Economic Fundamentals in Australia
Sample responses to questions contained in
Activity Centre: Unit 4 Outcome 2

Question 1

a) ***Aggregate supply (AS) policies*** *refer to any policy initiative designed to reduce the costs of production and/or improve supply conditions for businesses. This includes measures that directly reduce business costs, such as a reduction in business taxes, or measures that are designed to improve the productivity or efficiency of businesses, such as government incentives for investment in new technology. AS policies work on the supply side of the economy and involves a shift of the AS curve to the right.*

Productivity *relates to the efficiency of our factors of production (primarily labour and capital) when producing goods and services. In a more technical sense, productivity refers to the volume of output (e.g. goods or services) that is produced from a given number of inputs (e.g. labour and capital resources). The most commonly used measure of productivity is labour productivity, derived by dividing total output by the number of labour hours employed.*

Productive capacity *is the maximum amount of output that can be produced in an economy with its given quantity of available inputs (or resources). It is equivalent to the boundary of an economy's production possibility frontier or the vertical section of an economy's Aggregate Supply curve. Once an economy reaches its productive capacity, it is impossible to achieve higher output levels.*

b) *When AS policies are successfully employed (such as measures to lift national productivity levels or greater investment in infrastructure) it typically means that businesses can produce more output with existing inputs. This helps to reduce average costs of production and results in greater national output levels before capacity constraints become problematic. Accordingly, the AS curve shifts to the right (or the PPF expands).*

By raising the nation's productive capacity (or improving supply conditions for industries), AS policies facilitate higher output and employment, alongside lower inflation. This occurs because lower production costs enable firms to reduce prices for any given output level, or increase output at any given price level – all without sacrificing profits. This results in lower inflation levels and an increase real GDP, employment and incomes in the longer term. In this respect, AS policies help to achieve an increase in material living standards as Australians have greater access to goods and services.

c) *Investment in infrastructure, such as the increased funding allocated in recent budgets to improve rail networks, will help to improve freight times for goods being transported via rail. This helps to boost output relative to the labour (or capital) time employed by a business. Accordingly, productivity increases because output per unit of input will increase. This helps to reduce the costs of production for businesses using rail as a means of transportation, and reduces pressure on the prices charged for these goods. This helps to directly reduce the CPI (or inflationary pressure) if the goods transported are final consumption goods (e.g. private motor vehicles). To the extent that the transported goods are used as inputs in the production process, it further helps to reduce the cost structure across the economy, reducing pressure on prices and minimising inflation.*

d) The use of the government's skilled migration program can be effectively used to address the problems associated with capacity constraints. By identifying those skills in short supply and increasing the skilled migration intake for these particular skills, the government will help to reduce the extent of supply bottlenecks and minimise pressure on wages. This will enable businesses to source scarce labour that they would otherwise not be able to secure, or only secure at high rates. This helps to increase national output/productive capacity.

Question 2

A.

Benefit: *The higher tariffs will help to protect the sales and production volumes of domestic import competing producers, particularly in the short term. This is because the higher tariffs raise the price of imports, resulting in consumers purchasing fewer imports and more domestically produced goods.*

Cost: *The higher tariffs will tend to encourage lower efficiency levels, higher production costs and inflation over time. This is because the tariffs shield local producers from competitive pressures that help to raise productivity and lower prices. In addition, tariffs increase the costs for other producers in the economy reliant on the protected product, which ultimately leads to a higher cost structure in the economy.*

B.

The continuing government funds invested in the rollout of the broadband network will expand the nation's productive capacity over time as the cost and speed of telecommunications for businesses and households will improve. Faster broadband speeds will enable businesses to cut production costs as communications with clients, staff, suppliers, etc will be more efficient. This leads to greater productivity levels over time and an ability for the economy to produce more goods and services than before (i.e. an increase in AS and productive capacity).

The broadband investment should help to improve material living standards for Australians because faster broadband speeds should help to improve Australia's international competitiveness, creating jobs and income over time, which enables Australians to consume/purchase more goods and services as before. Non-material living standards are also likely to improve because Australians are able to spend less time telecommunicating, with more time for leisure.

C.

Tax concessions, such as the 2022-3 tax breaks for small businesses purchasing capital equipment, can help to boost aggregate supply because they encourage businesses to purchase new capital to replace existing capital stock. This should help to boost (capital) productivity and enable the economy to produce a larger supply of goods and services. Over time this should help the government to achieve its low inflation goal of 2-3% inflation, on average, over the course of the economic cycle. This is because higher productivity means that production can occur with fewer inputs, reducing average production costs and enabling businesses to reduce prices without eroding margins. The reduction or containment of prices over time will therefore reduce cost inflationary pressures.

