples of each.
3. Draw a rough ‘production possibility curve’ for ‘Defence goods’ and ‘Environmental goods’ and answer the following:
 - describe how movements along the PPF can highlight the concept of opportunity cost.
 - show points of technical/ productive efficiency on the PPF.
 - use the PPF to distinguish allocative efficiency from technical efficiency.
 - highlight how two points on the PPF can represent dynamic efficiency.
 - use the PPF to distinguish allocative efficiency from dynamic efficiency.
 - show a point where unemployment exists on your diagram.
4. Outline the three basic questions that every economy confronts.
5. Draw a PPF with Capital goods on the y-axis and Consumer goods on the x-axis. Describe any points on the PPF that are least likely to be intertemporally efficient and explain why you believe this to be the case.
 - A) Draw a series of points along the PPF and describe which point(s) are ‘technically efficient’?
 - B) Describe which of the above points are ‘allocatively efficient’? Can there be more than one?
 - C) Discuss how a movement from one point to another can illustrate the degree of ‘dynamic efficiency’ that is present in an economy.
6. Explain why there is a trade-off between consumption (consumer goods) and capital investment (capital goods) in machinery, factories and infrastructure.
7. Explain how the market answers each of the three basic economic questions.
8. Discuss four key characteristics of a free and perfectly competitive markets.
9. Define opportunity costs and distinguish between an opportunity cost and a cost

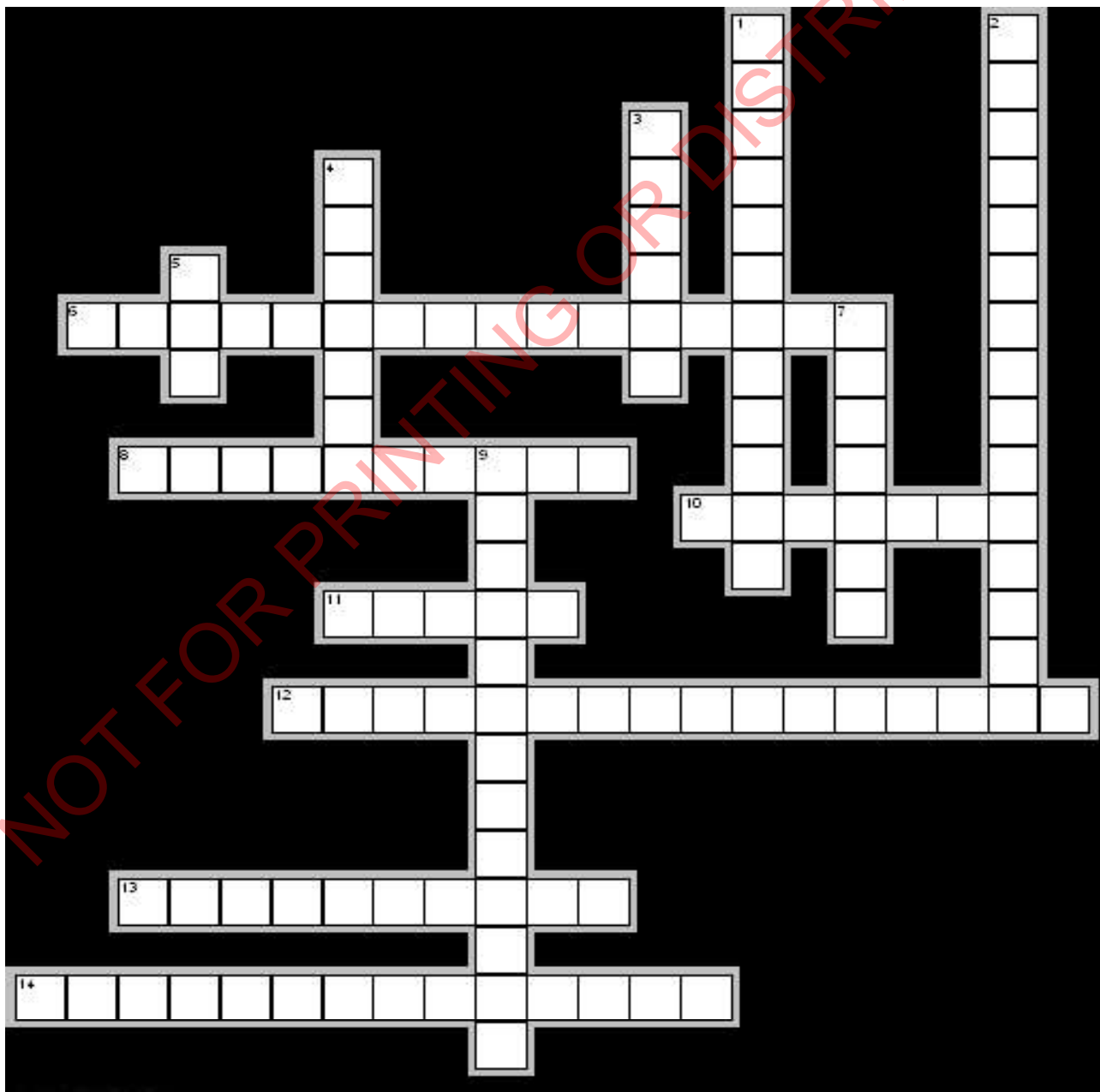
Quick revision crossword No 1: Introduction to economics

Across

6. Items like robotics and machinery used in the production process (2 words)
8. The most important type of efficiency that represents the best combination of goods and services produces such that living standards are maximised
10. any place or region around the world where production of goods and services takes place
11. A 'fuel' that drives our economy (it is also relatively scarce)
12. Demands placed on resources greater than the ability to meet those demands with existing resources (2 words)
13. Investing in this can help to push the PPF outwards over time
14. Describes how the forces of demand and supply determine (relative) prices, which then ultimately determines the way our productive resources are allocated in the economy (2 words)

Down

1. What must be occurring when a nation produces inside its production possibility frontier
2. the value that could have been derived if the next best alternative was chosen
3. A factor of production involving human capital
4. The type of efficiency that refers to how a nation's firms or industries are able to respond to changing market conditions or changes in technology
5. An acronym for an abstract tool used by economists that highlights the concepts of opportunity cost and productive efficiency
7. An insufficient volume of this is likely to lead to intertemporal inefficiency
9. The type of efficiency that refers to a firm, government or indeed the nation having just the right balance between resources used for current as opposed to future use.



QUICK QUIZ 3: MARKET FAILURE AND GOVERNMENT INTERVENTIONS

For each of the market failures listed in the left hand column of the table, complete the necessary information in the adjacent row. The first one has been completed to provide an idea of the approach that could be used.

Type of failure	Characteristics	Examples	Why the market fails?	Example of Government interventions	Impact of intervention
Negative externality in production	The production of a product Imposes costs(spillovers) on third parties who are not involved in the original transaction	Carbon emissions from coal fired electricity (CFE) production	Social costs are not internalised by the market and too many resources are allocated to production of CFE	Carbon tax	Higher price of CFE Lower demand Reduced supply Fewer resources allocated to CFE production
Negative externality in consumption					
Positive externality: production					
Positive externality: Consumption					
Asymmetric information					
Common access resources					
Public goods					

One example of a government intervention in markets that unintentionally leads to a decrease in one of allocative, productive, dynamic or intertemporal efficiency

We have already seen that unregulated markets have a tendency to “fail” by not achieving an allocation of resources that best satisfies society’s needs and wants (allocative efficiency). As a consequence, governments frequently intervene to alter how resources are used within an economy, with the intention of improving overall living standards. However, government intervention frequently comes with unintended consequences that, in some cases, leads to a less efficient allocation of resources and a reduction in living standards.

Governments intervene in many ways, as we have seen above, via the implementation of indirect taxes (e.g. excise tax on fuel, alcohol and tobacco), subsidies (e.g. renewable energy) government regulations (e.g. E10 fuel/ energy markets via RET/minimum wage/ plain packaging laws) and advertising (e.g. sunscreen and smoking) with the intention of improving efficiency in the allocation of resources. However, given that there are a variety of potential solutions to overcome the “misallocation of resources” that frequently occur in unregulated markets, any policy response runs the risk of decreasing economic efficiency and creating ‘government failure’. This will occur if the costs of the intervention outweigh any intended benefits from the intervention, such that overall living standards fall as a consequence of the intervention.

Examples of government intervention and unintended consequences:

Excise on tobacco and alcohol

In the market for traditional cigarettes, the government has attempted to achieve a more efficient allocation of resources via the implementation and increase of indirect taxes over time. This includes the legislated 5% per annum increase over the next three years (2023-2025). While this has certainly helped to raise the relative price of traditional cigarettes, it has reduced the relative price of other (substitute) products, such as black-market cigarettes and/or e-cigarettes, which has resulted in higher demand and production. Given that the production of black-market goods [and/or e-cigarettes] create their own social costs, such as the proliferation of crime [or adverse health effects from e-cigarette consumption], this has a negative impact on allocative efficiency because it leads to an over-allocation of resource to the production of goods and/or services that are not in society’s best interests.

A similar problem occurs in relation to the excise on alcohol, including the tax on alcopops (alcoholic beverages that resemble soft drinks). While these taxes are clearly designed to reduce the negative externalities associated with the consumption of alcohol, they have the perverse effect of encouraging the consumption of other potentially more harmful drugs whose relative prices is reduced following the introduction or increase in excise on alcohol. This is particularly problematic in the case of younger Australians (e.g. students) who are more likely to be lower income earners with greater sensitivity to the level (or change) in prices of competing (mind altering) products. Faced with the choice of consuming alcohol or illicit drugs, younger Australians will increasingly turn to the consumption of illicit drugs following any increase in excise on alcohol. This occurs because the tax effectively reduces the relative price of illicit drugs, discouraging the consumption of alcohol and encouraging the consumption of illicit drugs. Accordingly, the excise on alcohol has the unintended consequence of more resources flowing to the production of a substitute product (illicit drugs) which has the potential to have a net negative effect on efficiency in the allocation of resources and living standards.