D.

Trade liberalisation refers to the systematic dismantling of protectionist measures (such as tariffs and quotas) that prevented the free flow of goods and services across the globe via open trading

relationships. Like Aggregate Supply policies more generally, trade liberalisation helps to lower the cost structure of the economy and improve our international competitiveness as inflationary pressure is minimised. The reduction in protectionist measures (e.g.continued tariff reductions) exposes domestic firms to an increase in competitive pressures from abroad which forces domestic firms to adopt the latest technology and/or innovate in order to remain competitive and penetrate global markets. Over time, this helps to increase productivity and boost technical efficiency, which leads to lower prices than otherwise. With relatively lower prices, AD is boosted via higher levels of Consumption, Investment and Net Exports, thereby boosting economic growth.

Question 3

a) *The ageing population is likely to cause a significant drop in the nation's labour supply in future years as baby boomers, in particular, retire from the labour force. It means that a relatively smaller proportion of the future population will be forced to produce the output required by the economy, and to fund the increasing welfare budget of the federal government. This will have negative implications for wage costs (as the supply of labour will be lower), taxes (as the number of working Australians will be smaller), government expenditure (to support an ageing population) and future levels of real GDP. This is why the government is keen to boost the LFPR.*

b) *A recent budgetary policy initative to boost productivity growth includes greater funding for education and training, which should help to increase the skills of Australia's labour force and boost labour productivity (output per hour worked or real GDP per person employed) over time. By increasing productivity growth, future resources (including labour) will be able to produce higher output levels, reducing pressure on the labour force, minimising future wage growth and enabling real GDP to grow at a relatively faster pace. This should help to protect future government revenue and therefore limit the deterioration in future federal government budgets, raising living standards and addressing the problems stemming from an ageing population.*

c) ***Positive***

Higher levels for skilled immigration can help to alleviate capacity constraints that have been contributed to by skills shortages. Allowing immigrants to fill skilled vacancies helps to reduce inflationary pressure and enables economic growth to be sustained. In this respect, skilled immigration helps to achieve strong and sustainable rates of economic growth, supports incomes, and increases the ability of Australians to purchase goods and services, thereby boosting material living standards.

Negative

Higher levels of immigration more generally can contribute to excessive use of the nation's resources, leading to unsustainable development or over-development within certain parts of Australia (particularly city areas). Greater levels of congestion, pollution and resource shortages (such as water) that are associated with excessive population growth more generally can lead to a decrease in non-material living standards.

Question 4

a. Capacity constraints occur when the productive capacity of the economy is too small relative to the level of Aggregate Demand (AD). It will typically be evidenced by things like skills shortages (and/or a tight labour market) or inadequate infrastructure (such as ports being too small) and will invariably result in inflationary pressure. Government policy needs to focus on lifting productive capacity over time and alleviating the constraints, as well as constraining the growth in AD which is likely to be excessive.
Immigration policy could play a key role in alleviating capacity constraints. First, the government could reduce the pressure that higher immigration has on AD and inflationary pressure by changing the immigration mix. By reducing the migrant intake that is not skilled, such as the humanitarian or family migration schemes, pressure on AD (and inflation) is likely to be lower. Second, it could seek to increase the numbers entering the country via the skilled migration scheme which allows businesses facing skills shortages to access labour. This should help to reduce capacity constraints because businesses will be more able to supply goods and services, thereby helping to contain inflationary pressures.

Monetary policy could also assist by the RBA adopting a more contractionary (or restrictive) monetary policy stance once it is evident that capacity constraints are beginning to emerge. So long as the capacity constraints are contributed to by excessive growth in AD, a tightening of monetary policy, via an increase in interest rates, should help to contain growth in AD and reduce demand inflationary pressure . This could be supported by the delivery of a more contractionary budgetary policy stance, where the government delivers a smaller (structural) budget deficit or a bigger (structural) budget surplus in order to further reduce pressure on AD. In addition, budgetary policy supply side initiatives could help to directly alleviate capacity constraints, such as increased funding for child care (allowing parents to return to the workforce), business tax cuts (to encourage an increase in investment spending which may add to capacity) and increased spending on government infrastructure (such as expanded ports and railways).

These supply side initiatives could be supported by other Aggregate Supply policies, such as further reform of labour markets, continued trade liberalisation and continued deregulation of markets, all helping to expand aggregate supply over time and delay (or eliminate) the onset of capacity constraints.

b. Infrastructure spending includes the building/upgrade of roads, bridges, airports, ports, and railways. With more or better quality infrastructure in place, the willingness and ability of Australian organisations [including businesses and governments] to produce goods and services will increase, leading to an increase in productive capacity and aggregate supply. This occurs because more and/or better quality infrastructure leads to an acceleration in the efficiency/speed with which goods and services can be produced in the economy. For example, better quality ports facilitate a speedier transportation of exports to foreign markets [as well as faster access to capital/intermediate imports], which ultimately improves productivity and helps to increase the supply capacity of the economy [i.e. productive capacity] or aggregate supply of goods and services. This increases the rate of growth in real GDP (i.e. economic growth) as Australia's international competitiveness improves and AD accelerates.

Question 5

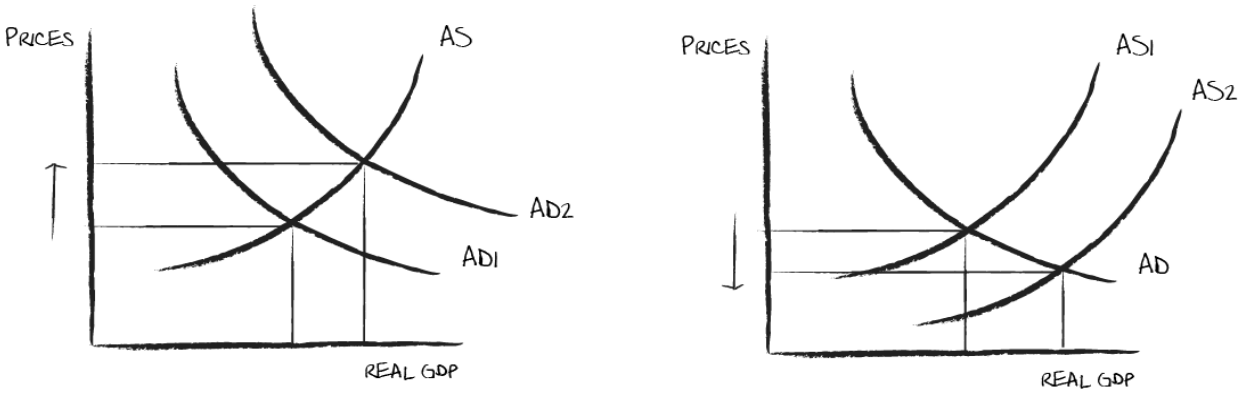
a. *The reduction in the personal income tax burden [as described in part a) above] will raise disposable incomes and increase the incentive for people to increase their contribution to the production process via entrepreneurship. For example, some individuals will be more encouraged by lower taxes and decide to start a small business, or follow through with a business idea that is designed to generate income. To the extent that some of these efforts result in more or better quality goods and services being offered and sold in markets, it helps to create income [for both the entrepreneurs and any workers they subsequently employ], boost AD and lift Australian output levels. Australian living standards are likely to improve in material terms if it helps Australians, on average, to purchase more (or better quality) goods and services. [This should be evidenced by an increase in real GDP per capita.]*

b. *The government can increase the value of subsidies it provides to educational institutions to increase the willingness of these institutions to supply more education/training places; or alternatively, to improve efficiency or quality of the existing education/training services provided. To the extent that these subsidies are directed at courses designed to provide individuals with useful skills that can employed in the future (e.g. courses related to artificial intelligence or digital technologies or in the personal care industries), it will help to increase the quality of human capital and therefore raise labour productivity, which is total output per hour of labour employed. A more productive workforce should then increase the ability of Australian businesses to supply goods and services and, in macroeconomic terms, help to raise the productive capacity of the economy.*

c. *The provision of subsidies that ultimately help to improve the quality of human capital will have the potential to assist with the achievement of the government's full employment goal - which is to reduce the rate of unemployment to its lowest possible level before inflationary pressures become excessive. [This rate of unemployment is also referred to as the Non-Accelerating Inflation Rate of Unemployment (NAIRU) and is currently considered to be approximately 4.25%].*

   As labour productivity increases it ultimately helps to reduce unit labour costs for businesses, which in turn helps to decrease the average costs of production across the economy. Businesses will therefore be in a better position to reduce prices of goods and services (or inflation) without suffering a reduction in profit margins. Over time, lower Australian inflation rates will help to increase Australia's international competitiveness, improving the ability of Australian businesses to attract a larger share of the global market, which helps to increase net export demand [i.e. exporters and import competing producers are likely to sell greater volumes], boosting aggregate demand and real GDP. The demand for labour is therefore likely to increase over time, which raises employment and helps to reduce the unemployment rate to the full employment level in the future.