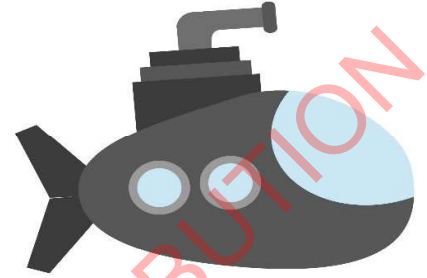


Reneged government contracts

Federal and state governments will often enter into contractual obligations with the private sector for the provision of goods or services, including infrastructure projects and major events. These contracts are typically completed and deliver outcomes as intended by the government. However, on occasions, contracts are entered into that are cancelled or reneged, often for political reasons as governments change. This results in penalties being paid from the government to the private contractor for the ‘losses’ incurred as a consequence of the private contractor performing preparatory work, in addition to the potential loss of other contracts. Typically, the penalty clauses contained in these contracts are stacked in favour of the private contractor which comes at a huge expense to the government, and by extension, taxpayers. It effectively means that millions or even billions of dollars are delivered from the government sector to the private sector for very little (or nothing) in return. This comes at a huge opportunity cost and leads to an inefficient allocation of resources as the money forgone cannot be used in the production of other much needed government services, including health, education, or aged care services.

High profile examples include the Victorian Government's decision to cancel the contract to host the **2026 Commonwealth Games** on the basis that the projected cost to Victorian taxpayers had 'blown out' to excessive levels (i.e. more than \$6 billion). The renegeing of the contract resulted in the Victorian government making a compensation payment of \$380 million to the major bodies involved in organising the games (e.g. the Commonwealth Games Federation). While this \$380 million cannot be used to fund other Victorian government projects (potentially representing government failure), it can also be argued that it was a rational economic decision given the cost blowouts. Ultimately, it becomes a value judgement: Did the payment of the \$380 million perversely deliver net economic benefits for Victorians on the basis that more than \$6 billion was otherwise saved?

In late 2021, the Federal Government cancelled a **\$90 billion submarine contract** it entered into with France which involved the construction of 12 conventionally powered submarines. Instead, the government eventually entered into a partnership with the United Kingdom and the United States (AUKUS) that involved a commitment to spend up to \$368 billion on a fleet of up to eight nuclear powered submarines. The renegeed French contract ultimately cost Australian taxpayers approximately \$3.4 billion (close to \$1 billion of which was paid directly to the French naval contractor). Once again, this comes at a huge opportunity cost given that the money cannot be otherwise spent on the provision of other government services.



In 2015, the new Victorian Government cancelled the contract to build the **East West link freeway project**, which was entered into by the previous government. The cancellation ultimately cost the Victorian taxpayer in excess of \$1 billion in compensation payable to the private sector consortium. Again, this can represent another example of government failure given that the funds paid to the consortium, which delivered virtually zero economic benefit, could not be used on other Victorian projects that had the potential to deliver significant benefits for Victorian communities.

Over regulation

It can also be argued that government failure occurs if the costs of any given government intervention are greater than they could otherwise be (i.e. the opportunity cost of government intervention is not minimised). For example, a 2006 report by the Productivity Commission found that as a society we are potentially too risk averse, which leads to excessive and costly regulation (i.e. too much red tape!). The Commission found that:

“... regulatory burdens fall disproportionately on the economy’s many small (including ‘micro’) businesses, which lack the resources to deal with them. Tailoring regulation to limit the impact on small business and keeping regulatory costs down generally are essential if the ‘engine room’ of employment and economic growth is to prosper.”

“Australia clearly could not function well without regulation. However, in the Taskforce’s view, there is too much regulation and, in many cases, it imposes excessive and unnecessary costs on business. In so doing, it also imposes costs on the wider Australian community, through higher prices, less innovation and reduced choice.”

<https://www.pc.gov.au/research/supporting/regulation-taskforce/report/regulation-taskforce2.pdf>

This over regulation can reduce profits and increase losses, resulting in fewer resources flowing to the establishment and maintenance of businesses in Australia. Small businesses are a large employer and also provide important competition within markets which promotes the need to be both technically efficient (e.g. forces firms to find more effective production methods to reduce costs and maximise output) and dynamically efficient (e.g. forces firms to become more responsive to changes in tastes and preferences in order to gain market share and capture more profit). Ultimately, this excessive regulation leads to the nation's resources being allocated to the production of goods and services in a way that does not maximise living standards – which means that allocative efficiency is not achieved.

Whilst both the last Labor and Liberal Governments have stated their desire to reduce this excessive regulation, there is little doubt that we remain over regulated and, as recently as November 2019, the Prime Minister stated *“Our Deregulation Agenda has a laser focus on reducing the regulatory compliance burden on business”*

<https://www.pm.gov.au/media/new-measures-delivering-deregulation-australian-business>

Under regulation and underfunding of compliance: the case of flammable cladding

Government failure can also occur if regulation or funding for “compliance” is withdrawn or reduced inappropriately, demonstrating that getting the balance right is not easy, especially with so many vested interests to consider. This can be seen in the construction industry with a significant number of modern apartments being unsafe due to flammable cladding and other

faults. This has a number of causes, the core of which was the desire for builders/construction industry to cut costs, followed by the failure of government regulation.

The reduction in government funding for building inspections led to less enforcement of regulations and lower compliance levels by builders. Builders took advantage of the reduced number of inspections to 'cut corners', leading to many problems, such as people being evicted from their properties, others unable to get insurance without expensive fixes and building surveyors (who are responsible for making the final call on the quality of construction projects) finding it harder to get indemnity insurance. This, according to many recent reports, had (and has) the potential to cause a slow down and eventual freeze in new construction <https://www.abc.net.au/news/2019-06-25/flamable-cladding-website-suggests-how-government-will-respond/11244182>.

Other problems have also been found in the general quality of some buildings, leading to accusations of "cowboy/ dodgy" builders, which is also likely to reduce the demand for modern apartments and hinder the future flow of resources towards building new apartments.

As a consequence, many owners will be regretting their decisions to buy, and the demand for new apartments is likely to fall. In reality, too many resources flowed to building apartment blocks that would not have been bought if buyers were aware of the problems. In this respect, it is an example of asymmetric information as a market failure and ultimately reduces the ability to achieve allocative efficiency in the economy. State governments, who are responsible for building regulations and compliance, are potentially faced with heavy costs in helping to rectify the problems that they inadvertently contributed towards. The Victorian government is providing \$300 million in funding and raising another \$300m from levies on new construction to help rectify the problems and restore faith in modern apartments. These funds can no longer be used to fund other improvements or projects that the government could have spent the \$300m on, meaning that it comes at a significant opportunity cost and further hinders the ability to achieve allocative efficiency and improve living standards.

Vocational educational training: VET FEE-HELP

As discussed under market failure, given that education contains public good characteristics (i.e. it is a merit good or a good with positive externalities in consumption) there will typically be an under-allocation of resources to its production unless the government intervenes. Employers are typically reluctant to invest in industry level and general skills training (as opposed to firm specific skills training) because employers cannot prevent workers from leaving a firm nor can they recoup the cost of training if they leave. As a result, governments intervene to ensure that a more optimal level of resources are allocated to education in general.



Vocational Education and Training (VET) is designed to equip students to gain qualifications for many types of employment (e.g. Certificates 1/2/3/4 in Hospitality or Aged and Community Care) as well as specific skills to help them in the workforce. During the early and mid-2000's, State governments increasingly moved away from Government run educational provision towards a more market-based system where private RTO'S (Recognised Training Organisations) competed to attract customers. It was felt that this would boost technical efficiency by "creating incentives for public and private training providers to minimise costs. It would also raise allocative efficiency by more closely tying training provision to user demand and lift dynamic efficiency by promoting innovation in service delivery."

Victoria and South Australia moved early in deregulating their VET training by reducing barriers to entry and handing out hundreds of licenses to new "colleges". Funding was offered under a "VET FEE-HELP" scheme, similar to the potentially more successful University HECS debt model. It was hoped that courses would quickly respond to fast changing industry requirements (dynamic and allocative efficiency). Instead many wrote the cheapest possible course curriculums, providing them online and reducing the quality and length of courses, whilst still charging the government full prices. It was found that many offered bribes to attract new customers such as iPad's, trips to Bali and splitting the government training subsidy. These incentives were used to attract students with low educational achievements and an investigation by *The Age* found that operators even targeted vulnerable people or groups, such as those with intellectual and other disabilities, remote Aboriginal communities and immigrants with limited English.

According to government figures this scheme has cost taxpayers more than \$7.5 billion, including loans that will never be repaid, and left many owing thousands for courses they never finished or for qualifications not fit for purpose. It also undermined the integrity and trust in VET training and potentially reduced the skills of the workforce with many firms and industry sectors claiming that, despite relatively high underutilisation rates (unemployment and underemployment combined), they struggle to find skilled workers. This makes it harder to improve productivity and boost our international competitiveness, undermining the ability to minimise costs (technical efficiency), quickly alter production (dynamic efficiency) or achieve the best allocation of resources to improve living standards (allocative efficiency). This huge sum of money could also have been used elsewhere in the economy such as government provided education and training (our TAFE system has seen reduced funding). The Joyce review into vocational

training found that “most of the leading large scale (commercial) providers have been exposed as essentially fraudulent, exploiting government subsidies and leaving students with worthless qualifications.” The regulator ASQA in 2015/16 cancelled the registration of 69 RTO’s and by 2017/18 this had risen to 322.

In principle, the policy of adopting a more market-based system was potentially sound with The Age writing “the government’s proposed changes to vocational educational sector are welcome, this debacle is a reminder that great care is needed when competitive principals are added to such areas as human services and education. With under-resourced regulators, inadequate sanctions and flawed legislation, the path to corruption and market failure was a disaster waiting to happen.”

This highlights the difficulty in creating sound legislation with adequate funding to oversee its implementation and shows clearly that well intentioned government policy often leads to unintended consequences and potentially creates a combination of both market failure and government failure, reducing the economy’s ability to achieve dynamic, technical and allocative efficiency.

Tax incentives contributing to housing affordability issues

The current tax laws in relation to negative gearing and capital gains tax concessions have negatively impacted on allocative efficiency in the Australian economy. Negative gearing allows investors to enjoy tax advantages not available on other types of investments (e.g. effectively offsetting interest costs against other taxable income) and these tax advantages for investing in housing are compounded by the 50% tax concession on capital gains. The operation of both tax concessions continues to fuel speculative investment in Australia’s housing stock, which is a major factor behind the booming housing market up to 2022. By making it financially attractive to borrow and invest in houses, it has resulted in investors flocking to the market, causing house prices to rise so much that it has created a real housing affordability issue. This is characterised by younger Australians, who desire a house as a residence, rather than an investment, being locked out of the housing market. It therefore has led to an (allocatively) inefficient allocation of resources given that it has resulted in an undesirable social outcome. The increasing supply of housing stock owned by investors, at the expense of other Australians who are (or will be) forced to rent, prevents them from realising ‘the dream’ to own one’s home. The removal of these tax laws therefore has the potential to make society better off, with more of the nation’s resources devoted to the production and sale of owner-occupied dwellings.



The fast roll out of Jobkeeper in 2020

The JobKeeper wage subsidy was introduced in 2020 and involved the government effectively subsidising ‘eligible employers’ (e.g. businesses suffering a 30+ percent decline in revenue) by paying their employees \$750 each per week [until September 2020 and at a reduced rate thereafter with the program ending in March 2021]. Its purpose was to support income and spending in the economy, as well as to discourage employers from dismissing employees during the 2020 economic downturn. While it certainly helped to assist with the economic recovery, there were several businesses who continued to receive support during the first six months of the program whose turnover (sales levels) actually increased. This was due to a design error in the scheme where businesses only needed to report a ‘predicted’ 30% fall in turnover [50% for large companies] in the first month of the program in order to receive the full wage subsidies for the first six months. This meant the profitable businesses that ultimately didn’t suffer during the downturn were in receipt of subsidies that were not justified. This was an example of an unintended consequence of the initiative which had a negative impact on efficiency because the unwarranted subsidies came at an excessive opportunity cost, reducing allocative efficiency, given that the money could have been better used to assist with economic recovery in some other way, such as directing those funds to those with more genuine need for income support or spending on some other government program that would have better served the economy or society.

Exam Tip: In the 2023 study design, students no longer need to include a 'contemporary' example of government failure. This means that students have more scope to choose an example from the past that is interesting and memorable. The new study design also states that students need to explain how the chosen example impacts on one specific type of efficiency (allocative, productive, dynamic or inter-temporal). While it is very **unlikely** that the exam will ask students to refer to a specific efficiency, such as inter-temporal, it is not impossible. The safest approach is to be prepared with an example (or examples) that can be linked to each type of efficiency.

Exam Tip: Technically, the Study Design requires students to think in terms of government failure in the sense that the government intervention led to a 'net' reduction in economic efficiency. The best responses will be those that attempt to make this argument. For example, in relation to subsidies provided to private vocational colleges (or subsidies provided to industries more generally), economic efficiency would decrease if it could be shown that the benefits of the subsidies are outweighed by the costs in terms of the roting, waste and/or inefficiencies that became entrenched. Indeed, this point was made in the 2017 Examination Report where it was pointed out that students needed to do more than simply refer to unintended consequences - instead, they were required to make a link to 'reduced efficiency'.

REVIEW/APPLICATION QUESTIONS 4 – market failures and government intervention

1. Define what is meant by a market failure.
2. With respect to 'public goods', what is meant by 'non-excludable' and non-rivalrous' (non-depletable).
3. Identify two examples of a market failure (except externalities) and explain how each leads to an inefficient allocation of resources.
4. Explain what is meant by the 'free rider principle' (or 'free rider problem') using an example like prison or defense services as the public good in question.
5. Explain why a 'free market' is unlikely to provide a large fireworks display on new year's eve.
6. Explain how the government overcomes the market failure related to public goods.
7. Distinguish 'positive externalities from 'negative externalities'
8. List one other 'positive externality' apart from health and education and outline why you consider it to be a 'positive externality'
9. List one other 'negative externality of consumption' apart from tobacco, alcohol, and illegal drugs and outline why it is considered to be a 'negative externality'.
10. Define the term 'externalities' and distinguish 'positive' from 'negative' externalities. In your answer, refer to 'social' costs and benefits.
11. Explain how the government overcomes the market failure related to the existence of negative externalities in consumption.
12. Explain how the government overcomes the market failure related to the existence of negative externalities in production.
13. Explain how the government overcomes the market failure related to the existence of positive externalities in consumption.
14. Explain how the government overcomes the market failure related to the existence of positive externalities in production.
15. Explain what is meant by 'asymmetric information' in your answer refer to one contemporary example of asymmetric information.
16. Draw a D/S diagram for the sugar market showing before and after a successful government advertising campaign about the dangers of high sugar consumption causing diabetes. Explain how the new equilibrium is achieved.
17. Discuss why the government intervenes in the tobacco market? Ensure that you demonstrate an understanding of market failure and negative externalities.
18. How does the government use indirect taxation on tobacco to improve the allocation of resources in the economy.
19. Using an example of your choice explain why government intervention can lead to unintended consequences that reduce the efficiency of resource allocation.
20. Using demand and supply diagrams show the impact of your selected example on the market in question [Show the old and new equilibrium price and quantity].
21. Using these diagrams in your explanation discuss how relative prices have changed to alter the allocation of resources.
22. Discuss why deregulation of vocational educational training has created market failure.
23. Draw separate D/S diagrams for the events described below, and examine the impact on the market in terms of prices, production levels and resource allocation. You should attempt to justify why the government has intervened for each scenario. (Tip: you must shift one of the D/S curves for each example and consider efficiencies and market failure.)
 - i. In the market for cigarettes, the government increases tax (excise) on tobacco;
 - ii. In the market for cars, the government reduces taxes on imports (tariffs);
 - iii. In the market for LPG conversions, the government provides a cash grant to consumers who convert their cars from petrol to LPG;
 - iv. In the market for fish, the government reduces the number of fishing permits in existence;
 - v. In the market for motor vehicles, the government provides a subsidy to manufactures that produce environmentally friendly (i.e. 'green') vehicles;
 - vi. In the market for water, the government builds a desalination plant in Wonthaggi;
 - vii. In the market for housing in Wonthaggi, the government builds a desalination plant in the township;
 - viii. In the market for electricity, the government provides rebates for households and businesses who install solar panels;
 - ix. In the market for ready to drink mixed alcoholic beverages (i.e. alcopops), the government increases the indirect tax for these products;
 - x. In the market for home insulation, the government provides a rebate for installation by households;
 - xi. In the market for solar panels, the government provides a consumer subsidy;
 - xii. In the market for electricity, the government repeals the carbon tax;
 - xiii. In the market for groceries, Coles and Woolworths collude against rival Aldi; and
 - xiv. In the market for air-conditioners, Mitsubishi Electric induces one of its dealers to sell its branded air-conditioners at a higher price.
24. Explain one example of government intervention that unintentionally leads to a decrease in allocative efficiency
25. Explain one example of government intervention that unintentionally leads to a decrease in productive efficiency
26. Explain one example of government intervention that unintentionally leads to a decrease in inter-temporal efficiency
27. Explain one example of government intervention that unintentionally leads to a decrease in dynamic efficiency

Quick revision crossword No 4

Market Failures

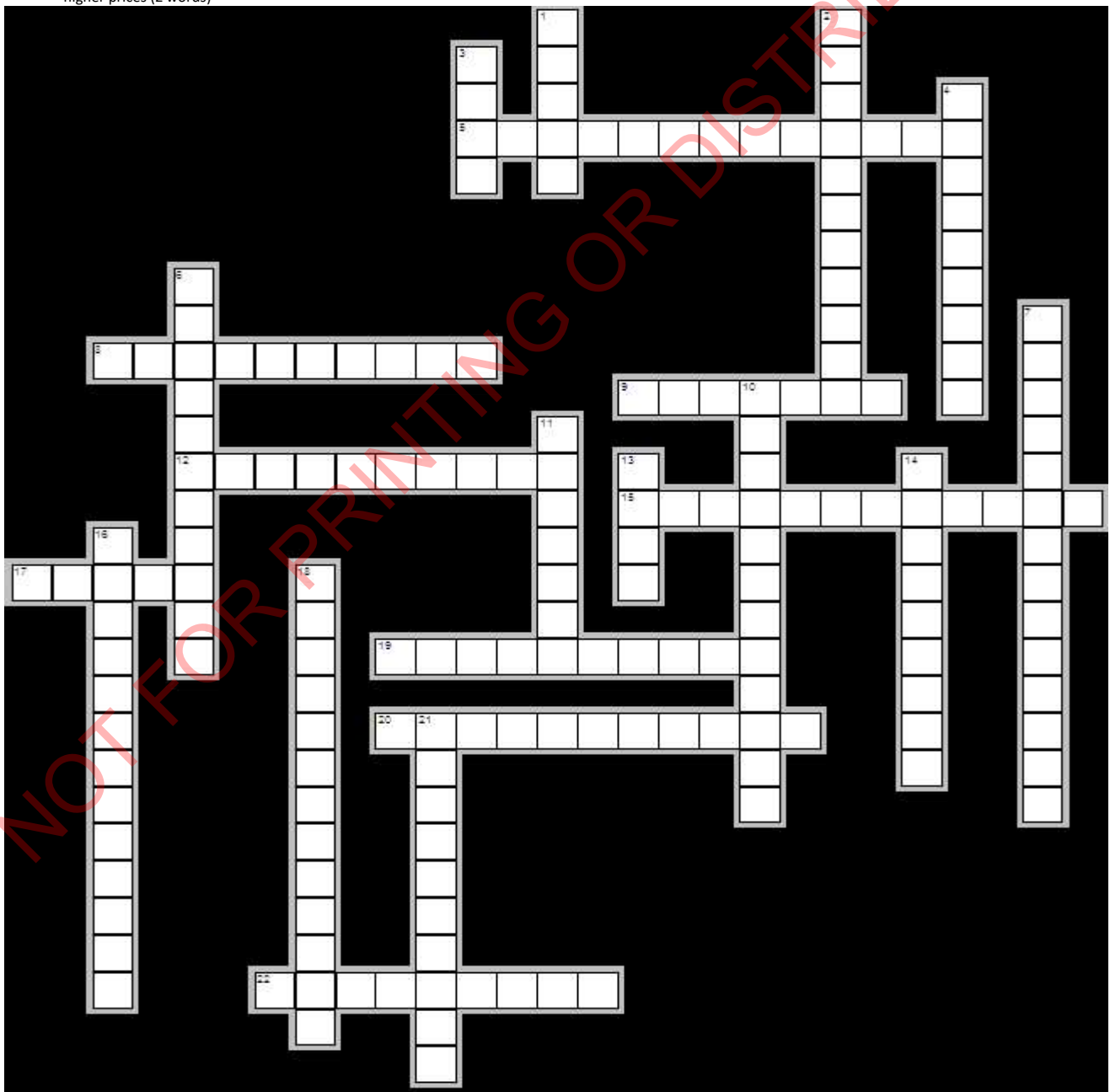
Across

- 5. Some argue this to be the greatest market failure the world has seen (2 words)
- 8. Public goods do not have this characteristic
- 9. A means by which the government can promote the production of merit goods (or goods with positive externalities)
- 12. These types of services are a common example of public goods
- 15. This is what causes producers to ignore the social costs associated with the production of some products (2 words)
- 17. The imposition of these is used to reduce the consumption and production of de-merit goods (or goods with negative externalities)
- 19. Private goods have this characteristic
- 20. The term used to describe the situation where dominant firms behave uncompetitively (2 words)
- 22. The problem of not being able to enforce payment from some consumers (2 words)

Down

- 1. These types of goods are also referred to as goods with positive externalities in production or consumption
- 2. A form of asymmetric information that involves an insured party failing to reduce risk taking behaviour and causing insurance companies to charge higher prices (2 words)

- 3. The competition watchdog (acronym)
- 4. This type of efficiency is likely to be compromised when a monopoly exists
- 6. Two words used to describe the third party (or spillover) effects stemming from negative externalities (2 words)
- 7. A classic example of a negative externality in consumption (2 words)
- 10. This is what causes consumers to ignore the social costs associated with the consumption of some products (2 words)
- 11. Unregulated markets will tend to cause a reduction in this
- 13. The acronym for Australia's version of an emissions trading scheme (ETS) that did not achieve parliamentary approval
- 14. The common example of a negative externality in production
- 16. Costs or benefits associated with the production or consumption of goods and services that are passed onto 'third parties
- 18. Occurs when markets, left unregulated, will tend to result in an over-allocation of resources to the production of some goods and services and an under-allocation of resources to the production of others (2 words)
- 21. Information of this variety creates a market failure



TEST YOURSELF : 50 MULTIPLE CHOICE QUESTIONS – AREA OF STUDY 1

1. In Australia, resources are allocated via

- (a) 'The market' primarily, with some government involvement
- (b) Government decision making, with a limited role for 'the market'
- (c) consumers and their demand for goods and services
- (d) producers and their demands for scarce resources

2. Which of the following is not regarded as being a 'factor of production'?

- (a) capital
- (b) natural resources
- (c) money
- (d) labour

3. The opportunity cost of producing a given commodity is:

- (a) the price at which the commodity sells in the market place
- (b) the best alternative jobs which the workers employed in its production could have obtained
- (c) the value of the best foregone alternative which the resources used in its production could have produced
- (d) the price paid for the resources used in its production

Andre Pitts, a student, can use his precious time after school either watching sport on TV or studying. The following are the various combinations he can choose (measured in hours):

TV(hours)	0	1	2	3	4	5
Study (Work requirements done)	20	16	12	8	4	0

4. The opportunity cost of Andre increasing his TV sports viewing time from one hour to four hours is:

- (a) 12 work requirements
- (b) 16 work requirements
- (c) 8 work requirements
- (d) 4 work requirements

5. When the price of a product is below equilibrium

- (a) it means that there is excess supply and price will fall
- (b) it means that there is excess demand and price will fall
- (c) it means that there is excess supply and price will rise
- (d) it means that there is excess demand and price will rise

6. Which one of the following statements is not true?

- (a) the basic economic problem is one of choice
- (b) choice is necessary because of limited wants and needs
- (c) the means available to satisfy wants are limited
- (d) entrepreneurship is a specialised form of labour resources

7. With respect to a production possibility curve, which of the following statements is false?

- (a) unemployment is likely to occur when the economy is producing inside the frontier
- (b) inflation is likely to occur when demand is at a point beyond the frontier (i.e. outside the curve)
- (c) at a point in time, an economy cannot possibly produce at two different points along the frontier
- (d) a movement along the curve, from one point to another, is unrelated to the concept of opportunity cost

8. Which of the following is not likely to shift the production possibility curve outwards in the longer term?

- (a) an improvement in technology
- (b) an decrease in the savings ratio (i.e. people saving less)
- (c) an increase in the population
- (d) an increase in the efficiency of labour

9. A firm will:

- (a) seek to achieve an inelastic (i.e. STEEP) demand curve
- (b) seek to achieve an elastic (i.e. FLAT) demand curve
- (c) seek to promote competition in its industry
- (d) seek to minimise profits and maximise costs

10. Any excess supply of a commodity indicates that

- (a) the price in the market is too high
- (b) inappropriate technology was applied causing over production
- (c) resources are being wasted or used inefficiently
- (d) poor marketing and promotion has left a shortfall in demand

11. If market equilibrium is \$1.40 cents per litre for petrol, any attempt by government to place a minimum price of \$1.60 to reduce petrol consumption, this will cause

- (a) supply to increase, demand to fall, price to rise and excess supply
- (b) supply to fall, demand to fall, price to fall and excess supply
- (c) supply to increase, demand to fall, price to fall and excess demand
- (d) supply to fall, demand to increase, price to rise and excess supply

12. The factor "entrepreneurship" is different to "labour" as entrepreneurship

- (a) involves financial risk taking whereas labour generally does not
- (b) is rewarded with money whilst labour is not
- (c) is a capital resource whereas labour is a human resource
- (d) is paid more than labour resources

13. Microeconomics examines all of the following with the exception of

- (a) changes in Australia's rate of unemployment
- (b) changes in pricing policies for the steel industry
- (c) structural change in the telecommunications industry
- (d) labour market reform via the introduction of Workchoices legislation

14. With respect to the market for oranges, which of the following statements is correct

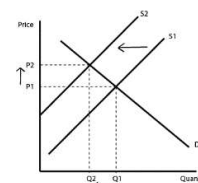
- (a) the price will rise when the supply curve shifts to the right
- (b) the price will rise when the demand curve shifts to the left
- (c) the price will fall when the demand for orange juice increases
- (d) the price will rise when the price of mandarins (a substitute) increases

15. The government will intervene in the marketplace because

- (a) a market will usually result in lower productivity levels in the economy
- (b) a market results in higher levels of unemployment
- (c) a market will not allocate resources in ways that maximise national welfare
- (d) a market will typically be associated with lower rates of inflation

16. Which of the following would be most likely to cause a shift from S_1 to S_2 ?

- (a) a decrease in the price of the commodity
- (b) a boost in government subsidies
- (c) a reduction in transport and freight charges
- (d) an increase in the cost of raw materials



17. A movement back down the supply curve for beef (a contraction of supply) is most likely to be caused by

- (a) a decrease in the price of pork
- (b) drought conditions in cattle grazing areas
- (c) a decrease in the price of beef
- (d) a tax placed on the production of beef

18. Which of the following is least likely to be a government action that reduces smoking:

- (a) an increase in excise on tobacco
- (b) banning cigarette advertising
- (c) regulations that prohibit smoking indoors
- (d) the re-introduction of a carbon tax

19. The discovery of a major new oil deposit would result in

- (a) a movement upwards (expansion) along the supply curve for oil
- (b) a movement downwards (contraction) along the supply curve for oil
- (c) a shift to the right to a new supply curve for oil
- (d) a shift to the left to a new supply curve for oil

20. The 'law of supply' suggests that

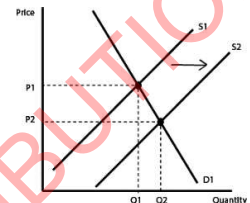
- (a) price and quantity supplied are positively related
- (b) price and quantity supplied are inversely related
- (c) increases in supply curve are caused by a price fall
- (d) supply will expand until market equilibrium is reached

21. Assume that we are operating in a purely competitive market and that Coke and Pepsi are close substitutes. A heat wave is likely to:

- (a) increase the price of Coke with the price of Pepsi remaining constant
- (b) increase the price of Pepsi and Coke
- (c) not affect the price of either Coke or Pepsi
- (d) decrease the price of Coke and increase the price of Pepsi

22. Which of the following is most likely to cause the change in equilibrium as illustrated in the adjacent diagram?

- (a) higher cost of materials
- (b) higher government subsidies
- (c) higher business taxes
- (d) higher interest rates



23. With respect to demand and supply for petrol

- (a) the price will rise when labour becomes cheaper
- (b) the price will rise when the demand curve shifts to the left
- (c) the price will fall when the demand for cars increases
- (d) the price will fall when the price of LPG (a substitute) decreases

24. When the price of bananas is above equilibrium, the following will occur in that market for bananas

- (a) the price will increase because of excess supply
- (b) the price will decrease because of excess demand
- (c) the price will decrease because of excess supply
- (d) the price will increase because of excess demand

25. In the market for motor vehicles, a rise in productivity is likely to

- (a) cause supply to increase and price to rise
- (b) cause supply to decrease and price to rise
- (c) cause supply to increase and price to fall
- (d) cause supply to decrease and price to fall

26. In the market for any good or service

- (a) the price will rise if there is excess demand in the market
- (b) the price will rise if there is excess supply in the market
- (c) the price will fall if the price of a substitute increases
- (d) the price will fall if the price of a complement decreases

27. A product that experiences a 50% increase in demand in response to a 100% reduction in price has a price elasticity of demand that is relatively:

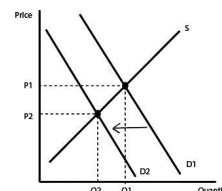
- (a) elastic
- (b) unit elastic
- (c) inelastic
- (d) elastic and inelastic

28. For basic foodstuffs such as bread and milk, price elasticity of demand tends to be:

- (a) close to zero
- (b) greater than negative one
- (c) equal to negative one
- (d) relatively elastic

29. Which of the following conditions are not consistent with a market that is perfectly competitive?

- (a) few buyers and sellers
- (b) firms sell homogeneous or identical products
- (c) there is a high degree of mobility of firms
- (d) no individual seller can influence the market price



30. Which of the following would be most likely to cause a shift from D1 to D2 in the market for guns?

- (a) increased incidence of wars around the world
- (b) the removal of shooting events from all Olympic competitions
- (c) the removal of government assistance to weapons manufacturers
- (d) the removal of government restrictions on gun ownership

31. If the government decided to legalise the consumption and production of marijuana.

- (a) The price of marijuana will increase and the production of marijuana will decrease
- (b) The price of marijuana will drop and the production of marijuana will increase
- (c) The price of marijuana will drop and the production of marijuana will decrease
- (d) Everyone smoking normal tobacco will switch to consuming marijuana

32. If brands A and B are substitutes then a decrease in the price of B will

- (a) decrease the demand for A
- (b) increase the demand for A
- (c) increase the supply of B
- (d) decrease the supply of A

33. Which one of the following is NOT a reason for the government intervening in the Australian economy?

- (a) to promote the production of public goods
- (b) to protect against or prevent the incidence of positive externalities
- (c) to reduce the rate of depletion of common access resources
- (d) to reduce the incidence of corporate fraud

34. Which of the following would be most likely to cause a shift of the supply curve for a product to the left?

- (a) a decrease in taxes paid by the industry
- (b) a removal of government subsidies to that industry
- (c) a rise in productivity
- (d) a decrease in the cost of raw materials

35. Which of the following would be most likely to cause a shift of the demand curve to the right?

- (a) a decrease in the price of the good
- (b) an introduction of a government subsidy to that industry
- (c) a reduction in the price of a substitute good
- (d) a decrease in rates of personal income tax

36. Which of the following is the least convincing reason for government intervention in markets?

- (a) pollution from factories
- (b) non production of socially desirable services such as defence or prisons
- (c) higher prices of goods and services over time
- (d) an underallocation of resources to the production of goods with positive externalities in consumption

37. In competitive markets, an increase in the demand for a product will most likely result in

- (a) a decrease in the production of that product
- (b) an increase in the production of a substitute product
- (c) an increase in the price of a substitute product
- (d) an increase in the price of a complimentary product

38. A large percentage fall in the price of a product that leads to a very small increase in quantity demanded means that

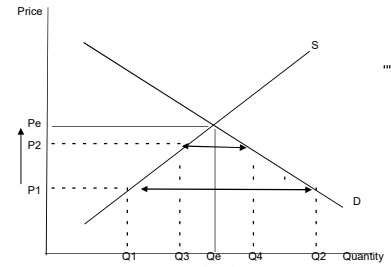
- (a) price elasticity of demand is low and the value of sales will rise
- (b) price elasticity of demand is high and the value of sales will rise
- (c) price elasticity of demand is low and the value of sales will fall
- (d) price elasticity of demand is high and the value of sales will fall

39. In a competitive market

- (a) if the price of one commodity decreases and the demand for related commodity increases the two goods are likely to be compliments
- (b) an increase in price tends to reduce excess supply of a commodity
- (c) a decrease in the price tends to reduce excess demand for a commodity
- (d) if two commodities are substitutes, an increase in the price of one will lead to a decrease in the price of the other

40. Which of the following best describes what is happening in the adjacent market?

- (a) the market was in excess supply with price too low and the price is increasing towards equilibrium
- (b) the market was in excess demand with price too high and the price is falling towards equilibrium
- (c) the market was in excess demand with price too low and the price is rising towards equilibrium
- (d) the market was in excess supply with price too high and the price is falling towards equilibrium



41. Which of the four events described below could usually be expected to cause an increase in the demand for coffee in a competitive market?

- (a) a rise in the income of consumers
- (b) an increase in the price of sugar (a complementary product)
- (c) a decrease in the price of tea (a substitute product)
- (d) a shift in consumer preferences towards tea

42. If a product has been the subject of negative publicity due to a poor safety record, this is likely to

- (a) cause a shift to the left of the demand curve
- (b) cause a movement down along the demand curve
- (c) cause a shift to the left of the demand curve and a lower price elasticity of demand
- (d) cause a shift to the left of the demand curve and a higher price elasticity of demand

43. The Headmaster and Board at a private school is contemplating whether rising production costs (brought about by a 5 per cent increase in teacher salaries) can be passed on in the form of higher school fees.

- (a) they should be concerned about a possible fall in enrolments if the demand for places at the school is price elastic
- (b) they should be concerned about a possible fall in enrolments if the demand for places at the school is price inelastic
- (c) price elasticity of demand for places at a school is never a consideration for the Headmaster or the Board
- (d) The income of parents is not a factor affecting the price elasticity of demand for places at private schools

44. When a farmer falsely claims that barn laid eggs are free range eggs, this is an example of which type of market failure?

- (a) asymmetric information
- (b) market power
- (c) externalities
- (d) public goods

45. Which of the following events is most likely to decrease the price of petrol?

- (a) the increase in excise tax on petrol
- (b) the success of an advertising campaign promoting petrol over LPG
- (c) cheaper LPG supplies
- (d) a war in the middle east disrupting petrol supplies

46. Higher petrol prices are most likely to result in all of the following except:

- (a) an increase in the demand for larger vehicles, like 4WDs
- (b) a higher price for LPG
- (c) an increased demand for public transport
- (d) an increased exploration effort by companies mining for oil

47. If a company has been found guilty of misleading and deceiving consumers it will tend to result in

- (a) higher prices and greater production
- (b) lower prices and greater production
- (c) higher prices and less production
- (d) lower prices and less production

48. A private producer is unlikely to provide prison services without some government financing or assistance because

- (a) it would be too costly to produce
- (b) prisoners would not have the money to pay for the service
- (c) it would be too difficult to extract payment from all users of the service
- (d) there would not be a demand for the service

49. With respect to demand and supply in the labour market for teachers

- (a) a wage above the market clearing level will not result in unemployment
- (b) higher wages for English teachers is a potential solution to the problem of over-supply of English teachers
- (c) higher wages for Maths teachers is a potential solution to the problem of under-supply of Maths teachers
- (d) differential pay rates in the teaching profession will alleviate shortages and will not have any impact on teacher morale across the State

50. Which of the following is not a factor affecting the price elasticity of demand for a brand new 40 foot yacht?

- (a) the availability and price of substitute goods (e.g. smaller yachts, speed boats, etc)
- (b) the income of consumers or buyers
- (c) the importance of the good to potential buyers (e.g. whether it is considered a necessity or luxury)
- (d) the availability of raw materials used in its production

Answers to multiple choice questions appear at the end of the Study Guide.

UNIT 3: MINI EXAM NO. 1

UNIT 3 AREA OF STUDY 1 (Total marks = 60)

Section A: Multiple choice (total marks = 15)

Section B: Short answer questions (total marks = 45)

Section A: multiple choice (15 MARKS)

1 The price of electric cars will fall if

- (a) the government removes road user charges for owners of electric cars
- (b) The price of petrol increases above \$2 per litre
- (c) The price of electricity falls
- (d) There are continuing technological advances in the electric car manufacturing industry

2 If a nation improves efficiency via the introduction of new technology, then the change may be illustrated graphically by

- (a) a movement along the production possibility curve
- (b) a shift outwards of the production possibility curve
- (c) a shift inwards of the production possibility curve
- (d) a shift towards the production possibility curve

3 New technology that improves the storage life of most fruit and vegetables will tend to:

- (a) increase the price elasticity of demand
- (b) reduce the price elasticity of demand
- (c) increase the price elasticity of supply
- (d) reduce the price elasticity of supply

4. In 2022 the Federal Court found that BlueScope engaged in cartel conduct with another supplier in relation to the supply of steel products in Australia. Which of the following best describes the ultimate reason for this type of government intervention?

- (a) protect against the incidence of negative externalities
- (b) promote competition in the economy
- (c) to protect against corporate fraud and dishonesty
- (d) limit the production of undesirable (or de-merit) goods in the economy

5. Which of the following factors is not likely to be a factor that results in higher supply of a product in the market place?

- (a) an increase in the price of a substitute product
- (b) an increase in productivity at the firm producing the good
- (c) a reduction in labour costs at the firm producing the good
- (d) the removal of a government subsidy to the supplier of that product

6 Which of the following factors is not likely to be a factor that results in higher demand for a product in the market place?

- (a) an increase in productivity at the firm producing the good
- (b) lower tax rates
- (c) higher consumer confidence
- (d) an increase in the price of a complement

7 A business will be operating in a less competitive market if:

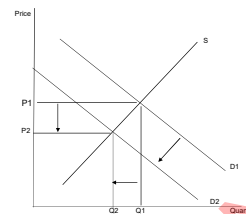
- (a) it faces a very elastic demand curve
- (b) it faces no competition from imports
- (c) there are no substitute products in that market
- (d) it has lots of competing businesses in that market

8 Which of the following market failures is most relevant in relation to climate change?

- (a) Externalities
- (b) Public goods
- (c) Common access resources
- (d) Asymmetric information

9. In the market for 'large cars', which of the following best explains the change in market conditions as depicted in the D/S diagram?

- (a) poor safety record of smaller cars
- (b) lower costs of production for manufacturers of large cars
- (c) rising petrol prices
- (d) bigger and better roads



10. Natural disasters in parts of Australia over recent years are most likely to have caused

- (a) the price of agricultural items to fall
- (b) the production of agricultural items to increase in the short term
- (c) the income of farmers to increase
- (d) the price and quantity of imported agricultural products to rise

11. Which of the following is unlikely to be an example of a market failure?

- (a) Non-production of prison services
- (b) Greed of some entrepreneurs
- (c) Pollution from factories
- (d) Depletion of common access resources

12. Which of the following is least likely to be an example of a service that results in positive externalities?

- (a) Gambling
- (b) Education
- (c) Scientific research
- (d) Health

13. Which of the following is unlikely to be an example of government intervention to reduce the harmful effects of smoking cigarettes?

- (a) Indirect taxes
- (b) Regulation
- (c) Advertising
- (d) Subsidies

14. The relative shortage of tradesmen is likely to have which of the following effects in the construction industry?

- (a) Higher prices for buildings as the demand is likely to increase in line with rising incomes
- (b) Higher prices for buildings as the costs of production for construction companies is likely to rise
- (c) Lower prices for buildings as demand is likely to fall in light of higher production costs
- (d) Lower prices for buildings as the costs of production for construction companies is likely to fall.

15. With respect to the price elasticity of demand (PED):

- (a) Businesses prefer to have a flat curve (i.e. a high PED for their products)
- (b) Lower PEDs are consistent with lots of competition
- (c) A low PEDs for a business means it can increase price and actually make more profit
- (d) The PED will increase in response to successful advertising campaigns

STRUCTURED QUESTIONS (45 MARKS)

Question 1 (25 marks)

- (a) Explain how an increase in the price of a substitute can affect the supply of a product. Use a fully labeled demand and supply diagram to illustrate. (4 marks)
- (b) Discuss how an increase in productivity at Kraft foods may affect the market for Kraft products. (4 marks)
- (c) Explain what is meant by an 'efficient allocation of resources'. (2 marks)
- (d) Define technical efficiency and discuss how an increase in technical efficiency can improve living standards. (3 marks)
- (e) Discuss how changes in relative prices can result in a reallocation of the nation's resources. (4 marks)
- (f) Explain why a business will prefer a low price elasticity of demand (PED) for its product and discuss one factor that might cause the PED to increase. (4 marks)
- (g) In free and perfectly competitive markets, it is assumed that there are lots of buyers and sellers, there are no barriers to entry or exit and products are homogenous. Explain why markets are likely to be less competitive when any two of the above conditions are not met. (4 marks)

Question 2 (20 marks)

- (a) Define a market failure. (2 marks)
- (b) Explain how asymmetric information may contribute to an inefficient allocation of resources and discuss one government action to account for the market failure. (4 marks)

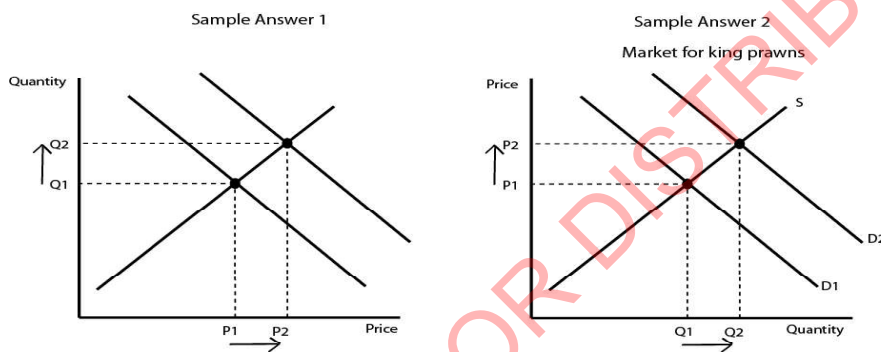
- (c) Explain why any one of the following services is generally regarded as an example of a public good: prisons, defence services or lighthouses. (4 marks)
- (d) Discuss two measures the government could take to minimise the problems associated with any negative externality in production, such as excessive emissions of Co2 into the atmosphere by big businesses. (4 marks)
- (e) Describe one example of government intervention in markets that unintentionally leads to a decrease in the efficiency of resource allocation. (4 marks)
- (f) Outline one way the government can increase competition in markets. (2 marks)

Answers and suggested responses at end of the Study Guide

YOU BE THE ASSESSOR: UNIT 3 AOS 1

In this section, you are required to assess the responses presented for each of the questions. You should award the responses a score (either full marks or less than full marks) and justify your decision. Once complete, compare your assessment to that of the authors [provided at the rear of the Study Guide.

1. a) Draw a fully labelled diagram below and show how an increase in the demand for king prawns at any given price is likely to be reflected in the diagram. **2 marks**



Justification _____

- b.) Outline and justify two demand factors that would be expected to shift the demand curve for king prawns to the right and interpret how this is likely to influence the equilibrium price and quantity for king prawns. **4 marks**

Sample 1

Two Demand factors that would be expected to shift the demand curve for king prawns to the right could be a decrease in income tax rates and an increase in immigration that boosts our population. Lower income taxes will increase disposable income, meaning they have more to spend and hence increases the quantity consumers wish to buy at any price, shifting the demand curve to the right. An increase in Australia’s population will also shift demand to the right at any given price. This shift in the demand curve will allow producers to increase their prices leading to an expansion in supply and demand at the new equilibrium where more king prawns (quantity rises) are sold at a higher price.

Justification _____

Sample 2

Two demand factors that would be expected to shift the demand curve for king prawns to the right could be lower income taxes increasing disposable incomes and an increase in Australia’s population brought about by higher immigration. As disposable income increases consumers have additional money available and their capacity to buy goods and services increases so a “normal” product like king prawns would be expected to see an increase in demand at any given price (ceteris paribus). Equally as Australia’s population increases (ceteris paribus) there will be more people to consume prawns shifting the demand curve to the right at any given price. At the original equilibrium price there will be an excess of demand or a shortage of supply. The producers will observe that they can increase their prices and sell more prawns which will increase the profits available. The higher prices and profits will see more resources allocated to supplying prawns so the supply of prawns will expand towards

the equilibrium price. As the price rises the demand will contract along the new demand curve until demand is equal to supply and a new equilibrium with higher prices and quantities of king prawns sold.

Justification _____

2. Discuss the role of competitive markets in achieving dynamic and allocative efficiency within an economy and explain the link to living standards. 6 marks

Sample 1

Allocative efficiency refers to how well resources such as capital and labour are being used to produce the goods and services that best satisfy society's needs and wants and hence maximise overall living standards (our quality of life in material and non material terms). If allocative efficiency is achieved then resources are best satisfying society's needs and wants and no alternative use will make society better off so living standards are maximised. Dynamic efficiency refers to how quickly resources can be utilised to satisfy society's needs and wants as our tastes and preferences change and the point of allocative efficiency changes. How quickly resources can be reallocated to produce these goods and services will be important in satisfying our living standards. If it takes a long time for resources to move to produce what society desires then dynamic efficiency is low and living standards will decline until allocative efficiency is achieved. For example, if sugar free drinks become more popular but producers take two years to alter their production towards these drinks, then dynamic efficiency is slow and allocative efficiency will not be achieved for at least two years. A competitive market, with many buyers and sellers, will force businesses to produce more efficiently and so allocative and dynamic efficiency are likely to be achieved. This will result in higher living standards than would be likely to occur in a non competitive market.

Justification _____

Sample 2

Allocative efficiency refers to how well resources such as capital and labour are used to produce goods and services that best satisfy society's needs and wants. If allocative efficiency is achieved then no alternative use of resources will make society better off so living standards (our quality of life) are maximised. Dynamic efficiency refers to how quickly resources can be utilised to satisfy society's needs and wants as our tastes and preferences change and the point of allocative efficiency changes. The time it takes for resources to be reallocated to produce these goods and services will be important in satisfying our living standards. If it takes a long time for resources to move to produce what society desires then dynamic efficiency is low and living standards will decline until allocative efficiency is achieved. A competitive market involves many buyers and sellers who have very good information about what is in demand, as well as ease of entry and exit so they can easily move their resources to producing goods and services that are in high demand (consumer sovereignty) and hence increase profits. If producers are slow to reallocate resources then a competitor/s will quickly enter the market or increase output to gain market share and hence increase their own profits, whilst the less dynamic producers will find the lower demand for what they are producing will reduce profitability. Given that producers seek to maximise their profits, as consumer preferences change and demand shifts between good and services, the relative price and profit firms can make from the more highly demanded items will also increase. Firms that are slow to adjust will lose market share and potentially go broke. Accordingly, a competitive market will force firms to be more dynamically efficient and therefore more responsive to consumer demands compared to markets that are less competitive. This will result in higher (material) living standards as consumers will have access to better quality and/or lower priced goods and services. For example, if sugar free drinks become more popular but producers take years to respond because they have an effective monopoly/oligopoly (i.e. market power prevents an erosion of profits that would occur in a more competitive market), then dynamic efficiency is low and allocative efficiency will not be (quickly) achieved, lowering living standards.

Justification _____

Q3. Explain why a producer would prefer to operate in a market with low price elasticity of demand (PED) for a product and outline the significance of one factor influencing the PED. 4 marks

Sample 1

The PED refers to how the quantity consumers are willing to buy will respond to a change in the price of the relevant good or service. In a market with low PED, a given % change in price will cause a smaller % change in quantity demanded. For example, if raising the price by 10% leads to a 5% fall in sales, then the product will have a low PED. This means that a low PED allows producers to make more profit if they raise prices because the negative impact on quantities sold will not be enough to outweigh the positive impact from higher prices, enabling the total sales revenue (i.e. price X quantity) to increase. In contrast, a high PED would mean that a 10% rise in price would lead to a greater fall in demand (of say 50%),

which will lead to lower profits overall due to the higher price having a larger impact on the quantity bought. Producers therefore wish to operate in a market with low PED. The degree of necessity to consumers will influence how consumers respond to a change in price. If a good or service is a 'necessity' (i.e. a need), then as the price rises consumers are likely to keep their demand relatively constant and reduce consumption of less important goods and services (i.e. those that are not necessities). Addictive products, like tobacco, are a good example of products with a low PED. It highlights an important reason why governments impose higher and higher excise on tobacco, knowing that the higher tax actually increase government tax revenue.

Justification _____

Sample 2

The PED relates to how quantity responds to a change in price. Low PED will allow firms to raise price and increase profits. Producers generally seek to maximise profits and so they want to operate in a low PED market whenever possible. A factor that would be likely to influence the PED is the degree of necessity. This can be influenced by advertising so more advertising will mean that a product is more likely to be a necessity and elasticity will therefore be lower.

Justification _____

Q4. Evaluate the role of free and competitive markets in allocating resources.

5 marks

Sample 1

A 'free' market is one that is free of any intervention/controls and so producers are free to use resources in whatever way that maximises profits. Markets are effective (dynamically efficient) in allocating resources to satisfy consumer demand (consumer sovereignty). In order to produce goods and services, resources such as labour and capital are required. In a 'competitive market' with many buyers and sellers, and easy entry and exit from a market, producers will quickly respond to changing consumer demands in order to maximise profits. This reallocation of resources occurs because, as the demand for one output increases, producers will observe shortages in the market and the price rises to attract new supply, increasing the relative price received compared to an alternative use. This increases the relative profit from the product in greater demand and results in unregulated markets being effective at allocating resources to satisfy consumer preferences. However, what some consumers desire (e.g. illicit drugs, tobacco, overconsumption of alcohol) may not be what best satisfies the needs and wants of society as a whole (allocative efficiency). Accordingly, satisfying consumer needs is unlikely to be the most allocatively efficient use of resources that best satisfy society's needs and wants, which ultimately means that free markets will lead to an (allocatively) inefficient allocation of resources. Markets will fail to deliver the best outcomes for society. In other words, free and competitive markets will fail to achieve the most allocatively efficient allocation of resources and these 'market failures' can come in a number of forms. For example, markets fail due to externalities associated with production and consumption of some goods and services which leads to an over or under-allocation of resources to the production of these goods and services. In the case of pollution as a negative externality, it is often created in production that damages current and future living standards. Without regulation, excessive pollution would occur and there would be an over-allocation of resources to relative 'dirty' forms of production and therefore an under-allocation of resources to 'cleaner' forms of production. If, however, producers were forced, via laws/regulations, to pay the full cost of this pollution (i.e. the government attempts to internalise the negative externality), then the market price would rise and consumers would buy less. This would ultimately result in fewer resources being allocated to this output and hence help to rectify the market failure (too many resources causing pollution). Because of market failures such as this, governments intervene in markets via regulations and controls in order to ensure that allocative efficiency is more likely to be achieved than under an unregulated market.

Justification _____

Sample 2

An free market is one free from any regulation and controls. A market is where buyer and sellers come together and in a competitive market where there are many buyers and sellers and easy entry and exit from the market producers will be forced to produce what is in demand or another firm will enter or increase their output to gain market share and higher profits. This occurs because as demand increases producers will observe shortages in the market and will increase their prices to increase their profits and make it worthwhile allocating more resources to its production. This raises relative price compared to alternative uses of resources and hence relative profit increases and more of this output will be created. Dynamic efficiency refers to how quickly resources can be allocated to satisfying consumer needs and the fear of competition and losing market share will mean that firms will quickly alter what and how much they produce to maximise their own profits by satisfying consumer sovereignty. A regulated market with controls and laws may be slow to respond to changing consumer needs for instance government regulation restricting where and how many houses or flats can be built on land will force up prices and reduce the markets ability to satisfy consumer needs for more property. Thus an unregulated market will be best at satisfying consumer sovereignty due to improved dynamic efficiency.

Justification _____

Q5a. Using an example, explain how government intervention in a market has unintentionally reduced the efficiency of resource allocation.
6 marks

Sample 1

Markets left to competitive forces will typically be technically efficient and dynamically efficient because of the need to stay competitive and to produce what is in demand (consumer sovereignty), in order to maximise profits. However, consumers do not always “buy” what is in society’s best interests, leading to an under (e.g. education) or over allocation of resources to some forms of production (e.g. illicit drugs), hindering our ability to achieve allocative efficiency (the allocation of resources that best satisfies the needs and wants of society). The government typically involves itself in markets to alter the allocation of resources so that resources are more likely to be used in an allocatively efficient manner.

E10 Biofuel is a fuel that contains 10% ethanol. The NSW and Qld governments have mandated (regulation) that 4% of fuel in QLD and 6% of fuel sold in NSW should be E10 biofuel. The government has intervened in this market to promote a more environmentally friendly fuel source that reduces reliance on fossil fuels (reducing negative externalities by helping to reduce emissions, assist with managing “climate change” and boosting intertemporal efficiency by ensuring fossil fuels last longer), and to establish an Ethanol industry in Australia.

The government intervention mandates large fines of up to \$550,000 per quarter for not achieving the E10 targets. However, consumers typically do not want to buy E10 fuel and many retailers have removed regular unleaded fuel pumps to force consumers to buy E10. While E10 demand has increased, consumers have also switched to buying premium fuels which most cars do not need, costing motorists more money and reducing spending on goods and services that would bring greater utility.

The Productivity Commission and the ACCC both recommend the removal of the biofuel mandates because it reduced consumer choice, damaged dynamic efficiency due to reducing competition and did not bring environmental benefits, indeed protecting local ethanol producers by discounting the fuel excise on local production but imposing the full excise on imported fuels actually prevented the importation of more environmentally friendly fuel sources.

Overall, the government intervention led to an allocation of resources that actually reduced how efficiently resources are used in the Australian economy because consumers were “forced” to buy more expensive fuel that reduced their discretionary income and hence their ability to satisfy needs and wants that bring greater utility. This also reduces the income of other businesses potentially increasing unemployment, which prevents technical efficiency from being achieved since there are unused resources sitting idle. Resources were also used for ethanol production rather than in areas of greater comparative advantage such as agricultural exports. On top of these unintended consequences the desired environmental benefits were not achieved. In combination, this intervention has made it harder to achieve allocative efficiency and as a result government intervention has led to a less efficient allocation of resources in the economy.

Justification _____

Sample 2

Governments typically intervene in markets to correct for market failure which occurs when resources are not used in a way that best satisfies the needs and wants of society (allocative efficiency). Consumers will typically buy what is in their own perceived self-interest rather than consume what is in the best interests of society. For instance, we typically over consume tobacco, illicit drugs and fossil fuels (which create negative externalities whereby costs are imposed on third parties) and under consume education and health (positive externalities, providing benefits to third parties).

In order to ensure that workers are paid a salary that allows them to live a “dignified” quality of life, the government intervenes in labour markets by setting a minimum wage. This wage is adjusted each year by Fair Work Australia (FWA). In 2017, FWA also reduced penalty rates for weekend work because it said it created a two tier playing field between large firms who set wages based on Enterprise Bargaining Agreements (EBA’s) and small businesses who were forced to pay weekend penalty rates. As a result, FWA felt that many small businesses simply stayed closed or worked reduced hours.

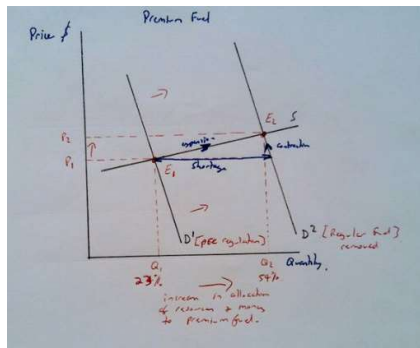
Setting a minimum wage above the market clearing equilibrium price/wage (where demand = supply) means that more workers are attracted to offer their services and so participate in the labour market. This leads to an expansion in the supply of labour. However, setting the wage too high increases the cost of employing people and so firms typically substitute to capital (machinery/automation/robotics) or reduce the hours they open. As a result, the demand for labour falls, leading to a contraction along the demand curve for labour and higher unemployment. As a consequence, allocative and technical efficiency are not achieved, demonstrating that government intervention can have unintended consequences.

Justification _____

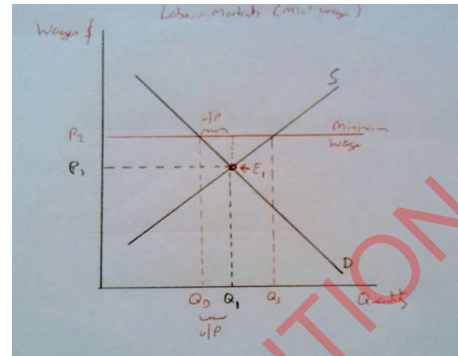
Q5b. Use a fully labelled diagram to show how the market referred to in part (a) will be affected by either the government intervention, or some other factor.

3 marks

Sample 1



Sample 2



Q5c. Explain how the market adjusts following the government intervention.

2 marks

Sample 1

Following the mandated (regulation) requirement for E10 fuel sales and significant fines for non compliance, producers/ suppliers in NSW removed the ability for consumers to buy regular petrol by limiting the availability/ supply of regular fuel. Since fuel is a necessity for many households, it has a low price elasticity of demand, which meant that consumers needed to substitute to an alternative fuel source. Many moved to buying Premium fuel which shifted the demand curve to the right, such that at any given price, the demand for Premium fuel increased, leading to a shortage of Premium fuel at the original price. This sends a signal to producers that they can increase prices and make higher profits, leading to an expansion in supply and more resources being allocated to the supply of Premium fuel in NSW. Supply for fuel is relatively elastic since fuel is easily stored and so only a relatively small price rise is needed to attract the extra resources required to meet the increased demand. As the price rises demand contracts until a new equilibrium is achieved at E2, with a higher price and greater quantity being bought and sold.

Sample 2

Setting the minimum wage (P2) above the market clearing wage (P1) has led to an expansion in the supply of people willing to work, boosting participation rates. At the same time the higher wage has reduced producers demand for workers leading to a contraction along the demand curve (Qd). This has created unemployed workers (Q1-Qd).

Justification _____

Q6. Explain how a decrease in the price of a good can affect the demand for a complement.

2 marks

Sample 1

A decrease in the price of a good can affect the demand for a complement as if the good is cheaper, consumers will be more willing to purchase that the compliment in comparison to another that is more expensive, therefore demand for the complement will increase. This will in turn lead to an excess demand at the old price, which forces up the price and leads to more resources being allocated to the production of the complement over time.

Justification _____

Sample 2

A complement is typically consumed with a product, such as butter being a complement for bread. If there is a decrease in the price of a good (such as bread), it is likely to increase the demand for its complement (such as butter) because bread consumption is likely to rise (due to the law of demand), which necessarily leads to an increase in demand for its complement given that both goods are consumed together.

Justification _____

YOU BE THE ASSESSOR: CORRECTIONS AND ANALYSIS (U3 AOS 2)

1. Explain how relatively low wage growth can influence the achievement of full employment.

4 marks

While it is true that low wages growth 'can' reduce the effective costs of production and inflation, much more is required from the student on how this occurs. Instead, the student launches into a demand side explanation without consideration of the 'supply side' impact.

Sample 1

Sample answer: Relatively low growth in wages will reduce the costs of production and the rate of inflation, which in turn increases Australia's international competitiveness and lifts aggregate demand (AD). This will result in the AD shifting to the right, leading to an increase in real GDP and economic growth. With greater levels of national output, businesses will require more labour which adds to employment and reduces the rate of unemployment. This means that the government is more likely to be successful in achieving its full employment goal.

Student has not demonstrated an understanding of the FE goal, which is a key part of the question

Student effectively 'signposts' their response (let's the assessor know how where the response is heading)

Student demonstrates an understanding of the FE goal. Reference to NAIRU not required but adds value to the quality of the response

Sample 2

Sample answer: Relatively low growth in wages helps to stimulate economic growth and contributes to the achievement of full employment, which occurs when the economy experiences the lowest unemployment rate possible before inflationary pressures become unmanageable (or the NAIRU rate of approximately 5% unemployment). This is because low growth in wages helps to contain labour costs and decreases pressure on the costs of production. Businesses will then be more willing to increase investment and expand capacity, which helps to boost production levels. This should lead to an increase in the demand for labour, raise employment levels and decrease the rate of unemployment towards the full employment level. In addition, the lower price of labour provides an incentive for businesses to demand more labour relative to capital (an expansion along the demand curve in labour markets) which has an additional favourable impact on both jobs growth and the rate of unemployment.

An effective supply side explanation is required for how lower wages growth (as a supply factor) can reduce the UE rate.

Final sentence adds value and leaves the assessor in no doubt that the student understands how low wages growth helps to create more jobs

Analysis (Sample 2 full marks)

Overall, Sample 1 lacks sufficient depth. While it highlights that the student understands the direction of the relationship, it leaves the assessor in some doubt as to the student's knowledge of the key links. It also makes the common mistake of not addressing a key part of the question, which is to move beyond an explanation of the impact on unemployment (or the unemployment rate) and to consider the implications for the achievement of the government's goal. Demonstrating an understanding of the goal, when it is referenced in the question, is important. Sample 2 is superior because it addresses all parts of the question and clearly demonstrates an understanding of the necessary links. Note that this student should still receive full marks even without reference to lower inflation and improved international competitiveness, which will occur (*ceteris paribus*) when the costs of production fall and the AS curve shifts to the right. Reference to inflation and international competitiveness provide an alternative avenue of answering the question successfully (providing the necessary supply side links are established).

2. Outline why long-term unemployment increased in Australia up to 2021.

2 marks

Clear identification of one cause of LT UE

Accurate outline of how the factor impacts on the demand for labour and LT UE

Sample 1

This has occurred because of technological change in the economy which has altered the structure of Australian industries and increased reliance on capital relative to labour. This has resulted in higher levels of structural unemployment, with many of those structurally unemployed remaining so for more than one year.

Demonstrates understanding of LT UE as distinct from UE more generally

Poor choice of factor as it relates more to cyclical UE

No attempt to link to LT UE

Sample 2

A decrease in consumer confidence over recent years has had a negative effect on Australia's unemployment rate. As consumer confidence falls, the demand for goods and services in Australia decreases, meaning that firms become less willing and able to supply, shifting the nation's aggregate supply curve to the left. This results in higher costs of production and prices, which causes producers to decrease their demand for labour and increasing the rate of long term unemployment.

Deficient explanation for how lower CC affects UE. The student should instead choose the AD route rather than the AS route

Despite mentioning LT UE, there is no outline for why this increases as distinct from UE more generally

Analysis (Sample 1 full marks)

Despite being the briefer response, Sample 1 is superior because it focuses on a key cause of higher long term unemployment (technological change/structural unemployment) and demonstrates a clear understanding of what is meant by long term unemployment (i.e. being unemployed for more than one year). Sample 2 focuses on a factor causing a rise in unemployment more generally and the student makes no attempt to link the factor to long term unemployment. In addition, the student incorrectly focuses on a supply side explanation for how a fall in consumer sentiment will impact on the rate of unemployment.

3. Describe one cause and one effect of a low rate of inflation up to the start of 2022. 4 marks

Clear identification of one cause of low inflation

Explanation is deficient. Link between lower OS growth and domestic inflation requires more depth. In addition, low rates of inflation is not the same as deflation

Sample 1

A low rate of inflation was caused by the slower rates of economic growth experienced by the USA, Europe and China. This led to slower growth in export demand and deflation in Australia. These lower prices meant that the purchasing power of consumers or households improved, such that material living standards of Australian households will increase.

Too brief. Why and how? What are material living standards?

Clear identification of one cause of low inflation

Explanations for how slower growth OS reduces inflationary pressure

Sample 2

The relatively low rate of inflation was caused by a number of factors, including the slower rates of economic growth experienced by Australia's trading partners. Slower growth in the USA, Europe and China has reduced export demand and demand inflationary pressures in Australia. Slower growth in export demand means that Australian exporting businesses experienced a reduction in sales, which led to excess capacity which, in itself, eased pressure on prices. In addition, slower growth in export volumes or production meant that exporters experienced a fall in incomes and profits, which resulted in lower returns to its factors of production, such as lower dividends for shareholders and lower wages for workers. This further reduced demand inflationary pressures in the economy and contributed to the very low rates of inflation experienced in Australia. This brings many benefits for the Australian economy, not least of which is the beneficial effect on international competitiveness and the longer run benefits this brings for Australia's balance of payments, economic growth and living standards. Lower prices means that net exports and AD more generally should eventually rebound, resulting in a lower CAD as well as a higher level of AD and real GDP. Stronger growth in real GDP should therefore help to create employment and incomes, and ultimately boost material living standards over time as Australian households will have the ability to purchase more goods and services.

Clear identification of one effect of low inflation

Explanations for how lower inflation can provide benefits

Analysis (Sample 2 full marks)

Overall, Sample 1 lacks sufficient depth. With respect to the cause of low inflation, the student's response requires more information and it confuses lower inflation (disinflation) with deflation. [While Australia did indeed experience a quarter of deflation (i.e. lower prices for a quarter), it did not experience 'deflation' over the past two years.] With respect to the effect of low inflation, its link to improved material living standards is too shallow and the student does not attempt to demonstrate an understanding of material living standards. Sample 2 provides two reasons to explain how slower overseas growth can contribute to a lower rate of inflation in Australia. [However, only one is required and the second simply adds value.] It also provides depth in describing how lower inflation (as distinct from deflation) can contribute to an improvement in material living standards over time.

4. Explain how an increase in aggregate supply might contribute to an increase in the rate of economic growth. 2 marks

Demonstrates an understanding of what is meant by an increase in AS

Demonstrates an understanding of how an increase AS can occur and links to productive capacity. This is not necessary for full marks, but serves to add value to the quality of the response

Sample 1

An increase in aggregate supply (AS) means that producers are more willing and able to produce goods and services. It usually occurs as a result of improved supply conditions and effectively leads to an increase in productive capacity. The increase in AS exerts downward pressure on prices (or inflation), as businesses experience excess supply and discount prices to clear surplus stock. This in turn stimulates AD and leads to an increase in real GDP (economic growth).

Demonstrates an understanding of how the increase AS ultimately leads to an increase in real GDP

Sample 2

If there is an increase in aggregate supply (AS) it means that more goods and services will be produced per unit of output (greater productivity) which means that producers will be more willing to raise output (i.e. an increased willingness to supply). This will result in higher output levels across the economy. Given that output equates to real GDP, growth in output by producers means that real GDP increases, which means that economic growth has increased.

This is an incorrect statement for it implies that AS can only increase as a result of higher productivity.

Deficient explanation for why an increase in AS contributes to an increase in economic growth.

Analysis (Sample 1 full marks)

Sample 1 is the superior response because it succinctly demonstrates an understanding of AS and provides a logical and plausible explanation of how an increase in AS leads to an increase in real GDP. Note that the student appropriately refers to the role of prices (i.e. downward pressure on inflation) and AD when explaining how an increase in AS leads to an increase in economic growth. Sample 2 makes the mistake of assuming that AS only increases in response to higher productivity. [The student should have used productivity growth as an example of a factor that leads to an increase in AS]. In addition, the student does not adequately explain how an increase in AS contributes to an increase in economic growth. It is insufficient to assert that an increase in AS results in higher output without an explanation for how or why this occurs.