d. Government infrastructure spending includes the building/upgrade of roads, bridges, airports, ports, and railways. With more or better quality infrastructure in place, the willingness and ability of Australian organisations [including businesses and governments] to produce goods and services will increase because it leads to an acceleration in the efficiency/speed with which goods and services can move through the economy [e.g. between buyers/consumers and sellers/producers]. For example, better quality ports facilitate a speedier transportation of exports to foreign markets [as well as faster access to capital/intermediate imports], which ultimately improves productivity and helps to increase the supply capacity of the economy [i.e. productive capacity] or aggregate supply of goods and services. This makes it easier for the government to achieve its macroeconomic goal of strong and sustainable economic growth, given that a higher rate of economic growth will be possible before the economy experiences inflationary and/or external pressures [i.e. stronger growth is more sustainable].



e. Aggregate supply (AS) policies are typically designed to expand the productive capacity of the economy by increasing the quality and/or quantity of factors of production [such as labour and capital]. A well-known strength of AS policies (relative to the expansionary monetary or budgetary policies) is the ability of AS initiatives to increase the value of real GDP over time without adding to supply or capacity constraints, which ultimately create shortages of goods and services and inflation [as well as increase the rate of resource depletion]. In contrast, expansionary AD policies [e.g. continued loosening of monetary policy] are more suited to short-term expansion of AD and real GDP and less suited to long-term non-inflationary stimulus to the economy. This can be illustrated with the use of the AD/AS diagrams below. While both the AD and AS policies help to achieve an increase in real GDP (i.e. economic growth), the use of AS policies are more sustainable because growth is achieved without inflationary pressures (e.g. prices are lower in the diagram on the right), which ultimately constrains future rates of growth.

f. Environmental policies will generally have a negative economic impact in the 'short term' to the extent that they force the private sector to internalise negative environmental externalities associated with production. For example, pricing carbon adds to the cost of production and negatively impacts on real GDP. [However, in the long run, environmental policies can prevent AS from being disrupted as much by more prolonged droughts, more intense natural disasters etc. However, some environmental policies can also increase production and aggregate supply in the short term, such as the provision of government subsidies (e.g. under the Recycling Modernization Fund) to encourage more investment in some productive activities. It can be argued that this type of government intervention has the potential to reduce growth in the long run given that the subsidies indirectly create costs for other businesses.

g. Markets, left unregulated, will typically lead to an under-investment in some activities that ultimately help to improve the quality of factors of production (e.g. productivity or efficiency of labour and capital). Common examples include investment in research and development, as well as investment in training and education [both of which are likely to create positive externalities associated with production/consumption]. Government intervention in the form of subsidies and/or tax concessions encourage private sector investment above that which would have otherwise occurred, which positively impacts on the efficiency of both labour and capital. [This is an example of an interventionist approach to managing AS.]

h. A lower tax rate will help to incentivise small to medium sized corporations to invest more in their businesses [because more of the profits can be retained within the business instead of being paid to the government in tax]. This will typically include greater investment in capital (e.g. more machinery and equipment) and/or a general expansion in the size of the business (e.g. the establishment of new outlets or branches). This will enable the relevant corporations to increase the total volume of output produced (as there will be an increase in the quality and/or quantity of factors of production), which increases aggregate supply and/or productive capacity of the economy.

Question 6

a. A lower personal tax burden (e.g. lower marginal tax rates) will necessarily raise disposable incomes and therefore increase the net rewards from work. Some workers are therefore likely to increase their intensity of effort at workplaces [particularly in those workplaces where there is a close connection between effort/output and income/wages] in an effort to raise their personal income. At both the micro and macro level, this is likely to increase labour productivity, as measured by total output divided by the total number of hours worked, boosting aggregate supply and reducing average production costs, which in turn reduces price pressures and raises (international) competitiveness. To the extent that Australian output levels expand in response to growth in AD, and Australian incomes increase on average, national (material) living standards can be expected to rise, as measured by growth in real GDP per capita, given that Australians on average will have access to more goods and services.

The lower tax burden will also help to increase the labour force participation rate, as some people (not in the labour force) will be incentivised to search for employment given that the (after tax) financial rewards from working have increased. This increases the size of the labour force [as a proportion of the working age population] and raises the supply of labour in the economy. This helps to expand aggregate supply in the economy given that, one, businesses will have more labour available [e.g. capacity constraints are reduced] and, two, pressure on the price/cost of labour will be lower. Material living standards can increase, on average, given that the improvement to aggregate supply stimulates economic growth, as well as real GDP/income per capita and the ability to purchase goods and services. [Material living standards can also increase for those new labour market entrants to the extent that they gain employment and earn (higher) income.]

b. Investment in human capital refers to government or private sector investment into skills development of employees (or people more generally) which is designed to improve labour productivity and increase the ability (and willingness) of businesses to supply goods and services. In

contrast, investment in physical capital refers to government or private sector investment into man made (physical/non-human) factors of production that is designed to raise capital productivity and increase the ability (and willingness) of businesses to supply goods and services. For example, spending money on robotics or machinery is an example of investment in physical capital, whereas spending money on training and education is an example of investment in human capital.

c. *Government subsidies to educational providers/training institutions are example of a producer subsidy that is designed to increase the willingness of producers to supply more education or training places; or alternatively, to improve efficiency or quality of the existing education/training service provided. Ultimately, the subsidies are designed to improve the quality of human capital (e.g. better skills) and/or the quantity of human capital (e.g. more people entering the labour market) by reducing the effective costs of production for training/education providers, allowing the providers to reduce the cost of training/education and/or invest more in capital/technology/labour. To the extent that these institutions produce better quality courses and better quality graduates, the subsidy helps to increase the quality (and/or quantity) of labour available for businesses, which in turn increases the willingness and/or ability of businesses to supply goods and services to the market (i.e. boost aggregate supply) given that labour productivity is likely to be higher. This in turn should help to contain price pressures in the economy, reducing the rate of inflation and helping the RBA to achieve its price stability goal of 2 - 3% growth in the rate of inflation on average over time.*

d. *Subsidies can have negative implications for living standards in the long-term, particularly if they are provided to firms or industries as a means of protection (e.g. helping them to compete against foreign competition). Subsidies will help to reduce costs (and prices) for local producers, which enables them to compete more effectively with foreign producers. While this can help to protect employment and incomes [in the short-term], it imposes costs on other producers (e.g. taxes may need to be higher to fund the subsidies) and has a negative impact on efficiency/productivity over time, as protected businesses face a reduced threat of competition and don't need to 'work as hard' to maintain market share. For example, the imperative to become more technically and dynamically efficient is reduced given that the subsidies allow domestic producers to produce at a lower cost, and price rival products out of the market. However, over time, subsidies lead to a higher cost structure across the economy and ultimately reduce international competitiveness given that prices in the longer term are likely to be higher. This negatively affects aggregate demand as net export growth falls in the face of higher domestic prices, as well as the fact that retaliatory measures from abroad [e.g. tariffs imposed on Australian goods/services] might further reduce demand for Australian exports.*

e. *Businesses are likely to under-invest in R&D without government intervention [due to the fact that there are significant positive externalities associated with the production of R&D]. The provision of R&D grants by governments is therefore designed to increase the incentive for businesses to spend more on R&D into new ideas, new production methods, new markets, etc. The grants will therefore help Australian businesses to innovate and become more [dynamically/technically/inter-temporally] efficient over time. Innovation is therefore likely to help businesses become more responsive to consumer needs and/or to produce at the lowest possible prices. This helps to improve allocative efficiency as existing productive resources will achieve greater consumer satisfaction and/or lift Australian living standards above that which would otherwise have occurred in the absence of R&D grants.*

f. This initiative should help to boost the labour force participation rate and increase the supply of labour by reducing the cost of participating in the labour force for those with child care responsibilitiies. This increase in labour supply improves the ability of businesses to produce more goods and services as they will have access to more labour. [In addition, businesses will be more willing to produce goods and services as a larger labour supply exerts downward pressure on the price of labour and helps to reduce growth in production costs]. As more people are employed [and average costs of production fall], this helps to expand the volume [or real value] of goods and services being produced in the economy, thereby boosting aggregate supply.

g. The introduction of a carbon tax is an example of the government placing a price on carbon and is one of many ways the Government can attempt to force the private sector to internalise negative externalities such as carbon pollution. The price on carbon will force carbon emitters (e.g. coal mining companies and carbon intensive electricity generators) to take into account the additional costs (i.e. the tax) when emitting carbon into the atmosphere. This eventually rises the (relative) price of carbon intensive products and leads to a reallocation of the nation's resources away from the production of carbon intensive products to the production of less environmentally damaging products (e.g. green and clean alternatives). In the short term, the carbon tax will actually tended to reduce the rate of economic growth by virtue of the inflationary impact [e.g. he AS curve shifts to the left]. However, over time, once the economy adjusts to the new environment and resources are reallocated, it will help to ensure that growth is more sustainable in the respect that it occurs with a more benign environmental impact.

Answers to crossword puzzle: