Economics

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ANSWERS

Assessment criteria

Paper 1

Section A = 10 marks

Marks	Level descriptor
0	• The work does not reach a standard described by the descriptors below.
1–2	• The response indicates little understanding of the specific demands of the question. • Economic theory is stated but it is not relevant. • Economic terms are stated but they are not relevant.
3–4	• The response indicates some understanding of the specific demands of the question. • Relevant economic theory is described. • Some relevant economic terms are included.
5–6	• The response indicates understanding of the specific demands of the question, but these demands are only partially addressed. • Relevant economic theory is partly explained. • Some relevant economic terms are used appropriately. • Where appropriate, relevant diagram(s) are included.
7–8	• The specific demands of the question are understood and addressed. • Relevant economic theory is explained. • Relevant economic terms are used mostly appropriately. • Where appropriate, relevant diagram(s) are included and explained.
9–10	• The specific demands of the question are understood and addressed. • Relevant economic theory is fully explained. • Relevant economic terms are used appropriately throughout the response. • Where appropriate, relevant diagram(s) are included and fully explained.

Economics for the IB Diploma exam practice answers

Marks	Level descriptor
0	• The work does not reach a standard described by the descriptors below.
1–3	• The response indicates little understanding of the specific demands of the question. • Economic theory is stated but it is not relevant. • Economic terms are stated but they are not relevant. • The response contains no evidence of synthesis or evaluation. • A real-world example(s) is identified but it is irrelevant.
4–6	• The response indicates some understanding of the specific demands of the question. • Relevant economic theory is described. • Some relevant economic terms are included. • The response contains evidence of superficial synthesis or evaluation. • A relevant real-world example(s) is identified.
7–9	• The response indicates understanding of the specific demands of the question, but these demands are only partially addressed. • Relevant economic theory is partly explained. • Some relevant economic terms are used appropriately. • Where appropriate, relevant diagram(s) are included. • The response contains evidence of appropriate synthesis or evaluation but • lacks balance. • A relevant real-world example(s) is identified and partly developed in the context of the question.
10–12	• The specific demands of the question are understood and addressed. • Relevant economic theory is explained. • Relevant economic terms are used mostly appropriately. • Where appropriate, relevant diagram(s) are included and explained. • The response contains evidence of appropriate synthesis or evaluation that is mostly balanced. • A relevant real-world example(s) is identified and developed in the context of the question.
13–15	• The specific demands of the question are understood and addressed. • Relevant economic theory is fully explained. • Relevant economic terms are used appropriately throughout the response. • Where appropriate, relevant diagram(s) are included and fully explained. • The response contains evidence of effective and balanced synthesis or evaluation. • A relevant real-world example(s) is identified and fully developed to support the argument.

Paper 2

15 marks

Examiners should be aware that candidates may take a different approach which, if appropriate, should be rewarded.

Marks	Level descriptor
0	• The work does not reach a standard described by the descriptors below.
1–3	• The response indicates little understanding of the specific demands of the question. • Economic theory is stated but it is not relevant. • Economic terms are stated but they are not relevant. • The response contains no evidence of synthesis or evaluation. • The response contains no use of text/data.
4–6	• The response indicates some understanding of the specific demands of the question. • Relevant economic theory is described. • Some relevant economic terms are included. • The response contains evidence of superficial synthesis or evaluation. • The response contains limited use of text/data.
7–9	• The response indicates understanding of the specific demands of the question, but these demands are only partially addressed. • Relevant economic theory is partly explained. • Some relevant economic terms are used appropriately. • Where appropriate, relevant diagram(s) are included. • The response contains evidence of appropriate synthesis or evaluation but • lacks balance. • The response includes some relevant information from the text/data.
10–12	• The specific demands of the question are understood and addressed. • Relevant economic theory is explained. • Relevant economic terms are used appropriately. • Where appropriate, relevant diagram(s) are included and explained. • The response contains evidence of appropriate synthesis or evaluation that is mostly balanced. • The use of information from the text/data is generally appropriate, relevant, and applied correctly.
13–15	• The specific demands of the question are understood and addressed. • Relevant economic theory is fully explained. • Relevant economic terms are used appropriately throughout the response. • Where appropriate, relevant diagram(s) are included and fully explained. • The response contains evidence of effective and balanced synthesis or evaluation. • The use of information from the text/data is appropriate, relevant, and is used to formulate a reasoned argument supported by analysis/evaluation.

Paper 3

10 marks

Recommend requires the student to present an advisable course of action with appropriate supporting evidence/reason in relation to a given situation, problem or issue.

Marks	Level descriptor
0	• The work does not reach a standard described by the descriptors below.
1–2	• The response identifies a policy. • The response uses no economic theory to support the recommendation. • Economic terms are stated but are not relevant. • The response contains no use of text/data to support the recommendation. • The response contains no evidence of synthesis or evaluation.
3–4	• The response identifies an appropriate policy. • The response uses limited economic theory to support the recommendation in a superficial manner. • Some relevant economic terms are included. • The response contains no use of relevant text/data to support the recommendation. • The response contains evidence of superficial synthesis or evaluation.
5–6	• The response identifies and explains an appropriate policy. • The response uses relevant economic theory to partially support the recommendation. • Some relevant economic terms are used appropriately. • The response includes some relevant information from the text/data to support the recommendation. • The response contains evidence of appropriate synthesis or evaluation but lacks balance.
7–8	• The response identifies and fully explains an appropriate policy. • The response uses relevant economic theory to support the recommendation. • Relevant economic terms are used mostly appropriately. • The use of information from the text/data is generally appropriate, relevant and applied correctly to support the recommendation. • The response contains evidence of appropriate synthesis or evaluation that is mostly balanced.
9–10	• The response identifies and fully explains an appropriate policy. • The response uses relevant economic theory effectively to support the recommendation. • Relevant economic terms are used appropriately throughout the response. • The use of information from the text/data is appropriate, relevant and supports the analysis/evaluation effectively. • The response contains evidence of effective and balanced synthesis or evaluation.

Chapter 1 – What is economics?

[Paper 2 and 3 Exam practice question 1.1]

By producing an extra 10 units of producer goods, the opportunity cost is 20 units of consumer goods, i.e. a ratio of 10:20 or 1:2. Therefore, the opportunity cost of producing 1 extra unit of producer good is 2 units of consumer goods.

Award *1 mark* for the correct answer, and 1 mark for appropriate working out.

[Paper 2 and Paper 3 Exam practice question 1.2]

For every additional 4,000 kilograms of carrots, the farmer sacrifices 6,000 kilograms of corn, i.e. a ratio of 4:6 or 1:1.5. This means that the opportunity cost of producing 1 kilogram of carrots is 1.5 kilograms of corn..

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

[Paper 2 and Paper 3 Exam practice question 1.3]

   a) PPC diagram for Bangladesh:
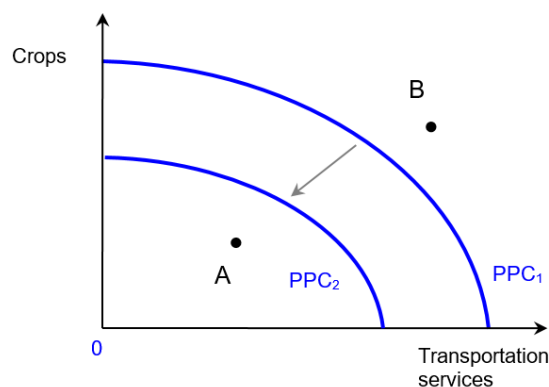
The PPC curve of Bangladesh will shift inwards from PPC$_1$ to PPC$_2$ because the flooding causes disruptions to transportation networks and damage to crops and homes.

Award up to *2 marks* for drawing and labelling a correct diagram.

Award up to *2 marks* for a full explanation of the diagram.

   a) At point A, some of the factors of production are idle (unemployed or underutilized) because this point is positioned inside of the PPC.
   b) Point B is currently unattainable because it is positioned outside the PPC.

Chapter 2 – How do economists approach the world?

[Paper 1 Exam practice question 2.1]

    a) Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: normative economics and positive economics.
- Explanation: of the role of normative economics and role of positive economics. Explanation of the significance of these for the study/discipline of economics, such as the role of normative economics and value judgments in policymaking. Reference may be made to behavioural economics, for instance. Explanation of the significance and role of positive economics in the use of hypotheses, models and theories.
- Diagram: not needed for this question.

    b) Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: ceteris paribus, and economic models/theories.
- Explanation: of how the ceteris paribus assumption might work in economics, with reference to the simplification of the models/theories of economics, such as the circular flow of income model or any school of economic thought from the 18th century to the 21st century, such as the Marxist critique of classical economic thought and/or and the growing role of behavioural economics.
- Diagram: circular flow of income and/or the circular economy.

    c) Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: equity and equality.
- Explanation: of both equity and equality from social and economic perspectives. Explanation of the role of normative and positive economics in the distinction of equity and equality. Explanation of the differences in how equity and equality enable economists to explore macroeconomics as well as significant global issues.
- Diagram: not needed for this question, although students might choose to use the Lorenz curve/Gini coefficient to show the degree of (in)equality in an economy.

Note: *equity* is a key concept in IB Economics, whereas equality is not.

Chapter 3 – Demand

[Paper 2 and 3 Exam practice question 3.1]

The law of demand states that, in general, the quantity demanded falls as price rises, ceteris paribus. This is due to the lower willingness and ability of customers to pay. Likewise, the quantity demanded will tend to increase at lower prices. Hence, the law of demand states that there is an inverse relationship between the price of a good or service and its price.

Award *1 mark* for a vague definition that shows some understanding of the term law of demand.

Award *2 marks* for an accurate definition of the term law of demand, similar to the explanation given above.

[Paper 2 and 3 Exam practice question 3.2]

It is likely that a rise in the price of private transportation will cause a small increase in the demand for public transportation, ceteris paribus. This is because they are weak substitutes – at least in the short run. Similarly, an increase in the price of public transportation may cause a change in the demand for private transportation but perhaps only in the long run and if the relative price differences make the convenience of private transportation more attractive to consumers.

Note: the scenario may differ from one country to another and examiners will bear this in mind so long as you explain the reason(s) behind your answer.

Award *1–2 marks* if the written response is limited.

Award *3–4 marks* if the written response is accurate, similar to the explanation above.

[Paper 1 Exam practice question 3.3]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: Substitutes and complementary goods.
- Explanations: Substitutes are products that can be used instead of each other, such as Coca-Cola or Pepsi and tea or coffee. Hence, these products are in competitive demand. By contrast, complementary goods are products that are consumed together, such as cinema movies and popcorn or pencils and erasers. Hence, complementary goods are jointly demanded.
- Diagram: Demand and supply diagram(s) showing the impact of substitutes and complementary goods when prices for these products change.

Chapter 4 – Supply

[Paper 1 Exam practice question 4.1]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definition(s): Supply and/or supply curve, shift of the supply curve (for a product) and a movement along the supply curve.
- Explanation: of a shift in the supply curve for a good or service being caused by changes in non-price factors that affect the supply of the product, such as taxes, subsidies, adverse weather conditions and production times. Explanation that a movement along the supply curve of a product is caused by changes in prices only – an increase in price causes an expansion in supply, whilst a price reduction causes supply to contract, ceteris paribus.
- Diagram: Supply curve diagram showing *shifts* in the supply curve (due to changes in non-price factors that affect the supply of a product) and *movements* along a supply curve (due to changes in price).

Although the question does not specifically require the use of real-world examples, some students might choose to use appropriate examples to explain their answers. If this is the case, they should be awarded accordingly.

[Paper 1 Exam practice question 4.2]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definition(s): Supply and/or supply curve, and shift of the supply curve (for a product).
- Explanation: of any **two** factors that can cause a shift in a firm's supply curve; these must be changes in non-price factors that affect the supply of a product, such as: an increase in indirect taxes, the reduction or removal of subsidies, adverse weather conditions, and prolonged production times (perhaps due to a major natural disaster). The explanation is likely to make reference to and/or consider the ceteris paribus assumption.
- Diagram: Supply curve diagram showing leftward/inwards shifts of the supply curve (due to changes in non-price factors that adversely affect the supply of a good or service).

Chapter 5 – Competitive market equilibrium

[Paper 2 and 3 Exam Practice Question 5.1]

The supply curve has shifted to the right from S1 to S2, i.e. there is an increase in the supply of textbooks. Possible reasons for this include:

- Cheaper raw material costs, such as wood needed for the paper.
- Cheaper capital costs, such as printing equipment or printing machines.
- Cheaper transportation and distribution costs for publishers.
- A reduction in the per-unit tax imposed on textbooks.
- Technological progress, helping to reduce costs, such as e-textbooks and digital resources.
- Accept any other supply factor related to the textbook industry.

Mark as a *2 + 2.*

Award up to *2 marks* for explaining <u>each</u> cause of the rightward shift of the supply curve, up to the maximum of *4 marks.*

[Paper 2 and 3 Exam Practice Question 5.2]

- At P = $3 per ton, total revenue is $3 × 30,000 = $90,000
- At P = $4 per ton, total revenue increases to $4 × 40,000 = $160,000
- Therefore, the change in total revenue = **+$70,000**

Award *1 mark* for the correct answer and *1 mark* for showing accurate working out.

[Paper 2 and 3 Exam Practice Question 5.3]

a) $20 (as this is the price level where the quantity demanded equals the quantity supplied).
b) $Qd(\$10) = 60,000$ and $Qs(\$10) = 20,000$, so $ED(\$10) = 40,000$, i.e. when the price is $10, there is excess demand (a shortage) of 40,000 units.
c) $Qd(\$40) = 0$ and $Qs(\$40) = 80,000$, so $ES(\$40) = 80,000$, i.e. when the price is $40, there is excess supply (a surplus) of 80,000 units.

[Paper 2 and 3 Exam Practice Question 5.4]
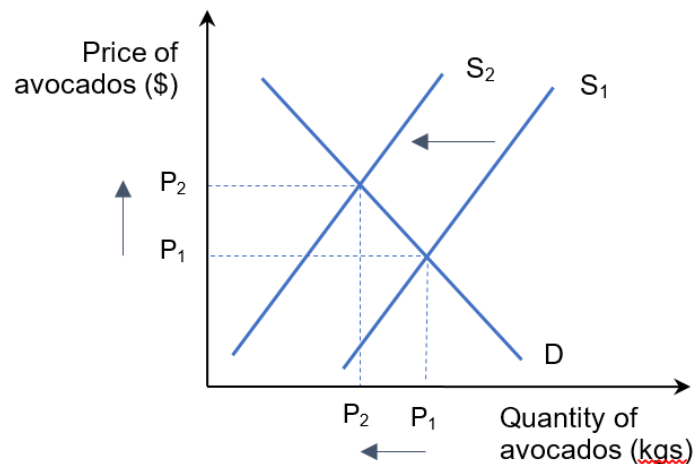
Award up to *2 marks* for drawing a fully labelled diagram that shows a leftward shift of the supply curve of avocados.

Award up to another *2 marks* for an explanation, showing that a fall in the supply of avocados, due to the reduced harvests, causes the market price of avocados to rise.

[Paper 1 Exam Practice Question 5.5]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: signalling and incentive functions of the price mechanism.
- Explanations: the signalling function involves price adjustments to reflect relative scarcities and surpluses in product and resource markets for economic agents (producers and consumers), i.e. prices change to indicate where resources are required (price increases) and where they are not (price decreases). The incentive function provides pricing information for economic agents, where a fall in price provides an incentive for consumers to purchase more, vice versa. Explanation that for competitive markets to work efficiently, economic agents must respond to price signals and incentives in product and resource markets.
- Diagram: Demand and supply diagram(s) showing the impact of the signalling and incentive functions of price and quantity for particular markets, illustrating the impact of the signalling and incentive functions of price.

[Paper 3 Exam Practice Question 5.6]

a)
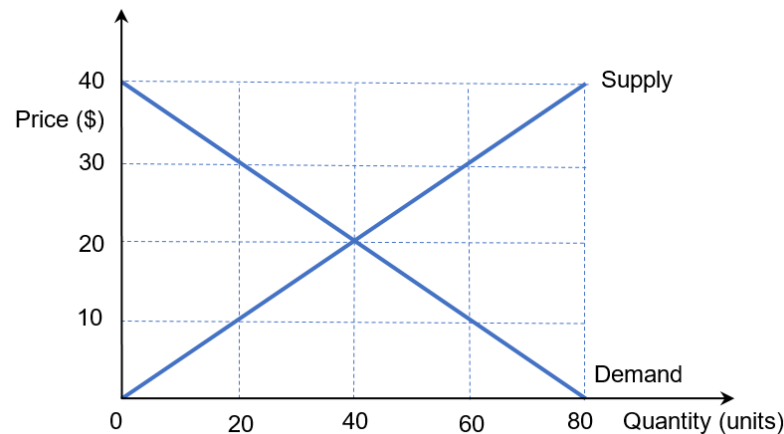
Award *1 mark* each for the following: *y*-axis label, *x*-axis label, supply curve, and demand curve (which must be plotting accurately and labelled accordingly), up to the maximum of *4 marks*.

There is no need to include a title for this diagram.

b) Consumer surplus exists when there are customers willing and able to pay more than the equilibrium price. Hence at $20, the consumer surplus is shown by the triangular area under the demand curve, above the equilibrium price level.

Hence, the value of consumer surplus is [($40 − $20) × 40]/2 = **$400**
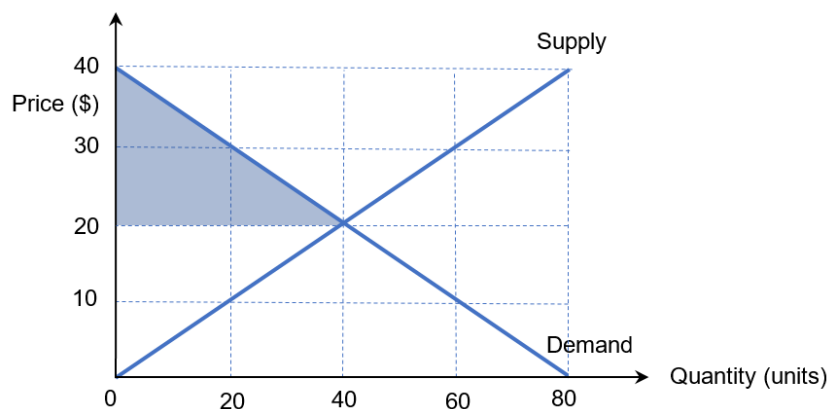
Award *1 mark* for the correct answer and *1 mark* for showing the working out.

c) The value of producer surplus at $10 is [($10 – $0) × 20]/2 = **$100**
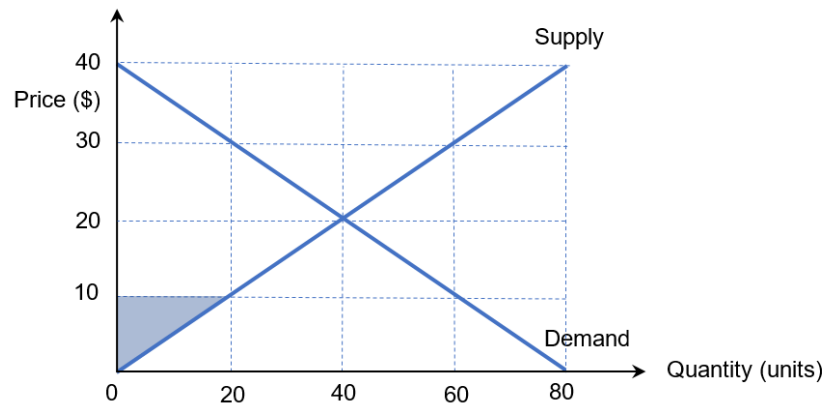
Award *1 mark* for the correct answer and *1 mark* for showing the working out.

d) From the graph in Question b, it can be seen that:
- If price is $10, demand = 60 and supply = 20
- Hence, there is excess demand of 60 – 20 = **40 units**.

Award *1 mark* for the correct answer and *1 mark* for showing the working out.

e) From the graph in Question b, it can be seen that:
- At a price of $30, demand = 20 units and supply = 60 units
- Thus, there is excess supply of **40 units**.

Award *1 mark* for the correct answer and *1 mark* for showing the working out.

[Paper 1 Exam Practice Question 5.7]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: consumer surplus and producer surplus.
- Explanations: of how consumer and producer surplus are maximized at the free market equilibrium price, and how disequilibrium brings inefficiencies and opportunity costs. For example, at a price lower than the equilibrium, consumer surplus will increase but at the cost of lower producer surplus, and vice versa for an increase in price above the equilibrium. Explanation of the economic interpretation of 'best allocation of resources', i.e. economic efficiency.
- Diagrams: changes in consumer and producer surplus following changes in prices, perhaps caused by factors such as changes in indirect taxes and producer subsidies from the domestic government.

Chapter 6 – Critique of the maximizing behaviour of consumers and producers (HL only)

[Paper 2 and 3 Exam Practice Question 6.1]

- Market share = 16.4% × $14,000,000 = **$2,296,000**

Award *1 mark* for the correct answer and *1 mark* for the correct working out.

[Paper 1 Exam Practice Question 6.2]

a) Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:
   - Definition: cognitive biases/biases.
   - Explanation: of any **two** cognitive biases: rule of thumb, anchoring, framing, and availability. Explanation of consumption choices. Award the use of relevant and explained examples where provided.
   - Diagram: not needed for this question.

b) Use the assessment criteria on page 2 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:
   - Definition: nudge theory.
   - Explanation: of how nudge theory can help consumers to make more informed/better choices, as nudges are an important aspect of choice architecture. Counter-argument explaining or questioning the limitations of nudge theory in influencing consumer choice.
   - Diagram: Demand and supply diagram showing the impact of nudge theory on the demand and/or supply of certain products.
   - Synthesis (evaluate): strengths and limitations of using nudges/nudge theory to help consumers to make better (more informed) choices. Consideration of the validity of assumptions (such as consumer rationality, utility maximization and perfect information) as well as choice architecture (such as default, restricted and mandated choices) to examine choice architecture in action.
   - Examples: real-world examples where nudge theory has been used to help consumers to make better/worse decisions (choices), including examples of nudges used by businesses to encourage buyers to choose to buy a certain good or service.

Chapter 7 – Elasticity of demand – price elasticity of demand (PED)

[Paper 1 Exam Practice Question 7.1]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definition: price elasticity of demand (PED).
- Explanation: of why the price elasticity of demand (PED) for concert tickets is likely to be highly price inelastic. The explanation includes reference to the determinants of PED, such as limited suitable substitutes and a high degree of necessity for the concert tickets. For example, there are no close substitutes readily available, and loyal fans are willing to pay for the unique experience.
- Explanation of the relatively high PED for airline tickets, based on determinants such as the proportion of income spent, the degree of necessity vs luxury expenditure (for airline travel), and the number of available substitutes. For example, airline tickets are sold in a highly competitive market with customers often able to choose from various carriers to the same destination. Buyers can easily compare prices, especially with online price comparison websites. For domestic travellers, they may also have the option to use substitute travel means, such as by car, coach or train.
- Diagrams: relatively price inelastic demand curve for concert tickets, and relatively price elastic demand for airline travel/tickets

[Paper 2 and 3 Exam Practice Question 7.2]

- $\%\triangle Q_D = (95 - 85)/85 = +11.76\%$
- $\%\triangle P = (250 - 300)/300 = -16.67\%$
- $PED = +11.76\%/-16.67\% = -0.7$
- As the PED is <1 (ignoring the negative coefficient), the demand for the retailer's designer label sunglasses is **price inelastic** (customers are not very responsive to the change in price). The reduction in price (of 16.67%) led to a smaller than proportional increase (of 11.76%) in the quantity demanded.

[Paper 2 and 3 Exam Practice Question 7.3]

a)

- The percentage change in quantity demanded = $(30 - 25)/25 = +20\%$
- The percentage change in price = $(350 - 400)/400 = -12.5\%$

- Hence the PED value = +20/–12.5 = **–1.6**
- This means the demand for the earrings is price elastic, i.e. customers are highly responsive to the change in price. The fall in price (12.5%) of the platinum earrings has caused a greater than proportional increase (20%) in the quantity demanded.

b) Knowledge of price elasticity of demand (PED) can help the decision-making of firms and governments in terms or their pricing strategy. For example:
   - Price inelastic demand means that firms can increase prices without too much impact on the quantity demanded, thereby raising their total sales revenue. The opposite would apply in the case of price elastic demand.
   - The government can impose higher indirect taxes on price inelastic goods (such as cigarettes, petrol and alcohol) in order to raise tax revenues as well as to discourage the consumption of certain products.

Mark as a *2 + 2.*

Award up to *2 marks* for explaining the significance of price elasticity of demand (PED) for the decision-making of firms, and up to a further *2 marks* explaining the significance of PED for the decision-making of governments.

[Paper 1 Exam Practice Question 7.4]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: price elasticity of demand (PED), primary commodities, and manufactured products.
- Explanation: of why the price elasticity of demand (PED) for primary commodities (such as crude oil or coffee beans) has a comparatively low value, i.e. the demand for these products is relatively price inelastic so demand is relatively unresponsive to changes in price. A key reason is the lack of substitutes as they are essential for production – coffee beans to make coffee, and crude oil to refine into motor fuel. Another reason is the high degree of necessity of primary commodities for producers (of oil/petroleum and coffee drinks).
- Explanation: of why the demand for manufactured products (such as laptops) is relatively price elastic, i.e. a high PED value. Reasons for this could include the large number of substitute laptop brands, and the relatively high proportion of income spent on purchasing laptop computers, i.e. the price of laptops takes up a

much larger proportion of the average household's income than the price of coffee beans does, again accounting for its larger PED value.
- Diagrams: relatively price inelastic demand curve for primary products, such as coffee beans or crude oil, and a relatively price elastic demand curve for secondary products, such as laptops.

[Paper 2 and 3 Exam Practice Question 7.5]

- First, calculate the percentage change in the quantity demanded, i.e. demand falls by 10% from 50,000 to 45,000 match tickets per week.
- Next, calculate the percentage change in the price of match tickets, i.e. prices increased by 20% from $50 to $60 per match ticket.
- Then, substitute these figures into the PED formula to give: −10 / +20 = **−0.5**

As the PED for football match tickets is less than 1 (ignoring the minus coefficient), the demand is relatively price inelastic, i.e. football fans are not very responsive to the increase in match ticket prices. Subsequently, there is a smaller fall in the quantity demanded compared to the increase in price.

[Paper 1 Exam Practice Question 7.6]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: price elasticity of demand (PED) and linear demand curve.
- Explanation: of why the PED value varies along the length of a linear demand curve, i.e. an explanation of the factors that cause the PED value to rise as the price of a product continues to increase. Reasons could include the price accounting for a larger proportion of consumers' average incomes, and the incentive to search for alternative (substitute) products as the price continues to rise.
- Diagrams: linear, downward sloping demand curve show the values from PED = infinity (where the demand curve intersects the y-axis (i.e. when price is so high that the quantity demanded falls to zero), PED = 1 (the midpoint of the linear demand curve), and PED = 0, when the price is so low (zero) that there is no change in the quantity demanded.

[Paper 2 and 3 Exam Practice Question 7.7]

- Original revenue = $20 × 200 = $4,000
- As PED = –3.0, the 10% price rise (from $20 to $22) causes quantity demand to fall by 30%, i.e. from 200 to 140 units
- New revenue = $22 × 140 = $3,080
- Hence, the effect of the increase in price is a fall in sales revenue of $920 (because demand is price elastic, so sales revenue will fall if the price increases).

Award up to *2 marks* for the calculation of the PED (correct answer and working out).

Award an additional *1 mark* for an appropriate comment on the effect of the higher price on the firm's sales revenue.

[Paper 2 and 3 Exam Practice Question 7.8]

a) Sales revenue = Price × Quantity = $4 × 200 units = $800

Award *1 mark* for the correct answer and *1 mark* for showing appropriate working out.

b)
- New price = $4 × 1.2 = $4.80
- PED is known to be –2.0
- Change in the percentage change in quantity demanded is calculated as: –2.0 = x%/+20% = –40%
- New quantity demanded = 200 × 0.6 = 120
- New sales revenue = 120 × $4.80 = $576

Award *1 mark* for the correct answer and up to *2 marks* for showing the working out in full.

c) Sales revenue has fallen from $800 per day to $576. This is because the demand for the firm's product is price elastic (–2.0) so the 20% increase in price causes a greater percentage fall (40%) in the quantity demanded. Thus, it was not a good decision for the firm to increase its price.

Award *1 mark* for a brief answer that shows some understanding of the demands of the question.

Award *2 marks* for a clear understanding of why it was not a good decision for the firm to raise its price due to the price elastic demand for its product.

Chapter 8 – Elasticity of demand – income elasticity of demand (YED)

[Paper 1 Exam Practice Question 8.1]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definition: normal goods and inferior goods.
- Explanation: of an increase in the demand for normal goods as real incomes rise, with reference to both necessity goods and luxury goods (which depend on the value of income elasticity of demand). Award the use of relevant examples where used. When the demand for a product increases with a rise in real income, it is called a *normal good*. Examples include both necessities (such as food, clothing and housing) and luxury products (such as jewellery, sports cars and overseas holidays).
- Explanation of a fall in the demand for inferior goods as real income rises, vice versa. Award the use of relevant examples where used. An *inferior good* has a negative relationship between real income and quantity demanded, i.e. consumers switch to a superior (luxury) product as their real income rises over time, e.g. canned food products versus fresh food products.
- Diagram: Engel curves to show relationship between real income and quantity demanded in relation to normal goods and inferior goods.

[Paper 2 and 3 Exam Practice Question 8.2]
- The income elasticity of demand (YED) is known to be –0.25 whilst income has increased by 3%. This means demand must have fallen.
- Substitute the known values into the YED formula to give: $x/+3\% = -0.25$.
- Hence, $x = -0.75\%$, i.e. the demand for sausages has fallen by 0.75%.

Award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out

[Paper 1 Exam Practice Question 8.3]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definition: primary commodities and price inelastic demand.
- Explanation: of any **two** reasons for the relatively price inelastic demand for primary commodities. For example:
    - The lack of close substitutes (for primary products such as food crops or raw materials used for production).

- o Most primary commodities are classed as necessities for production purposes. Therefore, even if the price of these commodities rises, they are still purchased in similar quantities.
  - o The time period under consideration – price elasticity tends to increase with time when producers are able to see/use alternative factors of production and resources, although this is not always feasible such as the case of fossil fuels.
- Diagram: price inelastic demand curve to show the impact of changes in price and the relatively unresponsive change in the quantity demanded with reference to primary commodities.

Chapter 9 – Elasticity of supply

[Paper 2 and 3 Exam Practice Question 9.1]

- Price has fallen by 10% (from $13 to $11.70)
- PES = %ΔQs/%ΔP = +3
- Hence, %ΔQs = –30%
- So, the new Qs = 3,500 units

Award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

[Paper 2 and 3 Exam Practice Question 9.2]

- %ΔQs = (50 – 20)/20 = +150%
- %ΔP = ($30 – $25)/$25 = +20%
- Hence, PES = 5%/4% = **+7.5**, i.e. supply is highly price elastic

Award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

[Paper 2 and 3 Exam Practice Question 9.3]

- The percentage change in quantity supplied = (10,500 – 10,000)/10,000 = +5%
- The percentage change in price = ($2.20 – $2.0)/$2.0 = +10%
- Hence, PES = 5%/10% = **0.5**, i.e. supply is price inelastic

Award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

[Paper 2 and 3 Exam Practice Question 9.4]

- Percentage change in quantity supplied = (85 – 95) / 95 = –10.53%
- Percentage change in price = (250 – 300) / 300 = –16.67%
- PES = –10.53%/–16.67% = **0.63**
- This means the supply of the luxury watches at Murtagh Corp. is price inelastic, i.e. supply is not very responsive to the change in price. The fall in price (16.67%) led to a smaller than proportional fall (10.53%) in the quantity supplied, perhaps due to the time needed to adjust the production of luxury watches.

Mark as a 2 + 2.

For the calculation, award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

For the commentary, award *1 mark* for a vague answer that shows some understanding of the demands of the question. Award *2 marks* for a clear comment that demonstrates a good understanding of the value of PES, written in the context of the case study.

[Paper 2 and 3 Exam Practice Question 9.5]

The supply of an original masterpiece artwork by Picasso or Van Gogh is perfectly price inelastic. Irrespective of any change in the price, it is impossible supply another original art piece from these artists, so any change in price has no impact on the quantity supplied.

Award *1 mark* for a vague explanation that shows some understanding of the demands of the question.

Award *2 marks* for a clear explanation of perfectly price inelastic supply for original masterpiece artwork by the likes of Picasso or Van Gogh.

[Paper 2 and 3 Exam Practice Question 9.6]

The supply curve of downloadable *Angry Birds* games is perfectly price elastic because *Rovio* can supply an extra unit of output at zero cost (customers simply download the games app) as there is no additional cost of production.
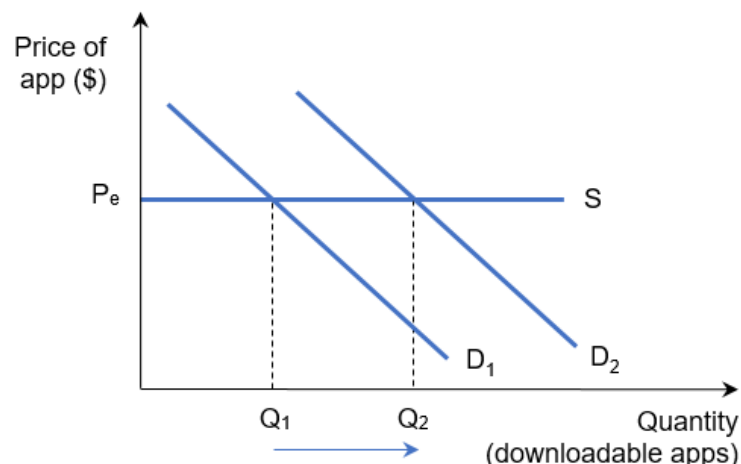
Mark as a 2 + 2.

Award up to *2 marks* or an appropriate and fully labelled demand and supply diagram.

Award up to *2 marks* for a commentary that explains why PES is likely to be perfectly price elastic (shown as a horizontal supply curve), as the digital resource can be supplied at any level of output without additional direct costs imposed on *Rovio*.

Chapter 10 – Role of government in microeconomics

[Paper 3 Exam Practice Question 10.1 – HL only]

a)   Old consumer surplus = a + b + c
New consumer surplus = a + b + d
Hence, the change in consumer surplus = c – d

b)   Old producer surplus = d + e + h
New producer surplus = h
Hence, the change in producer surplus = (d + e + h) – h, i.e. the loss of area
d + e

c)   The previous sales revenue = d + e + f + h + i + j
The new revenue = h + i
Hence, the firm loses areas d + e + f + j
The change in sales revenue is therefore = the loss of area d + e + f + j

d)   The shortage (excess demand) = $Q_3 - Q_1$

Note: there is no need to show any working out for these questions; the above is shown
for illustrative purposes only.

Award *1 mark* for each correct answer.

[Paper 3 Exam Practice Question 10.2 – HL only]

a) A price ceiling refers to the legal maximum price for a particular good (such as food
products) or service (such as health care). It is a form of government intervention
designed to protect individuals and households on low incomes as market prices
could mean they are unable to afford important goods and services (such as
housing).

Award *1 mark* for a definition that shows some understanding of the term price ceiling.

Award *2 marks* for a clear definition that shows good understanding of the term price
ceiling.

b) Equilibrium exists where demand = supply, i.e. at P = **$20** both demand and
supply equal 20,000 units.

Award *1 mark* for correctly identifying the equilibrium price.

c) The minimum price of $25 means that demand = 15,000 units whereas supply = 24,000 units. Hence there is excess supply of 9,000 units.

Award *1 mark* for a brief answer that shows limited understanding.

Award *2 marks* for a clear understanding of the impact of a price floor on the product.

[Paper 3 Exam Practice Question 10.3 – HL only]

a) At the minimum price of $30, there will be **excess supply of 4,000 units**. This is because at $30, output will be 7,000 units whereas demand will only be 3,000 units.

b) Consumers used to spend $20 × 5,000 units = $100,000
At the higher price of $30, consumers now spend $30 × 3,000 = $90,000
Therefore, the change in consumer spending = **–$10,000**

c) Producers used to earn $20 × 5,000 units = $100,000
At the higher price of $30, they now earn:
- From consumers: $30 × 3,000 = $90,000
- From the government: $30 × 4,000 excess supply = $120,000
- Thus, total earnings are now $210,000
- Therefore, the change in producer revenue = $210,000 – $100,000 = **+$110,00**

d) The total amount spent on buying the excess supply = $30 × 4,000 = $120,000
If the government exports the excess supply, it receives $20 × 4,000 = $80,000
Hence, taxpayers pay for the difference, i.e. **$40,000**

For each question above, award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

[Paper 3 Exam Practice Question 10.4 – HL only]

a)
- Per unit tax = $20 – $10 (the vertical distance between the two supply curves) = $10
- Quantity traded = 30,000 units
- Hence, total tax revenue = 30,000 × $10 = **$300,000**

Award *1 mark* for the correct answer and *1 mark* for showing the working out.

b)

- Consumers used to pay $15 but now pay $20, i.e. an extra $5 per unit
- Equilibrium quantity is now 30,000 units
- Therefore, the total tax burden to consumers = $5 × 30,000 = **$150,000**

Award *1 mark* for the correct answer and *1 mark* for showing the working out.

c)

- Consumers used to spend $15 × 40,000 units = $600,000
- They now spend $20 × 30,000 units = $600,000
- Therefore, there is no change in total consumer spending after the tax.

Award *1 mark* for the correct answer and *1 mark* for showing the working out.

d)

- The DWL is the loss of consumer surplus and producer surplus following the imposition of the indirect tax
- It is equal to the triangular area [($20 – $10) × (40,000 – 30,000] / 2 = **$50,000**

Award *1 mark* for the correct answer and *1 mark* for showing the working out.

e)

- Producer surplus is the difference between what suppliers receive ($10 after imposition of the tax) above the price they are willing and able to supply.
- The new producer surplus is shown by the triangular area above the supply curve, under the horizontal price received by the firm ($10).
- Hence, producer surplus = ($10 × 10,000) + [($10 – $0) × (30,000 – 10,000)]/2 = $100,000 + $100,000 = **$200,000**
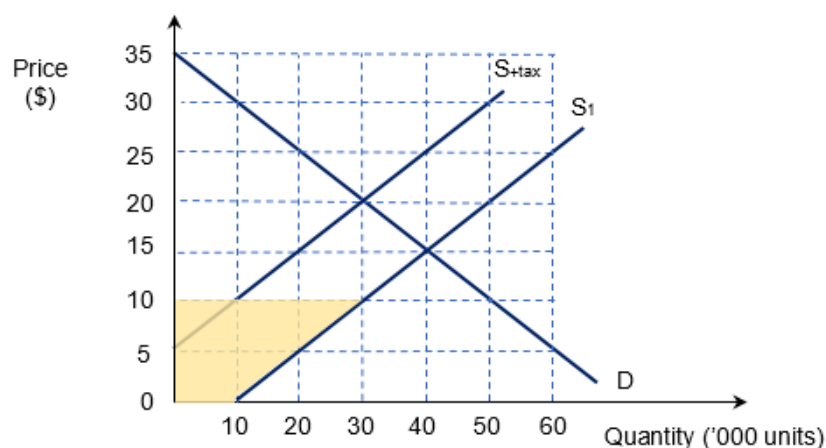
Award *1 mark* for the correct answer and *1 mark* for showing the working out.

f)

- Previous consumer surplus = [($35 − $15) × 40,000]/2 = $400,000
- New consumer surplus = [($35 − $20) × 30,000]/2 = $225,000
- Therefore, the change in consumer surplus = $400,000 − $225,000 = **$175,000**

Award *1 mark* for the correct answer and *1 mark* for showing the working out.

[Paper 1 Exam Practice Question 10.5]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: government intervention and price.
- Explanation: of any **two** ways in which a government can intervene in markets to influence the price of a product:
  - Price controls: price ceilings (maximum prices) and price floors (minimum prices), e.g. imposing a minimum price above the free market equilibrium, such as in the case of a minimum wage, can be used to encourage more people to find work as the price of labour services – or the wage rate has increased.
  - Indirect taxes – Indirect taxation can be used to increase costs of producing certain products deemed socially undesirable, thereby forcing up the price for consumers, e.g. cigarettes and alcoholic beverages.
  - Subsidies – A subsidy can be used to help lower production costs and hence prices for customers, e.g. health care and education.
  - Direct provision of services, such as health care, education, and/or public housing to make such things more affordable/accessible to people.
- Diagram: any two of the following (if referred to above) – price ceiling (maximum price), price floor (minimum price), indirect tax, and/or subsidy.

[Paper 3 Exam Practice Question 10.6 – HL only]

a)

- At P = $6, both demand and supply equal 60,000 units
- Hence, the equilibrium price is $6 and the equilibrium quantity traded is 60,000.

Award *1 mark* for identifying the correct equilibrium price and *1 mark* for the equilibrium quantity.

b)

- The subsidy enables supply to shift to the right, with the vertical distance between the two supply curves being equal to the per unit subsidy (of $1)
- Previously, a price of $6.50 was required to generate supply of 70,000 units
- Now, with the $1 per unit subsidy, the same 70,000 units can be supplied at a price of $5.50
- Hence, the equilibrium price is now **$5.50** and equilibrium output is **70,000 units**.

New				Original		
Qd	Price ($)	Qs		Qd	Price ($)	Qs
30,000	7.5			30,000	7.5	90,000
40,000	7.0			40,000	7.0	80,000
50,000	6.5	90,000		50,000	6.5	70,000
60,000	6.0	80,000		60,000	6.0	60,000
70,000	**5.5**	**70,000**		70,000	5.5	50,000
80,000	5.0	60,000		80,000	5.0	40,000
90,000	4.5	50,000		90,000	4.5	30,000

Award up to *2 marks* for the correct answers and *1 mark* for showing the working out.

c)

- The per unit subsidy = $1, and the quantity supplied = 70,000 units.
- Hence the total cost of providing the subsidy = **$70,000.**

Award *1 mark* for the correct answer and *1 mark* for showing the working out.

d)

- The total subsidy (calculated in the previous question) = $70,000
- However, as consumers only received $0.50 of the $1 per unit subsidy (they used to pay $6, but now pay $5.50), their incidence of the subsidy = **$35,000.**

Award *1 mark* for the correct answer and *1 mark* for showing the working out.

[Paper 3 Exam Practice Question 10.7 – HL only]

a) A subsidy is a financial benefit (usually in the form of a cash payment) given by the government to firms or individuals in order to reduce their costs of production. This helps to reduce their financial burden. It is often given there are social benefits to society.

Award *1 mark* for a definition that shows limited understanding of subsidies.

Award *2 marks* for a clear definition that shows good understanding of subsidies.

b)
- The per unit subsidy = AC
- The equilibrium quantity = CG
- Hence, the cost of the subsidy = **AECG.**
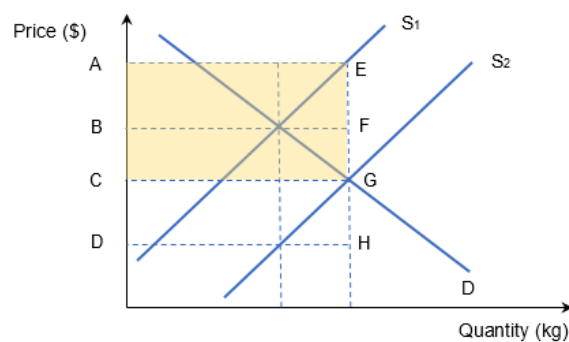
Award *1 mark* for the correct answer and *1 mark* for showing the working out or explanation.

c)
- Consumers used to pay a price of 0B but now pay 0C. However, the subsidy = AC.
- Hence producers gain AB per unit from the subsidy
- So, the total amount of the subsidy retained by producers = **AEBF**.
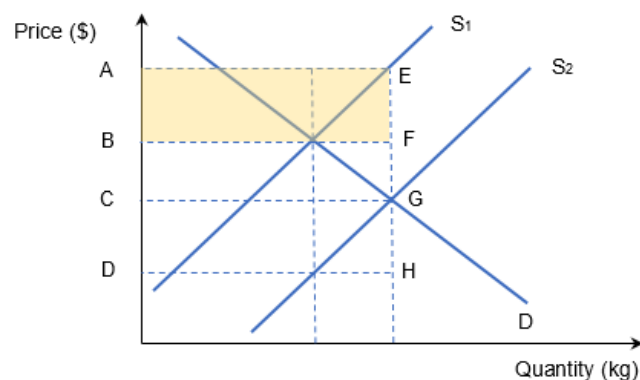
Award *1 mark* for the correct answer and *1 mark* for showing the working out or explanation.

Chapter 11 – Market failure – externalities and common pool (common access) resources

[Paper 2 and 3 Exam Practice Question 11.1]

The social costs of building a new airport include both the *private costs* and the *external costs* (negative externalities).

Private costs of building a new airport include:
- Manufacturing costs of building the airport
- Labour costs, such as the wages or salaries of construction workers and engineers
- Insurance costs

External costs of building a new airport include:
- Noise and air pollution to residents living nearby
- Additional traffic/congestion/traffic jams to people living near the airport site
- Loss of landscape and natural habitats
- Damage to/destruction of ecosystems
- Risks of accidents and the subsequent impacts on the local community
- Possible fall in house prices for those living in the local area

Award *1–2 marks* for an answer that shows some understanding of the demands of the question, although the explanation may be limited in demonstrating knowledge of social costs.

Award *3–4 marks* for an explanation that demonstrates a clear understanding of social costs, written in the context of the construction of a new airport.

[Paper 3 Exam Practice Question 11.2]

a) Possible answers could include a description of the production of demerit goods such as:

- Alcohol (alcohol addiction and related costs to society)
- Tobacco (second-hand smoking)
- Casinos (gambling)
- Gaming (gaming addiction)
- Chewing gum (litter)
- Gasoline/petrol (carbon emissions)

Award *1 mark* for an appropriate example of a product that has negative externalities.
Award *1 mark* for a suitable written commentary that meets the demands of the question.

b) i) In a free market economy without government intervention, output will be **50,000 units** where the MPC of production = MPB of production.

Award *1 mark* for identifying the correct output level.

ii)
- The socially optimal level of output is at **35,000 units** where MSC = MSB.
- At this output level, there is a higher price of **$30** being charged (to reduce the overproduction of the demerit good).

Award *1 mark* for each answer that is correctly identified.

iii) The welfare loss is the sum of the negative externalities of overproduction, up to 50,000 units in this case. This is shown by the shaded area in the diagram below (included here for illustrative purposes only).
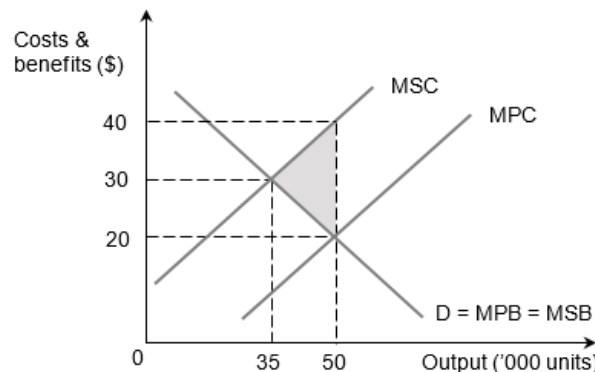
- Hence, the welfare loss = [($40 − $20) × (50,000 − 35,000)]/2
- = ($20 × 15,000)/2 = **$150,000**

Award *1 mark* for the correct answer and *1 mark* for showing appropriate working out.

Note: there is no need to include a diagram or to shade in the welfare loss; this has been included in the answer for illustrative purposes only.

[Paper 1 Exam Practice Question 11.3]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definition: market failure.
- Explanation: of why governments might choose to use congestion zone charging (essentially a form of indirect tax) in order to reduce the use of private motor vehicles

in congested city centres. Explanation of the (over)use of motor vehicles in city centres is a case of negative consumption externalities (private vehicles) or negative production externalities (commercial vehicles). Explanation of the external costs of motor vehicle usage in overcrowded cities, such as spillover effects on third parties due to congestion or pollution from vehicle traffic. An explanation that the MSB of consumption is less than the MPB of consumption (due to the existence of negative externalities).

- Diagram: market failure diagram showing the MSB curve below the MPB curve (negative externalities of consumption), with an explanation that the use of congestion zone charging can help to internalize the negative externalities of motor vehicle use in city centres.

Chapter 12 – Market failure – public goods

[Paper 1 Exam Practice Question 12.1]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: of merit goods, public goods and market failure.
- Explanation: that merit goods can be (under-)provided in a free market economy but would be under-consumed at market prices despite the MSB of consumption > MPB of consumption. Explanation that public goods are under-provided or not provided at all in a free market economy because they are non-excludable (due to the free-rider problem) and non-rivalrous. Explanation that merit goods and public goods have positive externalities, so are under-consumed and under-produced without government intervention. Award relevant examples of merit goods and public goods.
- Diagram: market failure diagram to illustrate the suboptimal output of merit goods and public goods in a free market economy.

[Paper 1 Exam Practice Question 12.2]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

The social benefits of a highway (motorway) expansion project funded by the government might include:

- Definitions: of social costs and social benefits.
- Explanation: of social benefits such as time savings for daily commuters and passengers, more efficient deliveries, reduced pollution (due to less traffic jams and congestion) and saved lives (due to freely flowing traffic). Explanation of social costs of the highway (motorway) expansion, such as the loss of natural habitats, noise and air pollution during construction, additional congestion and delays, and maintenance costs.
- Diagram: market failure diagram to illustrate the under-provision of highway expansion projects (to show the social benefits of improved infrastructure, for example).

[Paper 2 and 3 Exam Practice Question 12.3]

- Public goods are products that are both non-rivalrous and non-excludable. Examples include street lighting, lighthouses, law and order, and national defence.
- Public goods are considered as economic goods as they are limited in supply (the concept of scarcity) and there is an opportunity cost in providing such goods – unlike free goods.
- Although public goods may be provided for "free" at the point of use, this does not mean they are free goods because public goods are funded using limited or finite government tax revenues, so their provision incurs an opportunity cost to society.

Award *1–2 marks* for a written response that is limited.

Award *3–4 marks* for a written response that is accurate.

Alternative approaches may be taken in response to the *4-mark* question that uses an AO2 command term. If an alternative approach is valid, then full credit should be given.

Chapter 13 – Market failure – asymmetric information (HL only)

[Paper 1 Exam Practice Question 13.1]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: asymmetric information, market failure and inefficiency.
- Explanation: that the existence of asymmetric information between buyers and sellers in a market results in market failures and inefficiencies because consumer and producer surplus are not maximized. Explanations and/or examples could include adverse selection and moral hazard.
- Diagram: not needed for this question but could include a market failure diagram to show suboptimal output due to imperfect information or the loss of consumer and/or producer surplus due to asymmetric information in a particular market.

Chapter 14 – Market failure – market power (HL only)

[Paper 3 Exam Practice Question 14.1 – HL only]

a) Total Cost = Total Fixed Cost + Total Variable Cost
TVC = $8 × 5,000 = $40,000
TFC = Rent + Salaries = $15,000
Hence, TC = **$55,000**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

b) Profit = Total Revenue – Total Cost
TR = $20 × 5,000 = $100,000
Profit = TR – TC = $100,000 – $55,000 = **$45,000**

Award *1 mark* for the correct answer, and *1 mark* for showing the working out.

[Paper 3 Exam Practice Question 14.2 – HL only]

a) TFC = $4,545 – $2,000 = $2,545

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

b) AFC @ 10 units = 2,545 ÷ 10 = $254.50
AFC @ 15 units = 2,545 ÷ 15 = $169.67

Award *1 mark* for each correct answer

c) AVC @ 10 units = 2,000 ÷ 10 = $200.0
AVC @ 15 units = 2,850 ÷ 15 = $190.0

Award *1 mark* for each correct answer

d) AC @ 10 units = 4,545 ÷ 10 = $454.50
AC @ 15 units = 5,395 ÷ 15 = $359.67

Award *1 mark* for each correct answer

e) MC = TC/ Q = (5,395 – 4,545) / (15 – 10) = 850 / 5 = $170

Award *1 mark* for the correct answer, and *1 mark* for showing the working out.

[Paper 3 Exam Practice Question 14.3 – HL only]

a) Total revenue at $16 = 16 × 90 = **$1,440**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

b) Average revenue = Price, so at 120 units of output the AR = **$8**.
Alternatively, this can be found by the formula AR = TR ÷ Q = ($8 × 120) ÷ 120 = **$8**.

Award *1 mark* for the correct answer.

c) The difference between areas A and B = **marginal revenue** from changing the price. If price increases from $8 to $12, the firm gains area A but loses area B, so the difference between the two represents the extra revenue (marginal revenue) following a change in price.
Area A = ($16 – $8) × 90 = $720
Area B = $8 × (120 – 90) = $240
Hence, the difference between Area A and B = $720 – $240 = **$480.**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

[Paper 2 Exam Practice Question 14.4 – HL only]

A firm that is making zero economic profit is still making a profit equal to its next best alternative (opportunity cost). This means that the firm cannot earn *more* in any other market at that time. Zero economic profit does not mean the firm earns no profit – it does earn some profit, but this is not supernormal profit.

Award *0 marks* if the work does not meet the demands of the question.

Award *1 mark* if the written response is limited.

Award *2 marks* if the written response is accurate, similar to the explanation above.

[Paper 3 Exam Practice Question 14.5 – HL only]

a) The profit maximizing monopolist produces at the output level where MC = MR, i.e. 0G. The price charged at this level of output, shown on the AR = D curve, is therefore **0A**.

Award *1 mark* for the correct answer.

b) The profit maximizing monopolist produces at 0G, where MC = MR. The average cost here is GD (or 0B). Hence, the total cost is shown by the area **0BDG**.

Award *1 mark* for the correct answer.

c) The amount of abnormal profit earned by the profit maximizing monopolist is the difference between its price (0A) and average cost (0B) multiplied by the amount of output (0G). Hence the amount of abnormal profit is the area **ACDB**.

Award *1 mark* for the correct answer.

d) The revenue maximizing monopolist will supply output at the level where revenue is maximized, i.e. where MR = 0. Hence, the output level is **0H**.

Award *1 mark* for the correct answer.

Note: There is no need to explain the answer or to show the working out. The above have been included for explanatory purposes only.

[Paper 1 Exam Practice Question 14.6 – HL only]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: monopoly, abnormal profit and long run.
- Explanation: of how monopolies are able to maintain high barriers to entry which prevents price competition from rivals or the threat of new entrants (like in monopolistic and perfect competition). The explanation might also make reference to price inelastic demand for a monopolist's product (as there are not any close substitutes). This enables them to maintain economic profit in the long run.
- Diagram: Profit maximizing monopoly and the absence of a long run price reduction enabling the firm to earn abnormal profits.

[Paper 1 Exam Practice Question 14.7 – HL only]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: product differentiation, demand curve and monopolistic competition.
- Explanation: of how heterogeneous (differentiated) products require different prices as raw material costs are different (e.g. steak costs more than lettuce). Therefore, these firms are not selling at higher prices in an attempt to extract consumer surplus,

but out of necessity due to varying costs. Explanation that monopolistically competitive firms have some degree of price setting ability due to product differentiation.
- Diagram: short run and/or long run monopolistic competition diagram demonstrating downward sloping AR and MR curves.

[Paper 1 Exam Practice Question 14.8 – HL only]

Use the assessment criteria on page 2 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: monopolistic competition and perfect competition.
- Explanation: of the main characteristics of both market structures (in terms of price, output and efficiency). Explanation that allocative efficiency in perfect competition leads to lower prices in the short run and the long run, and that productive efficiency in the long run is unachievable by monopolistically competitive firms. Explanation that monopolistically competitive firms have a small degree of price setting power, so the demand curve of these firms is less price elastic than that of perfectly competitive firms. Explanation that there is a lack of economies of scale and market power in both models, due to the nature of barriers to entry in these market structures.
- Diagram: perfect competition diagram (showing normal profit and efficiency in the long run) and monopolistic competition diagram (showing inefficiency in the long run).
- Synthesis (evaluate): the ability of markets to change, either becoming more competitive or less competitive (dynamic not static analysis). Consideration of theoretical limitations of the models (perfect competition in particular). A judgment about the overall similarities and differences between the models, in terms of output and prices (in the short run and long run), the nature of entry barriers, market power, price elasticity of demand, and economic efficiency.
- Examples: real-world examples of perfect competition (such as small fruit and vegetable markets) and monopolistic competition (such as hairdressers and suburban restaurants).

[Paper 3 Exam Practice Question 14.9 – HL only]

a) $[(\$1.5 \times 4,000) + \$4,800] \div 4,000 = \textbf{\$2.70}$

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

b) Break even exists when TR = TC
Break even = Fixed Cost ÷ (Price – Average Variable Cost)
4,800 ÷ ($4 – $1.5) = **1,920 units**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

c) Profit = [($4 – $1.5) × 4,000] – $4,800 = **$5,200**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

Chapter 15 – The market's inability to achieve equity (HL only)

[Paper 1 Exam Practice Question 15.1 – HL only]

Use the assessment criteria on page 1 of the level descriptors. Award up to the maximum marks as indicated. Answers may include:

- Definitions: free market economy and distribution of income and wealth.
- Explanation: that the market mechanism may result in disparities in the distribution of income and wealth due to factor resources not being allocated equitably, such as wage differentials, rental income from property, interest from savings, and profits flowing to shareholders. Explanation that the free market system will not always respond to the needs and wants of low-income earners. Explanation that in a free market economy, the fundamental questions of *what*, *how* and *for whom* production should take place are based on those who are willing and able to pay to obtain goods and services, rather than those with fewer economic opportunities.
- Diagram: not needed for this question. Students may opt to use a Lorenz curve diagram, which, if used, should be credited as appropriate.

Chapter 16 – Measuring economics and illustrating its variations

[Paper 1 Exam Practice Question 16.1]

a) Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definition: national income.

- Explanation: of the income (Y), expenditure (E) and output (O) methods of measuring national income. Explanation of consumption choices. Explanation that national income is the return from generating national output that has been purchased by national expenditure, using the factor incomes generated from domestic production. Explanation of the circular flow of income model that shows that Y = E = O.

- Diagram: not required for this question, although students who use a circular flow of income diagram to demonstrate the three measures of national income should be awarded appropriately.

[Paper 1 Exam Practice Question 16.2]

a) Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: taxation, government spending, and circular flow of income.

- Explanation: that a cut in taxation (T) and an increase in government spending (G) are examples of an injection into the circular flow of an economy. Ceteris paribus, these would lead to an increase in the level of economic activity and hence national income in the economy.

- Diagram: a circular flow of income diagram to demonstrate the impact of a cut in taxation and an increase in government spending.

b) Use the assessment criteria on page 2. Award up to the maximum marks as indicated. Answers may include:

- Definitions: real gross national income (GNI) per capita, and standard of living.

- Explanation: of how an increase in real gross national income (GNI) per capita of a country can be used as a measure improved standards of living in the country. Explanation of other measures or indicators of standards of living, including quantitative factors (such as the cost of living in a country, literacy rates or number of doctors per 1,000 people in the population) and qualitative factors (such as the degree of political stability, freedom of speech and worship, and gender equality).

- Diagram: although not necessarily yet covered (if the syllabus is taught in a linear way), candidates can use an AD-AS diagram to illustrate how an increase in real gross national income (GNI) per capita is often associated with an increase in the national income of an economy, which generates higher levels of employment.

- Synthesis (evaluate): strengths and limitations of using real GNI per capita figures to measure living standards in a country. Consideration of the validity of assumptions (such as income distribution and cost of living in the country) as well as other factors or measures (such as sustainability, intergenerational equity and/or indices such as the HDI or BLI) to examine the connections between income and living standards.

- Examples: real-world examples where high real GNI per capital brings about relatively high standards of living for the average citizen. Examples of the opportunity costs of achieving high real GNI per capital which can diminish standards of living, e.g. highly congested and polluted cities and countries.

Note: It should be noted that definitions, theory and examples that have already been given in part (a), and then referred to in part (b), should be rewarded.

[Paper 2 and 3 Exam Practice Question 16.3]

- $GDP = C + I + G + (X - M)$
- $GDP = 150 + 60 + 55 + (31 - 28) =$ **$268 billion**

Note: there is no need to consider net income earned abroad as this is part of GNI, not GDP.

Award *1 mark* for the correct answer and *1 mark* for showing appropriate working out.

[Paper 2 and 3 Exam Practice Question 16.4]

$GDP = C + I + G + (X - M)$, where net exports = $(X - M)$

- Gross domestic product (GDP)   = $4,770
- Consumption (C)   = $3,720
- Government expenditure (G)   = $668
- Investment expenditure (I)   = $524
- As $GDP = C + G + I + (X - M)$
- $4,770 = 3,720 + 668 + 524 + (X - M)$
- $4,770 = 4,912 + (X - M)$
- Hence, net exports $(X - M)$ =   **–$142 billion** (i.e. a deficit as X < M)

Award *1 mark* for the correct answer and *1 mark* for showing appropriate working out.

[Paper 2 and 3 Exam Practice Question 16.5]

(Nominal) GDP at market prices = C + G + I + (X – M)

- Private consumer expenditure (C) = $1,205
- Government consumption expenditure (G) = $680
- Gross domestic fixed capital formation (I) = $1,150
- Domestic exports of goods (X) = $850
- Domestic exports of services (X) = $1,100
- Imports of goods (M) = $940
- Imports of services (M) = $1,700

Hence, GDP at market prices = 1,205 + 680 + 1,150 + 850 + 1,100 – 940 – 1,700 = $2,345 million (or **$2.345 billion**).

Award *1 mark* for the correct answer and *1 mark* for showing the working out.

[Paper 2 and 3 Exam Practice Question 16.6]

- GNI = C + I + G + (X – M) + + Net income property from abroad
- GDP = 150 + 60 + 55 + (31 – 28) + –8
- Hence, GNI = **$260 billion**.

Award *1 mark* for the correct answer and *1 mark* for showing appropriate working out.

[Paper 2 and 3 Exam Practice Question 16.7]

- The nominal GDP in 2019 = $260bn but the GDP deflator needs to be applied to get the real value of GDP
- Hence, 260/1.067 = **$243.67 billion**
- Similarly, nominal GDP in 2020 is found by:
- 262.4/1.085 = **$241.84 billion**
- Therefore, although nominal GDP increased by $2.4bn (or by around 0.92%), inflation (of around 1.69% between 2019 and 2020) has deflated the real value of GDP (by about 0.75%).

Award up to *2 marks* for the calculations, with appropriate working out. Award up to *2 marks* for the explanation, outlining why real GDP has fallen despite nominal GDP having risen.

[Paper 2 and 3 Exam Practice Question 16.8]

- To calculate the GDP per capita, divide the GDP by the population:

Year	GDP (US$ bn)	Population (million)	GDP per capita (US$)
2018	590	23.59	25,010.60
2019	605	23.60	25,635.59

- The percentage change in GDP per capita is therefore:
- (20,278.52 – 16,391.39/16,391.39) = **2.49%** (accept answers that show 2.5%)

Award *1 mark* for each correct answer, up to *2 marks*.

[Paper 2 and 3 Exam Practice Question 16.9]

a)

- To calculate the real GDP in 2019, deflate the nominal GDP by the GDP deflator for that year:
- (230.2/107.8) × 100 = **$213.54bn**

Award *1 mark* for the correct answer and *1 mark* for showing appropriate working out.

b)

- To calculate the real average income in 2020, deflate the nominal salary by the GDP deflator for that year
- ($24,000/109.8) × 100 = $21,857.92 or **$21,858**

Award *1 mark* for the correct answer and *1 mark* for showing appropriate working out.

c)

Year	Nominal GDP ($bn)	GDP deflator	Real GDP ($bn)
2018	228.0	106.0	215.09
2019	230.2	107.8	213.54
2020	232.4	109.8	211.66

- Nominal GDP increases by less than 1% between 2018 and 2019 but inflation rises by more than 1.69%

- Nominal GDP increases by less than 1% between 2015 and 2020 but inflation rises by more than 1.85%

- Hence, although nominal GDP has increased by $4.4bn, the effects of inflation have eroded the real value of GDP in Country G from $215.09bn in 2018 to $211.66bn in 2020.

Award *1 mark* for an answer that shows limited understanding.

Award *2 marks* for an answer that shows some understanding, although there is limited use of the data in the table.

Award *3 marks* for an answer that shows good understanding, with effective use of the data in the table.

[Paper 1 Exam Practice Question 16.10]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: the Better Life Index (BLI) and the Happy Planet Index (HPI).

- Explanation: of these indices as alternative measures of well-being other than relying or using GDP statistics. Explanation of the OECD's Better Life Index (BLI) – although candidates are not expected to explain all (eleven) components of the index. Explanation of the Happy Planet Index (HPI), with reference to well-being, life expectancy, inequality of outcomes, and ecological footprint. The explanation should also make clear distinctions between the two indices.

- Diagram: not needed for this question.

Chapter 17 – Variations in economic activity: aggregate demand and aggregate supply

[Paper 2 and 3 Exam Practice Question 17.1]

Accept an explanation of any two non-price factors that can cause a shift in the SRAS curve, such as:

- Changes in costs of factors of production, such as changes in wage rates, rents and subsidies for firms in certain industries.
- Changes in business tax rates and/or indirect taxes.
- Accept explanations about supply-side shocks, such as war, devastating natural disasters and/or the outbreak of infectious diseases.

Award *1 mark* for each relevant factor and up to *1 mark* for each of the explanations, up to the maximum of *4 marks*.

[Paper 2 Exam Practice Question 17.2]
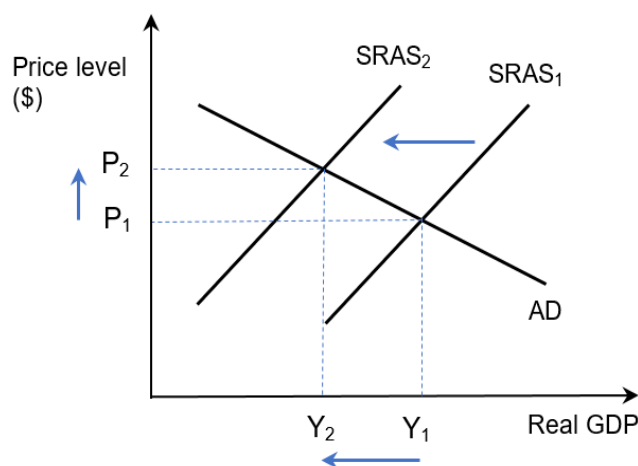
An explanation that an increase in business taxes will increase costs of production, so will shift the SRAS curve to the left, causing some inflation (an increase in the general price level from P_1 to P_2) and a reduction in the national output level from Y_1 to Y_2.

Award *1–2 marks* for an answer that shows a correct diagram OR an accurate written response.

Award *3–4 marks* for an answer that shows a correct diagram AND an accurate written response that explains the impact of an increase in business taxes on an economy's short run aggregate supply (SRAS).

[Paper 2 Exam Practice Question 17.3]

a) Aggregate demand is the sum of consumption expenditure (C), investment (I), government spending (G) and net exports (X – M). Hence, the increase in net exports (X – M) will shift an economy's aggregate demand curve rightward, ceteris paribus. Although this increases national output, from Y1 to Y2, the impact on the general price level is dependent on the slope of the aggregate supply curve. In this particular case, the increase in AD causes the general price level to rise from P_1 to P_2.

Award *1–2 marks* for an answer that shows a correct diagram OR an accurate written response.

Award *3–4 marks* for an answer that shows a correct diagram AND an accurate written response that explains the impact of an increase in net exports.

b) A major global financial crisis will mean a significant fall in the prices of stocks and share as well as a decline in the level of business confidence. This will have a negative impact on investment spending (I). At the same time, the fall in consumer confidence due to the global financial crisis will hinder consumption expenditure (C). Hence, the net effect is a shift of the AD curve to the left. Subsequently, both national output and the general price level are likely to fall.
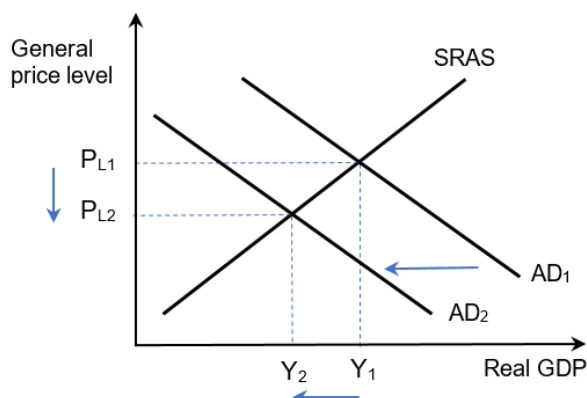
[Paper 3 Exam Practice Question 17.4 – HL only]

    a)

- Net exports = X – M = $6bn – $10bn
- = –$4bn

  b)

- Equilibrium national output occurs when AD = AS
- Recall AD = C + I + G + (X – M)
- Hence, equilibrium will occur at $41 billion because AD = AS = 24 + 8 + 9 + 8 – 8 = $41bn.

Price index	C	I	G	X	M	AD	AS
128.0	20	4	5	6	10	25	53
124.0	22	6	7	7	9	33	47
120.0	24	8	9	8	8	**41**	**41**
116.0	26	10	11	9	7	49	35

  c)

- At price index of 116, aggregate demand = 26 + 10 + 11 + 9 – 7 = $49bn
- Hence, when the price index = **116.0**, the value of AD = $49bn.

  d)

- At AD = $33bn, the price index is 124.0
- The table shows that when the price index = 124.0, the value of I = **$6bn**

[Paper 2 Exam Practice Question 17.5]

The situation can be depicted on an AD–AS diagram by a leftward shift of the aggregate demand curve (due to lower consumption, government spending, investments and/or net exports) or the aggregate supply curve (due to the fall in the ability and willingness of firms to supply output during a recession). In general, the recession causes both the level of national output and the general price level to decline.

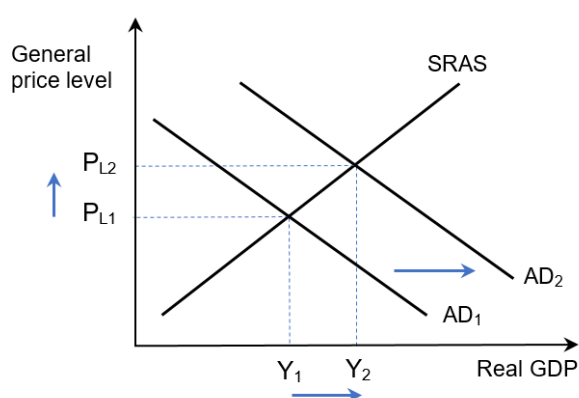Award *1–2 marks* for an answer that shows a correct diagram OR an accurate written response.

Award up to *2 marks* for drawing a correctly labelled AD–AS diagram. Most answers are likely to feature a shift in the AD curve to the left, although accept diagrams that show a leftwards shift of the AS curve.

Award *3–4 marks* for an answer that shows a correct diagram AND an accurate written response, i.e. an explanation of the change in the short run equilibrium position of the economy, with an explanation of the decline in real GDP and a decline in the general price level.

[Paper 2 Exam Practice Question 17.6]

It is likely that both aggregate demand and aggregate supply increase. The cut in income tax boosts consumption due to an increase in household disposable income, ceteris paribus. Hence, national output will increase. In addition, the cut on corporation tax will tend to increase profits of firms and hence their ability to increase productive capacity. Depending on the relative size of the shift in SRAS and AD, the price level may increase or decrease.

Award *1–2 marks* for an answer that shows a correct diagram OR an accurate written response.

Award *3–4 marks* for an answer that shows a correct diagram AND an accurate written response, explaining the change in the short run equilibrium position of the economy, i.e. an increase in real GDP as well as the impact on the general price level. The scale of these changes will depend on how 'temporary' the tax cuts are applied.

Chapter 18 – Macroeconomic objectives – economic growth

[Paper 2 and 3 Exam Practice Question 18.1]

a)

Year	Nominal national output ($bn)	Nominal ΔGDP ($bn)
2014	186.20	
2015	193.24	7.04
2016	205.28	12.04
2017	223.78	18.5
2018	245.21	**21.43**

Vietnam's nominal GDP increased the most in 2018 when it grew from $223.78bn in the previous year to $245.21bn, a gain of $21.43bn.

Award *1 mark* for showing the correct methodology/working out.

Award *1 mark* for the correct answer, i.e. 2018.

b) Annual rate of growth = Nominal GDP in a year – Nominal GDP of previous year × 100
   Nominal GDP of previous year

In this case, Vietnam experienced its highest growth rate in **2018** when its GDP increased from $223.78 billion in the previous year to $245.21 billion, i.e. a gain of 9.58%.

Year	Nominal national output ($ billion)	Growth rate (%) (%Δ GDP)
2014	186.20	
2015	193.24	3.78
2016	205.28	6.23
2017	223.78	9.01
2018	245.21	**9.58**

Award *1 mark* for showing the correct methodology/working out. Award *1 mark* for the correct answer, i.e. 2018.

[Paper 2 and 3 Exam Practice Question 18.2]

a) GDP per capita is calculated by dividing the nominal GDP of a country by the size of its population.

Country	Nominal GDP $bn (2020)	Population, million (2020)	Nominal GDP per capita ($)
USA	20,544	327.0	62,825.69
China	13,608	1,400.0	9,720.00
Japan	4,971	126.0	39,452.38
UK	2,855	66.19	43,133.40

- The USA has the highest nominal GDP per capita of $62,825.69
- China has the lowest nominal GDP per capita, valued at $9,720.00

Award *1 mark* for each correct answer, up to *2 marks.*

Award *1 mark* for showing the correct working out.

b) Nominal GDP per capita is a better indicator of standards of living than just referring to nominal income in absolute terms. When looking at the absolute value of nominal GDP, China is the second-largest economy, with a nominal GDP of $13.608 trillion. However, when dividing this amount by the population size, it becomes apparent that GDP per capita is significantly lower than in the other three countries.

Based on their income alone, the average person in China has the lowest living standard of the four countries because the average person in China earns less than the average person in the UK, Japan and the USA. Ceteris paribus, the average Chinese person earning $9,720 per annum cannot access as many goods and services to meet their needs and wants as the average person in the USA who earns around $62,825.69 per year.

Award *1–2 marks* for an answer that shows some understanding of the demands of the question, although there is limited application of the data.

Award *3–4 marks* for an answer that shows a good understanding of the demands of the question, with appropriate use of the data.

[Paper 2 Exam Practice Question 18.3]

a) Economic growth is defined as the increase in the level of national output or a country's production capacity, as measured by the annual percentage change in real gross domestic product (GDP).

Award *1 mark* for a vague definition that shows some understanding of the term economic growth.

Award *2 marks* for an accurate definition of economic growth, similar to the example above.

b) The huge amount of investment taking place in Macau can help to boost its economic growth because:

• Investing huge amounts of money in the country's infrastructure and facilities helps to attract a wider range of tourists, thus boosting its export earnings from foreign visitors.

• Foreign direct investment, such as the construction of casinos, helps to create jobs, consumer spending and hence economic growth in Macau.

• Investment itself is a component of aggregate demand, so an increase in investment will tend to increase the level of GDP and hence economic growth.

• Investment can help to increase the economy's productive capacity (an outwards shift of its PPC). This also helps to improve the economy's productivity and competitiveness, thereby increasing Macau's long-term economic growth.

• However, this all assumes the ceteris paribus condition holds, as no amount of investment expenditure can guarantee economic growth. The outbreak of infectious diseases such as the coronavirus harmed the economy due to the significant fall in tourist visitor numbers and therefore tourism spending and gambling proceeds on the island.

Award *1–2 marks* for a limited answer that shows some understanding. Application is likely to be missing.

Award *3–4 marks* for a clear answer that explains how investment expenditure in Macau helps to boost its economic growth.

Note: Alternative approaches may be taken in response to the 4-mark question that uses an AO2 command term. If an alternative approach is valid, then full credit should be given.

Chapter 19 – Macroeconomic objectives – low unemployment

[Paper 2 and 3 Exam Practice Question 19.1]

- First, calculate the size of the labour force:
    - Employed population = 74.8% of 100 million = 74.8m
    - Unemployed population = 15m
    - Labour force = 74.8m + 15m = 89.8m
- Then, use this figure to calculate the unemployment rate:
    - 15m ÷ 89.8m = **16.7%**

Award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

[Paper 3 Exam Practice Question 19.2 – HL only]

The labour market is in equilibrium at a real wage rate of W_1 and N_1 workers employed. However, at the higher real wage rate of W_2 the aggregate supply of labour (N_3) exceeds the demand for labour (N_2). Hence, there is real wage (or classical) unemployment caused by the real wage rate being higher than the equilibrium wage rate.

Award *1–2 marks* for an answer that shows a correct diagram OR an accurate written response.

Award *3–4 marks* for an answer that shows a correct diagram AND an accurate written response.

[Paper 2 and 3 Exam Practice Question 19.3]

a) Possible reasons include an explanation of:
- Time lags in collecting unemployment data.
- The data collected are only estimates and not exact – Pakistan is one of the world's most populated countries with around 212 million people.
- Unreported or illegal employment activities in the economy.
- Different interpretations of the meaning of 'unemployment', and therefore how it is measured. For example, are part-time workers unemployed? Does this depend on how 'part-time' they are? What is classed as the 'working age' in different countries? The ILO has four different ways to calculate the unemployment rate.
- *Accept any other relevant reason that is clearly explained.*

Mark as a 2 + 2.

Award *1–2 marks* for a written response that shows limited understanding of the demands of the question. Award up to *2 marks* if only one reason is explained.

Award *3–4 marks* for a written response that is accurate in addressing the demands of the question, with two well-explained reasons why it might be difficult accurately determine a country's unemployment rate.

Alternative approaches may be taken in response to the 4-mark question that uses an AO2 command term. If an alternative approach is valid, then full credit should be given.

b) Consequences of low unemployment for the Pakistani economy may include:
- Higher rates of economic growth as the employed have greater consumer spending power, thus boosting aggregate demand in the economy.
- Improved standards of living in the economy as more households are able to meet their needs and wants.
- Increased pressure on the general price level, i.e. inflationary pressures are likely to mount due to the higher levels of consumption expenditure as more people are in employment.
- Wages are likely to rise in response to the higher levels of derived demand for labour. A shortage of available labour will also tend to raise the average wage rate.
- *Accept any other reasonable consequence that is clearly explained.*

Award *1–2 marks* for a written response that shows limited understanding of the demands of the question. Award up to *2 marks* if only one reason is explained.

Award *3–4 marks* for a written response that is accurate in addressing the demands of the question, with two well-explained consequences of low unemployment for the Pakistani economy.

Alternative approaches may be taken in response to the 4-mark question that uses an AO2 command term. If an alternative approach is valid, then full credit should be given.

Chapter 20 – Macroeconomic objectives – low and stable rate of inflation

[Paper 2 and 3 Exam Practice Question 20.1]

a)

Year	Inflation rate (%) A	Wage increase (%) B	Real wage increase (%) = B – A
1	2.5	3.0	+0.5
2	3.1	3.5	+0.4
3	2.9	3.1	+0.2

The largest increase in real wages occurred in Year 1 when workers received a 3% pay rise whilst inflation was 2.5%, i.e. the average worker enjoyed a 0.5% real wage rise. Workers received a higher 3.1% nominal pay rise in Year 3, but this is actually worth less (due to the higher rate of inflation at 2.9%) than in Year 1 (when inflation was only 2.5%).

Award *1 mark* for identifying the correct year, i.e. Year 1.

Award a further *1 mark* for a written explanation that is limited.

Award a further *2 marks* for a written explanation that is accurate, similar to the above example.

b) Despite the wage increase being higher in Year 2 (at 3.5%) than in Year 3 (3.1%), the average wage rate still increased, but by a smaller amount. This is true even in real terms, with real wages increasing by 0.4% in Year 2 but increasing by another 0.2% in Year 3, i.e. average wages have increased, albeit by a smaller amount than in the two previous years.

Award *1 mark* for a written response that is limited.

Award *2 marks* for a written response that shows some understanding with the use of the data.

Award *3 marks* for a written response that is accurate and uses the data, similar to the example above.

[Paper 2 and 3 Exam Practice Question 20.2]

a) The inflation rate is an indicator of the cost of living in an economy, as measured by the consumer price index. For example, an inflation rate of 2.5% means that the cost of living for the average household increased by that amount within the past twelve months.

Award *1 mark* for a vague definition that shows some understanding of the term inflation.

Award *2 marks* for an accurate definition of inflation, similar to the example above.

b) Although the rate of inflation was highest in the first year (2.5%) and lowest in the second year (1.7%), prices were highest in the third year as there has been inflation throughout the period. Although the rate of inflation fell in the second year (disinflation), this only means that prices in general rose at a slower pace but prices were still higher on average.

Award *1 mark* for a limited response that shows some understanding of the demands of the question.

Award *2 marks* for an accurate response that shows good understanding of the demands of the question, similar to the example above.

[Paper 3 Exam Practice Question 20.3 – HL only]

Item	Price index	Statistical weight	Weighted index
Food and drink	120	10	12
Transportation	130	20	26
Leisure and entertainment	140	30	42
Housing	150	40	60
Consumer price index			**140.0**

Note that the non-weighted average price index = 135.0 but the weighted index accounts for the relatively higher costs of leisure/entertainment and housing.

Award up to *2 marks* for the correct methodology and working out, and a further *1 mark* for the correct answer for the weighted price index.

[Paper 2 and 3 Exam Practice Question 20.4]

The rate of inflation = 129.15/123 × 100 = 105 (or 129.15 – 123/123) = **5.0%**

Award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

[Paper 2 and 3 Exam Practice Question 20.5]

The CPI = 130 × 1.03 = **133.9**

Award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

[Paper 2 and 3 Exam Practice Question 20.6]

The inflation rate = (135 – 125) / 125 = 8%

Hence, the price of the basket = 1,200 × 1.08 = **$1,296**

Award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

[Paper 2 and 3 Exam Practice Question 20.7]

a) A consumer prices index (CPI) is used to calculate the rate of inflation by using a representative basket of goods and services purchased by a typical household in the country, per period of time.

Award *1 mark* for a vague definition that shows some understanding of the term consumer prices index (CPI).

Award *2 marks* for an accurate definition of (CPI), similar to the example above.

b) The statistical weights for housing and food in Jukeland are 30 and 20, respectively. This means the average household spends 30% of their income on housing costs, and 20% on food. However, they only typically spend 10% of their income on clothing. Hence, the typical household in Jukeland spends more money on housing than on food or clothing.

Award *1 mark* for a written response that is limited.

Award *2 marks* for a written response that is accurate, similar to the example above.

c)

Item	Price index	Weight	Weighted index
Clothing	110	10	110 × 0.1 = 11
Food	120	20	120 × 0.2 = 24
Housing	130	30	130 × 0.3 = 39
Others	140	40	140 × 0.4 = 56
Weighted RPI		100	**130.0**

Deduct *1 mark* for each error but apply the *own figure rule* (error carried forward), as appropriate.

[Paper 1 Exam Practice Question 20.8]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definition: cost-push and demand-pull inflation.

- Explanation: of cost-push inflation being caused by prices being forced (pushed) up due to escalating production costs. For example, higher prices of imported raw materials and components will result in higher costs of production for domestic producers. Explanation of demand-pull inflation being caused by prices being higher due to excess demand for goods and services. For example, lower interest rates and/or lower tax rates increase household incomes, which will tend to increase consumption expenditure in the economy.

- Diagrams: AD–AS diagrams showing the differences between cost-push and demand-pull inflation.

[Paper 1 Exam Practice Question 20.9]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definition: deflationary gap and deflation.

- Explanation: of deflation referring to a fall in the general price level (a negative rate of inflation), with examples of how this might come about. Explanation of a deflationary gap referring to the economy operating below its full capacity so there is low or negative economic growth. This does not necessarily mean deflation because even in a recession with falling national output, there can still be a very low rate of inflation.

- Diagrams: AD–AS diagrams showing the differences between deflationary gap and deflation.

[Paper 2 Exam Practice Question 20.10]

a) Deflation is the sustained fall in the general price level in an economy over time, i.e. the inflation rate is negative.

Award *1 mark* for a vague definition that shows some understanding of the term deflation.

Award *2 marks* for an accurate definition of deflation, similar to the example above.

b) The graph suggests that Japan has suffered deflation for most of the past 20 years, i.e. all shaded areas below 0% inflation in the graph. For example, Japan suffered deflation between 1999 and early 2004, and again for most parts of 2009–2013.

Award *1 mark* for a written explanation that is limited.

Award *2 marks* for a written explanation that is accurate, similar to the example above.

c) The impacts of prolonged deflation for the Japanese economy could include:

- The main cause of prolonged deflation is reduced aggregate demand, with consequences such as cyclical unemployment and lower economic growth.

- Lower prices and lower levels of consumption lead to a decline in company profits. This can also lead to bankruptcies and a prolonged economic downturn.

- Similarly, investment expenditure is likely to fall limiting any potential growth in the productive capacity of the Japanese economy.

- Bank lending falls because borrowers would return less in real terms (due to the declining value of money). In addition, interest rates will be low or close to zero (as in the case of Japan) during deflationary periods, which creates further disincentives for banks to lend money.

- *Accept any other impact of prolonged deflation, written in the context of the Japanese economy.*

Award *1–2 marks* for a written response that is limited in meeting the demands of the question.

Award *3–4 marks* for a written response that is accurate in meeting the demands of the question.

Note: Alternative approaches may be taken in response to the 4-mark question that uses an AO2 command term. If an alternative approach is valid, then full credit should be given.

[Paper 2 and 3 Exam Practice Question 20.11]

There has been deflation, as the average level of prices has fallen by (147 – 151)/151 = 2.65%. Disinflation would mean that the average price level has risen (albeit at a slower rate).

Award *1 mark* for a written response that is limited.

Award *2 marks* for a written response that is accurate, similar to the example above.

[Paper 1 Exam Practice Question 20.12]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: price stability (low and sustainable rates of inflation) and macroeconomic objective.

- Explanation: of the need to control inflation as a macroeconomic objective, i.e. if not controlled, inflation can result in major economic problems for a country, such as:

  - Inflation causes an undesirable effect on purchasing power due to the fall in the real value of money.

  - Inflation also has a negative impact on savings, which therefore causes a fall in the funds available for investment expenditure.

  - Higher prices will tend to reduce the international competitiveness of the country, which can lead to negative growth and job losses.

- Diagram: AD–AS diagram to show cost-push and/or demand-pull inflation.

Chapter 21 – Macroeconomic objectives – sustainable level of government (national) debt (HL only)

[Paper 1 Exam Practice Question 21.1]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: budget deficit and government debt.

- Explanation: of a budget deficit occurring when the government's annual expenditure exceeds its tax revenues and other sources of public sector proceeds. Explanation of government debt being the sum of budget deficits in previous years, for which debt interest is applied. Hence, government debt is the aggregate value of budget deficits accumulated over time. Whilst budget deficits might be affordable and perhaps necessary in the short run, they may not be sustainable in the long run. After all, government debts (or national debts) must be managed in an affordable and sustainable way, and must eventually be repaid.

- Diagram: not needed for this question, although some students may choose to use an AD–AS diagram to show a deflationary gap, suggesting a budget deficit as government spending may exceed tax revenues during such times.

[Paper 1 Exam Practice Question 21.2]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: budget deficit and government debt

- Explanation: of a budget deficit meaning the government spends more than the government's revenue. Explanation that government debt is the sum of money owed by the central government of the country to lending institutions or countries. Explanation that government debt is the total value of budget deficits accrued over time, and an explanation of how the level of government debt is determined by past years' budget balances. Essentially, a budget deficit will increase the value of national debt, ceteris paribus. Whilst budget deficits might be affordable and perhaps necessary in the short run, they may not be sustainable in the long run. After all, government debts (or national debts) must be managed in an affordable and sustainable way, and must eventually be repaid.

- Diagram: not needed for this question, although some students may choose to use an AD–AS diagram to show a deflationary gap, suggesting a budget deficit as government spending may exceed tax revenues during such times.

Chapter 22 – Macroeconomic objectives – potential conflict between macroeconomic objectives

[Paper 1 Exam Practice Question 22.1]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: trade-off, economic growth, and inflation.

- Explanation: of the ways in which high economic growth can be achieved, such as expansionary fiscal policies and/or loose monetary policies used to stimulate aggregate demand. Explanation that such policy measures are likely to cause demand-pull inflation and that therefore the economy is unable to simultaneously achieve both high economic growth and low inflation, at least in the short run. Alternatively, striving to achieve low inflation, perhaps through the use of tight macroeconomic policies, can come at the opportunity cost of lower economic growth.

- Diagram: AD–AS diagram(s) to show the potential conflict between policies used to achieve high rates of economic growth at the opportunity cost of higher inflation.

[Paper 1 Exam Practice Question 22.2 – HL only]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: inflation, unemployment, and short run.

- Explanation: of the ways in which low inflation can be achieved (such as contractionary fiscal policies and/or tight monetary policies) as well as the opportunity costs of this. Explanation that low unemployment may not be achieved in the short run if there is low inflation due to the contractionary macroeconomic policies used to lower the rate of inflation in the economy. Alternatively, striving to achieve low unemployment (perhaps through the use of expansionary macroeconomic policies) can come at the opportunity cost of lower inflation.

- Diagram: AD–AS diagram(s) to show the potential conflict between policies used to achieve low inflation at the opportunity cost of higher unemployment. Alternatively, students could use the short-run Philips Curve to demonstrate the potential conflict between low inflation and low unemployment.

Chapter 23 – Economics of inequality and poverty

[Paper 1 Exam Practice Question 23.1]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: Lorenz curve, the Gini coefficient, and income inequality.

- Explanation: of relative income shares in a country being tabulated in the form of five quintiles (or cumulative percentages). Explanation of the distribution of income in the economy being shown by the cumulative percentages (or share of national income) against the total population of the economy (arranged in quintiles). Explanation that the line of perfect equality is shown by a 45-degree line, representing that each quintal or cumulative percentage of the population earns the same income. Explanation that the Gini coefficient can have a value between 0 (which represents the highest income equality) and 1 (which represents the highest income inequality). Explanation that the Lorenz curve is used to measure the Gini coefficient, which is the ratio of the area above the Lorenz curve and below the line of equality.

- Diagram: Lorenz curve showing a 45-degree line, indicating perfect income equality and a curved line showing the cumulative percentage of income earned by the cumulative percentage of the population of a country (such as representing the richest 20% and poorest 20% and their share of incomes, along with other quintiles).

[Paper 1 Exam Practice Question 23.2]

Use the assessment criteria on page 2. Award up to the maximum marks as indicated. Answers may include:

- Definitions: inequality and poverty.

- Explanation: of methods that can be used to address inequality and poverty, such as transfer payments, offering direct provision of merit goods, subsidizing goods that are under-consumed and under-provided, using different market intervention initiatives (such as a price floor, price ceiling and national minimum wage), Universal Basic Income (UBI) and direct and indirect tax policies. Explanation of different direct and indirect taxes, along with the reference of proportional, progressive and regressive taxation policies.

- Diagram: A Lorenz curve showing income inequality of a country, or an outward shift of the Production Possibility Curve (PPC) to show economic development due to improved equality, or a shift in the AD and LRAS curves to show the achievement of higher real incomes due to less poverty in the economy.

- Synthesis (evaluate): strengths and limitations of using different government taxation and welfare benefits policies to address income distribution/income

inequalities and poverty. Consideration of short-run demand-side initiatives versus the long-run supply-side initiatives to address inequalities and poverty. Discussion of the meaning of 'the most effective way of addressing inequality and poverty', and how this might be different for different countries depending on whether it is experiencing a recession or inflation. Similarly, there could be evaluation of how government initiatives are different for ELDCs and MEDCs.

- Examples: real-world examples of country-specific government tax and welfare benefit policies, such as the various responses during the Covid-19 pandemic. Real-world examples of various government responses in tackling the issues of poverty and inequalities in their respective countries.

Note: It should be noted that definitions, theory and examples that have already been given in part (a), and then referred to in part (b), should be rewarded.

[Paper 3 Exam Practice Question 23.3 – HL only]

a) Tax B is progressive as the tax rate paid per year increases with an increase in income (10% tax on $10,000 compared to 18% tax on $25,000).

Award *1 mark* for the correct answer. There is no need to include an explanation – the above is included for reference only.

b) Tax C is proportional as the tax paid per year increases by the same rate as income increases (10% charged on all income levels).

Award *1 mark* for the correct answer. There is no need to include an explanation – the above is included for reference only.

c) Under a system of regressive taxes, those with a higher ability to pay are charged a lower rate of tax. By contrast, under a system of proportional taxes, the percentage of tax paid stays the same, irrespective of the taxpayer's level of income, wealth, or profits.

Award *1 mark* for a limited response that shows some understanding.

Award *2 marks* for a clear distinction, demonstrating a good understanding of the difference between a regressive and proportional tax, similar to the example above.

[Paper 3 Exam Practice Question 23.4 – HL only]

The country uses a proportional system of income tax as $5,500 is 10% of $55,000 and $1,500 is also 10% of $15,000, i.e. the country uses a flat rate tax of 10% on people's incomes.

Award *1 mark* for the correct answer, and *1 mark* for the explanation with reference to numerical information.

[Paper 3 Exam Practice Question 23.5 – HL only]

a)

Income level ($)	Tax rate (%)	Amount of tax paid ($)
Up to 10,000	0	First $10,000 is tax free = **$0**
10,001–40,000	10	Next $30,000 is taxed at 10% = **$3,000**
40,001 and above	15	Remaining $35,000 is taxed at 15% = **$5,250**
Total tax paid:		**$8,250**

Award *1 mark* each for the correct calculation of the amount of tax paid at each income level, up to the maximum of *3 marks*, plus *1 mark* for the correct calculation of total tax paid. Apply the own-figure rule (error carried forward) as appropriate.

b)   The average tax rate is calculated by the formula:
   - Average tax rate = (Total amount of tax paid/Total earnings) × 100
   - Average tax rate = ($8,250 ÷ $75,000) × 100 = 11%

Award *1 mark* for the correct answer and *1 mark* for showing appropriate working out.

[Paper 3 Exam Practice Question 23.6 – HL only]

a) The marginal rate of tax = 20% as this is the rate paid on the last dollar earned from the $40,000.

Award *1 mark* for the correct answer.

b) The total amount of tax paid on total income of $40,000 by an individual is shown in the table below.

Income tier	Tax rate (%)	Taxable income ($)	Amount of tax paid ($)
First $10,000	0	10,000	0
Next $20,000	10	20,000	2,000
Next $20,000	20	10,000	2,000
Thereafter	30		
Total tax paid			4,000

This consists of:

- $0 paid on the first $10,000 (the personal tax allowance or non-taxable income)
- $2,000 paid on the next $20,000 at 10%
- $2,000 paid on the final $10,000 at 20%
- Total tax = $4,000

Award *1 mark* for the correct answer and *1 mark* for the correct working out shown.

c) The average tax rate is calculated by the formula:

Average tax rate = (Total amount of tax paid/Total income) × 100

= (4,000/40,000) × 100

= 10%

Award *1 mark* for the correct answer and *1 mark* for the correct working out shown. Apply the own-figure rule (from Question 23.6b) where appropriate.

d) The average rate of tax for the individual earning $80,000 is shown in the table below:

Income tier	Tax rate (%)	Taxable income ($)	Amount of tax paid ($)
First $10,000	0	10,000	0
Next $20,000	10	20,000	2,000
Next $20,000	20	20,000	4,000
Thereafter	30	30,000	9,000
Total tax paid			15,000

It is calculated as follows:

- $10,000 at 0% = $0
- $20,000 at 10% = $2,000
- $20,000 at 20% = $4,000
- $30,000 at 30% = $9,000
- Total tax paid = $15,000
- Hence, the average tax rate = ($15,000 ÷ $80,000) × 100 = 18.75%

Note: despite this individual earning twice as much as the first individual, the progressive tax system ensures a higher average rate of tax is paid by those earning higher incomes.

Award *1 mark* for the correct answer (the average tax rate), and an additional *2 marks* for showing accurate and appropriate working out.

[Paper 3 Exam Practice Question 23.7 – HL only]

Taxable income = $50,000 – $15,000 = $35,000

Tax paid = $35,000 at 20% = $7,000

Hence, the average rate of tax paid = $7,000 ÷ $50,000 = 14%

Award *1 mark* for the correct answer and *1 mark* for the correct working out shown.

[Paper 3 Exam Practice Question 23.8]

The extra amount of tax paid = ($55,000 – $47,000) × 0.45 = $3,600

Award *1 mark* for the correct answer and *1 mark* for the correct working out shown.

[Paper 3 Exam Practice Question 23.9 – HL only]

Total income of $35,000 is charged at the following marginal rates of tax:

- $9,000 at 0% = $0
- Next $11,000 at 10% = $1,100
- Next $10,000 at 20% = $2,000
- Remaining $5,000 at 30% = $1,500
- Hence, the tax paid on a total income of $35,000 = **$4,600**

Award *1 mark* for the correct answer (the average tax rate), and an additional *2 marks* for showing accurate and appropriate working out. Apply the own-figure rule where appropriate.

Chapter 24 – Demand management (demand-side policies) – monetary policy

[Paper 2 and Paper 3 Exam Practice Question 24.1]

Year	Consumer price index (CPI)	Inflation rate (%)	Nominal interest rate (%)	Real interest rate (%)
2017	100		5.0	
2018	110	(110 – 100)/100 = 10.00	5.5	**–4.50**
2019	120	(120 – 110)/110 = 9.09	5.0	**4.91**
2020	115	(115 – 120)/120 = –4.17	4.5	**8.67**

Award *1 mark* for each correct answer, up to the maximum of *3 marks*. Apply the own figure rule (error carried forward) where appropriate.

[Paper 3 Exam Practice Question 24.2 – HL only]

The contrasting use of interest rate policies in Spain and Argentina is likely to be linked to the respective economic conditions in these countries. For example, Spain's continual decline in interest rates to a ZIRP (zero interest rate policy) suggests the economy has been contracting – in fact, Spain struggled for a decade to recover from the global financial crisis of 2008.

By contrast, the Argentinian economy is likely to have suffered from high rates of inflation, so the use of higher interest rates (of over 80%) has been used to tackle such problems – in fact, Argentina has experienced double-digit inflation rates for many consecutive years.

Award *1–2 marks* for an answer that shows limited understanding of the use of interest rate policies to tackle economic issues. There is limited, if any, reference to the charts.

Award *3–4 marks* for an answer that shows good understanding of the use of interest rate policies to tackle economic issues, such as recession or inflation. There is effective use of the given charts.

[Paper 2 and 3 Exam Practice Question 24.3]
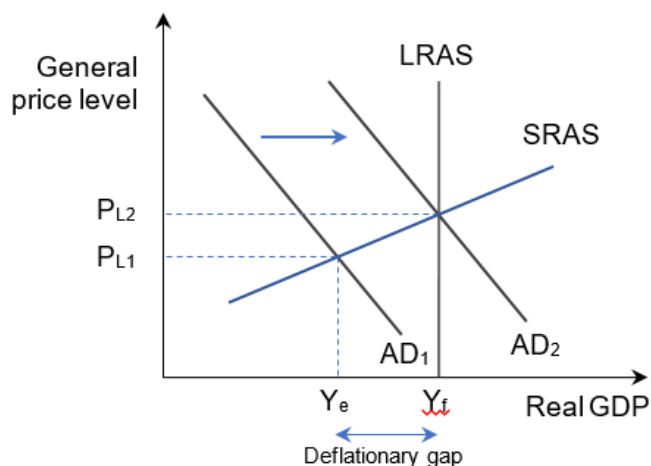
An expansionary monetary policy (by reducing interest rates) helps to increase the level of aggregate demand in the economy from AD_1 to AD_2, ceteris paribus. In theory, this increases real national income from Y_e to Y_f, thereby removing the recessionary gap, i.e. the difference between equilibrium national output (Y_e) and the national output at full employment (Y_f), with the general price level increasing from P_{L1} to P_{L2}.

Award *1–2 marks* for an answer that shows a correct diagram OR an accurate written response.

Award *3–4 marks* for an answer that shows a correct diagram AND an accurate written response, similar to the example above.

[Paper 2 and 3 Exam Practice Question 24.4]
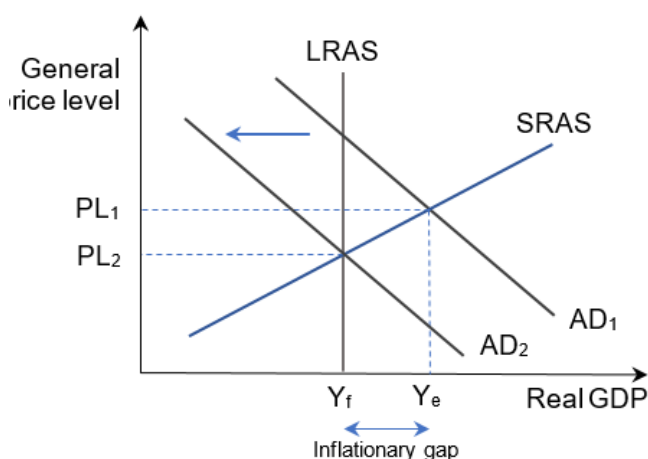
A contractionary monetary policy (by raising interest rates) shifts the aggregate demand curve leftwards from AD_1 to AD_2, ceteris paribus. In theory, this reduces real national income (real GDP) from Y_e to Y_f, thereby eliminating the inflationary gap. This means that actual real national output is brought in line with the long-run aggregate supply (potential output) at Yf, with the general price level returning from P_{L1} to P_{L2}.

Award *1–2 marks* for an answer that shows a correct diagram OR an accurate written response.

Award *3–4 marks* for an answer that shows a correct diagram AND an accurate written response, similar to the example above.

[Paper 1 Exam Practice Question 24.5]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: monetary policy and economic activity.

- Explanation: that increasing interest rates, as part of tight monetary policy, can be used to contract economic activity if there are inflationary pressures (vice versa). Explanation that currency appreciation can deflate the economy during times of rapid economic boom and overspending on exports (vice versa). Explanation that increasing the money supply during times of economic downturn can help to improve liquidity in the economy (although this may have inflationary effects). Explanation that lower interest rates also tend to lead to a lower exchange rate, thus causing an increase in the demand for the country's exports. Explanation that monetary policy is used to control inflation in order to achieve macroeconomic objectives. For example, reducing interest rates to stimulate economic activity means that:

    o Households and firms with outstanding mortgages have lower interest payments to make, thus have more disposable income to spend, i.e. consumption increases.

    o Savers have less of an incentive to deposit their money in banks, so are more likely to spend their money. This raises the level of aggregate demand in the economy, ceteris paribus.

- Diagram: appropriate use of an AD–AS diagram(s) to show the effects of the above explanations.

[Paper 1 Exam Practice Question 24.6]

Use the assessment criteria on page 2. Award up to the maximum marks as indicated. Answers may include:

- Definitions: monetary policy and macroeconomic objectives.

- Explanation: of the use of monetary policy to achieve economic growth, low unemployment, as well as low and stable inflation. Explanation that interest rates can be used to influence the level of consumption, investment, government expenditure (and government debt), and net exports. Explanation that time lags between changes in the interest rate and money supply and their impacts on the economy can be destabilising. Explanation that restricting monetary growth by increasing bank reserve requirements can cause government (rather than market) failure, thereby causing banks to become less efficient and less productive. Explanation that inflationary pressures can cause a price-wage spiral in the labour market, thereby limiting the effectiveness of any tight/contractionary monetary policy.

- Diagram: AD–AS diagram(s) to show the economic impacts of changes in interest rates in the economy.

- Synthesis (evaluate): strengths and limitations of using monetary policies to achieve macroeconomic objectives. Consideration of the limited success in affecting aggregate demand if the economy is in an economic depression and/or if consumer and business confidence levels are low. Consideration of potential conflict between macroeconomic objectives, such as lowering interest to stimulate the economy which could fuel inflation in the economy. Acknowledgement that aggregate demand (and consumption and investment expenditure in particular) are not totally and solely dependent on interest rates.

- Examples: real-world examples of countries that have experienced success and/or challenges in using monetary policies to influence the level of economic activity, such as during the global financial crisis of 2008 and/or the global coronavirus pandemic of 2019/2020.

Note: It should be noted that definitions, theory and examples that have already been given in part (a), and then referred to in part (b), should be rewarded.

Chapter 25 – Demand management – fiscal policy

[Paper 1 Exam Practice Question 25.1]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definition: fiscal policy and aggregate demand.

- Explanation: that fiscal policy will directly affect the government spending (G), investment (I) and consumption (C) components of aggregate demand. Depending on the type of fiscal policy used, there can also be a direct impact on exports (X) and imports (M). Explanation that fiscal policy can be used to either boost or reduce aggregate demand, depending on where the economy is at in its business cycle.

- Diagram: appropriate AD–AS diagram(s) to illustrate the impact of expansionary and/or contractionary fiscal policy on the economy, in terms of real national output, employment and the general price level.

[Paper 3 Exam Practice Question 25.2 – HL only]

a) The Keynesian multiplier shows by how much each extra dollar injected into the economy raises aggregate demand. Hence, knowledge of the Keynesian multiplier effect can support government decisions about fiscal policy (the size of any change in government spending and/or taxation policy) given their likely impacts on real national output, average price levels and employment.

Award *1 mark* for a limited response.

Award *2 marks* for a clear explanation of how knowledge of the Keynesian multiplier can support government policies and decisions, similar to the example above.

b) Keynesian multiplier = $1/(1 - MPC) = 1/(1 - 0.75) = 4$

Change in value of real GDP = $9.5bn $\times 1/(1 - 0.75) =$ **$38m**

Award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

c) $\Delta G \times [1/(1 - MPC)] = 15 \times (1 - 0.8) =$ **$3bn**

In other words, an injection of $3bn is sufficient to close the $15bn deflationary gap due to the Keynesian multiplier being 5.0, i.e. $1/(1 - 0.8)$.

Award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

d) $\Delta GDP = \Delta T \times [MPC/(1 - MPC)] = 20 \times (0.75/0.25) = $**$60bn** total withdrawal from the economy due to the negative Keynesian multiplier.

Award *1 mark* for the correct answer, and *1 mark* for showing appropriate working out.

[Paper 3 Exam Practice Question 25.3 – HL only]

Tax system A **Regressive**		Tax system B **Proportional**		Tax system C **Progressive**	
Tax/Income	Tax paid (%)	Tax/Income ($'000)	Tax paid (%)	Tax/Income ($'000)	Tax paid (%)
900/4,500	20	1,500/10,000	15	800/8,000	10
1,800/10,000	18	3,000/20,000	15	3,000/20,000	15
2,800/20,000	14	4,500/30,000	15	11,250/45,000	25

Award *1 mark* for each correct answer, and *1 mark* for showing sufficient and appropriate working out.

[Paper 1 Exam Practice Question 25.4]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definition: expansionary fiscal policy and aggregate supply.

- Explanation: of the various sections of the SRAS curve, i.e. perfectly price elastic, upwards sloping and perfectly price inelastic sections of the SRAS curve. Explanation of the impact of these different sections on the level of real GDP and the general price level. Explanation that fiscal measures used to increase aggregate (from AD_1 to AD_2 in the diagram below) have no impact on the general level of prices if the economy has spare capacity and unemployed resources, i.e. it is operating along the horizontal section of its AS curve. Explanation that fiscal measures to increase aggregate from AD_2 to AD_3 or AD_4 (in the diagram below) will increase both the real national output and the general price level as the economy operates along the upwards sloping section of its SRAS curve. As this causes some inflation (from P_{L1} to P_{L3} or from P_{L3} to P_{L4}), it reduces the effectiveness of expansionary fiscal policy to some extent. Explanation that fiscal stimulus that expands aggregate demand beyond the productive capacity level of the economy (full employment or AD_4 in the diagram below) is simply inflationary and ineffective in increasing national output beyond Y_f.

- Diagram: appropriately drawn and correctly labelled AD–AS diagram with explanations of the various sections of an SRAS curve:
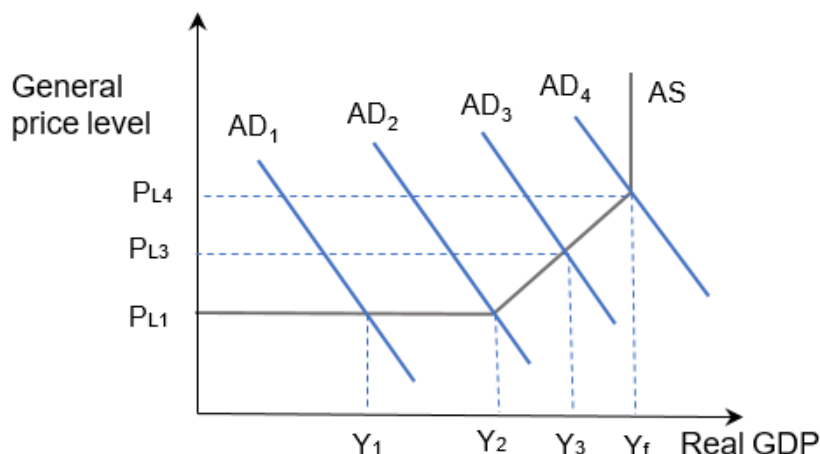

[Paper 1 Exam Practice Question 25.5]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definition: expansionary fiscal policy and budget deficit.

- Explanation: of the sources of government revenue (such as from taxation, public-sector enterprises, and privatization proceeds) and types of government spending (current and capital expenditure). Typically, a budget deficit may occur due to capital expenditure, but not for current expenditure. Explanation that tax cuts, used to stimulate the economy, result in the government receiving less tax revenues, which can lead to a budget deficit. Explanation that increased government spending (on welfare benefits and national defence, for example) depletes the funds in the government's budget, thus risks the budget going into deficit. Explanation that the combination of increased government spending and lower tax revenues will eventually cause a budget deficit for the government, ceteris paribus.

- Diagram: AD–AS diagram to show the impact of expansionary fiscal policy on the economy, despite the potential opportunity cost of experiencing a budget deficit.

[Paper 1 Exam Practice Question 25.6]

Use the assessment criteria on page 2. Award up to the maximum marks as indicated. Answers may include:

- Definition: fiscal policy and economic growth.

- Examination: of how fiscal policy can be used to promote long-term economic growth, including:

  o Income tax cuts lead to higher disposable incomes and hence increased consumption in the economy. The effectiveness will depend on several factors such as the scale and scope of the tax cuts and the size of the workforce.

  o Corporation tax cuts can also help businesses to improve their liquidity position and hence help with job creation in the long term. Lower corporation tax can attract foreign direct investment in the country, thereby improving its potential output and international competitiveness.

  o Increased government spending can stimulate aggregate demand and hence boost economic growth. Again, the scale and scope of the change in government spending will determine the extent to which fiscal policy is effective in achieving long-term economic growth.

- Explanation of how fiscal measures might be (in)effective depending on the phase of the business cycle that the country is currently in. Consideration of the shape of the AS curve and how this might affect the impact of fiscal policy measures to achieve economic growth.

- Diagram: AD–AS diagram to show how fiscal policy can help to achieve economic growth.

- Synthesis (evaluate): strengths and limitations of using fiscal policy to achieve long-term economic growth. Consideration of the limitations of fiscal policy in achieving economic growth. Consideration of how monetary policy might be used to complement fiscal policy as demand-management policy instruments to achieve long-term economic growth. Consideration of how supply-side policies might be more effective in achieving long-term economic growth.

- Examples: real-world examples of the use of fiscal policies and their economic growth, such as the use of fiscal stimulus packages during the global financial crisis of 2008 or the global coronavirus pandemic of 2019/2020.

Chapter 26 – Supply-side policies

[Paper 2 Exam Practice Question 26.1]

Privatization is the sale or transfer of state-owned assets and operations to the private sector. In theory, the private sector is more efficient in running the previously state-owned enterprise because private sector firms have a profit motive. This encourages privatized enterprises to reduce production costs, become more efficient and develop improved goods and services, thereby freeing up privatized industries and improving market incentives. Hence, privatization can increase the productive capacity or potential output of the economy.

Award *1–2 marks* for a limited response that shows some understanding of the demands of the question.

Award *3–4 marks* for a good response that shows a good understanding of the demands of the question. There is effective use of relevant economics terminology throughout the response, similar to the example above.

[Paper 1 Exam Practice Question 26.2]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definition: demand-side policy and supply-side policy.

- Explanation: that lower taxes can increase consumption in the short run as households have a higher amount of disposable income, thereby increasing aggregate demand. Explanation that cuts in taxes can incentivise businesses to invest in the economy as business tax rates fall; this can also attract foreign direct investment (FDI). Hence, in the long run, tax cuts can help to increase an economy's aggregate supply.

- Diagram: AD–AS diagram to show that a cut in taxes will, in theory, boost aggregate demand in the short run. An AD–AS diagram to show a cut in taxes can create incentives to invest in the economy, creating supply-side benefits in the long run.

[Paper 1 Exam Practice Question 26.3]

Use the assessment criteria on page 2. Award up to the maximum marks as indicated. Answers may include:

- Definitions: interventionist supply-side policies, economic growth, unemployment, and inflation.

- Explanation: of interventionist supply-side policies, such as education, training, improving quality, quantity and access to health care, research and development, the provision of infrastructure, and industrial policies. Explanation that interventionist supply-side policies can increase economic growth, lower unemployment, and achieve a sustainable low rate of inflation in the long run. Counter-argument explaining or questioning the limitations of interventionist supply-side policies, especially in the short run when demand-side policies might be more appropriate and more effective.

- Diagram: AD–AS diagram showing the impact of interventionist supply-side policies on the economy, with reference to real national output, the general price level and employment levels.

- Synthesis (evaluate): strengths and limitations of using interventionist supply-side policies to achieve the macroeconomic objectives of economic growth, low unemployment, and stable prices. Consideration of the validity of the assumptions of the effectiveness of interventionist supply-side policies.

- Examples: real-world examples of the use of interventionist supply-side policies and their level of effectiveness in meeting macroeconomic objectives (economic growth, low unemployment, and a stable price level).

Note: It should be noted that definitions, theory and examples that have already been given in part (a), and then referred to in part (b), should be rewarded.

[Paper 1 Exam Practice Question 26.4]

Use the assessment criteria on page 2. Award up to the maximum marks as indicated. Answers may include:

- Definition: market-based supply-side policies and macroeconomic objectives.

- Explanation: of market-based supply-side policies, such as policies to encourage competition (including deregulation, privatization, trade liberalization, and anti-monopoly regulation), labour market policies (such as reducing the power of labour unions, reducing unemployment benefits, and abolishing minimum wages), and incentive-related policies (such as personal income tax cuts and cuts in business tax and capital gains tax). Explanation that market-based supply-side policies can help an economy to achieve its macroeconomic objectives (growth, low unemployment, and a low and sustainable rate of inflation) by creating supply-side impacts on the economy. Counter-argument explaining or questioning the limitations of market-based supply-side policies, and the role of interventionist supply-side policies and/or demand-side policies to help the economy to achieve its macroeconomic objectives.

- Diagram: AD–AS diagram showing the impact of market-based supply-side policies on the economy, with reference to real national output, the general price level and employment levels.

- Synthesis (evaluate): strengths and limitations of using market-based supply-side policies to achieve the macroeconomic objectives of growth, low unemployment, and stable prices. Consideration of the validity of the assumptions of the effectiveness of market-based supply-side policies, such as whether abolishing minimum wages causes more harm than benefits, especially to those earning low incomes.

- Examples: real-world examples of the use of market-based supply-side policies and their level of effectiveness in meeting macroeconomic objectives (economic growth, low unemployment, and a stable price level).

Note: It should be noted that definitions, theory, and examples that have already been given in part (a), and then referred to in part (b), should be rewarded.

Chapter 27 – Benefits of international trade

[Paper 2 Exam Practice Question 27.1]

a) Possible reasons for countries such as Bangladesh and Brunei Darussalam trading with each other include:

- The lack of scarce resources in the domestic country, e.g. Bangladesh does not have sufficient supplies of crude oil and natural gas whereas Brunei Darussalam does not have the arable land needed to grow rice and tropical fruits.

- It is often cheaper to import products than to produce them domestically, e.g. Brunei Darussalam could, in theory, grow its own pineapples and bananas but it would be more economical to purchase these from overseas countries such as Thailand, the Philippines, India and Bangladesh.

- International specialization and trade can benefit consumers as there is more competition, choice, and improved quality of products.

- Employment opportunities can also arise from international trade (due to higher rates of economic growth and development).

- *Accept any other reason that is clearly explained.*

Note: that the real-world examples are included for illustrative purposes only. Students should be rewarded for their own examples, as appropriate.

Award *1 mark* for an answer that shows limited understanding of the demands of the question.

Award *2 marks* for an answer that shows good understanding of any the demands of the question, explaining one reason why countries such as Bangladesh and Brunei Darussalam trade with one another.

b) Possible problems could include:

- With Brunei Darussalam relying on crude oil and natural gas to account for 90% of its GDP, the country could be overspecializing. This makes economic conditions in the country very volatile if the world demand for such resources decreases in the future, perhaps in favour of more environmentally friendly fuel sources.

- The future supply of non-renewable resources such as crude oil and natural gas. The country may struggle to find alternative products that it can export to maintain its standards of living.

- *Accept any other reason that is clearly explained.*

Award *1 mark* for an answer that shows limited understanding of the demands of the question.

Award *2 marks* for an answer that shows good understanding of any the demands of the question, explaining one problem for Brunei Darussalam from (over)relying on oil exports.

   c) Bangladesh's export of rice and tropical fruits helps its farmers to achieve economies of scale because:

- Specialization allows exporters to operate on a large scale, and hence enjoy cost-saving benefits.

- Specialization also helps to improve productivity (which lowers unit production costs) and improve the quality of the output.

- The larger global market also enables Bangladeshi farmers to operate on a larger scale and sell to a much larger market than limiting the goods only to domestic consumers.

Award *1–2 marks* for an answer that shows some understanding of the demands of the question. There is limited use of relevant economic terminology.

Award *3–4 marks* for a detailed answer that clearly shows an understanding of how such specialization helps Bangladeshi farmers to achieve economies of scale. There is effective use of economics terminology throughout the response.

[Paper 3 Exam Practice Question 27.2 – HL only]

   a) With the world price set at $7, the quantity of plum oil export is (550,000 – 150,000) litres = 400,000 litres
     Price of plum oil = $7 per litre
     Hence, total value of exports from Country Z = $7 × 400,000 = **$2,800,000**

Award *1 mark* for the correct answer and *1 mark* for showing accurate working out.

   b) Social surplus is the sum total of consumer surplus and producer surplus
     Consumer surplus = 150,000 × ($10 – $7) × ½ = $225,000
     Producer surplus = 550,000 × ($7 – $2) × ½ = $1,375,000
     Social surplus = $225,000 + $1,375,000 = **$1,600,000**

Award *1 mark* for the correct answer and *1 mark* for showing accurate working out.

c) Domestic demand at $7 = 150,000 litres
Hence, total value of domestic consumption = $7 × 150,000 = **$1,050,000**

Award *1 mark* for the correct answer and *1 mark* for showing accurate working out.

[Paper 3 Exam Practice Question 27.3 – HL only]

a) Country K has an absolute advantage in the production of vegetables.

Award *1 mark* for identifying the correct country.

b) Country K should produce fruits because there is a much greater opportunity cost if it stops production of fruits. Country P only needs to give up 0.5 units of fruits to produce 1 unit of vegetables whereas Country K has to give up more (0.8 units) of fruits to gain the same amount (1 unit) of vegetables.
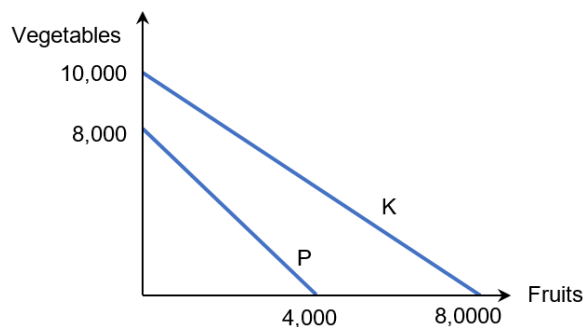
Alternatively, when Country P gives up 1 unit of fruits it can gain 2 units of vegetables. By contrast, Country K gains only 1.25 units of vegetables by giving up (the same) 1 unit of fruits:

	Fruits (units)	Vegetables (units)	Ratio	Opportunity cost ratio
Country K	8,000	0	80 : 100	1 : 1.25
	0	10,000		
Country P	4,000	0	40 : 80	1 : 2
	0	8,000		

Award *1 mark* for the correct answer (Country K) and *1 mark* for the working out or an outline that show why Country K should produce fruits.

c) (8,000/4,000) × 8 = **16 units**

	Fruits (units)	Vegetables (units)	Opportunity cost ratio
Country K	8,000	0	8 : 10
	0	10,000	
Country P	4,000	0	4 : 8 or
	0	8,000	8 : 16

Award *1 mark* for the correct answer and *1 mark* for showing accurate working out.

Chapter 28 – Types of trade protection

[Paper 1 Exam Practice Question 28.1]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: tariff and protectionism.

- Explanation: of the increase in price caused by the introduction of a tariff. This should include reference to the change in consumer surplus, producer surplus, welfare loss and government expenditure. Explanation of foreign producer revenue falling. With reference to the diagram, it is important to explain that domestic consumers pay more for fewer goods and services and existing inefficient domestic producers supply more (or new but inefficient domestic firms are attracted to the market).

- Diagram: Tariff diagram demonstrating changes in efficiency in terms of output and price.

[Paper 1 Exam Practice Question 28.2]

Use the assessment criteria on page 2. Award up to the maximum marks as indicated. Answers may include:

- Definitions: tariff, stakeholders, and protectionism.

- Explanation: of the increase in price caused by the introduction of a tariff. Explanation of the change in consumer surplus, producer surplus, welfare loss, and government expenditure. Explanation of the fall in foreign producer revenue due to the imposition of the tariff. With reference to the diagram, it is important to explain that domestic consumers pay more for fewer goods and services, yet inefficient domestic producers are attracted to the industry (or existing producers in the market are incentivized to produce more).

- Diagram: Tariff diagram demonstrating changes in efficiency, with reference to the impact on different stakeholders.

- Synthesis (evaluate): Consideration of the extent to which a tariff will impact different stakeholders, which depends on the amount of the tariff, the PED for the good, the duration of the tariff, and the degree of enforcement of the tariff. Accept any reasonable limitation/synthesis.

- Examples: real-world examples of tariffs (e.g. China and the USA's trade war, with tariffs being imposed on steel, solar panels etc.), and their impacts on different stakeholders.

[Paper 3 Exam practice question 28.3 – HL only]

a) Consumer surplus before the imposition of the tariff = [($350 − $100) × 50,000] ÷ 2 = **$6,250,000**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

b) Producer surplus before the imposition of the tariff = [($100 − $50) × 10,000] ÷ 2 = **$250,000**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

c) Consumer surplus after the imposition of the tariff = [($350 − $150) × 40,000] ÷ 2 = **$4,000,000**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

d) Producer surplus after the imposition of the tariff = [($150 − $50) × 20,000] ÷ 2 = **$1,000,000**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

e) Revenue to the government after the imposition of the tariff = ($150 − $100) × (40,000 − 20,000) = $1,000,000

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

f) The welfare loss after the imposition of the tariff = [($150 − $100) × (20,000 − 10,000)]/2 + [($150 − $100) × (50,000 − 40,000)]/2 = **$500,000**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

[Paper 1 Exam Practice Question 28.4]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: quota and protectionism.

- Explanation: of the increase in price caused by the introduction of a quota as a result of less supply in the market. Explanation that the domestic supply curve will shift outwards by the amount of the quota. With reference to the diagram, it is important to explain that domestic consumers pay more for fewer goods and services whilst inefficient domestic producers are attracted to the industry (or existing producers in the market are incentivized to supply more). Explanation that foreign producers will earn less revenue (depending on the value of PED for the product). Explanation that the government may gain revenue from the sale of import licences.

- Diagram: Quota diagram showing the economic impacts on various stakeholders, with reference to the change in price and quantity supplied.

[Paper 1 Exam Practice Question 28.5]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: producer subsidy and protectionism.

- Explanation: of the reduced costs of production for domestic producers. With reference to the diagram, there should be an explanation that the domestic supply curve will shift outwards by the amount of the subsidy. Explanation of the change in producer and consumer surplus following the imposition of the subsidy. Explanation that there will be an increase in domestic producer revenue and a decrease in foreign producer revenue (as a result of fewer imports).

- Diagram: Subsidy diagram (international economics), showing the impact of the producer subsidy of domestic producers on various stakeholders, with reference to changes in price and output levels.

[Paper 3 Exam Practice question 28.6 – HL only]

a) The cost of the subsidy to the government = ($20 – $10) × 15m = **$150 million**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

b) The amount of imports before government intervention = 30m – 5m = **25 million kilograms**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

c) The amount of imports after government intervention = 30m – 15m = **15 million kilograms**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

d) The total amount spent by domestic consumers under free trade = $10 × 30m = **$300 million**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

e) The total amount spent on imports after the imposition of the subsidy = 30m – 15m × $10 = **$150 million**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

[Paper 1 Exam Practice Question 28.7]

Use the assessment criteria on page 2. Award up to the maximum marks as indicated. Answers may include:

- Definitions: trade protection, along with any particular type of trade control introduced by the candidate.

- Explanation: of protection of infant industries, national security, health and safety, environmental standards, anti-dumping, unfair competition, balance of payments correction, government revenue, protection of jobs, and/or diversification in ELDCs.

- Diagram: Any trade protection diagram demonstrating the economic impacts of trade protection.

- Synthesis (evaluate): Strengths and limitations of various forms of trade protection. Arguments relating to the loss of efficiency and inefficient producers due to measures of trade protection. Understanding that the extent to which trade protection is beneficial could depend on the duration and purpose (strategic or retaliatory) of using protectionist measures, as well as the extent to which there are anti-competitive practices such as dumping.

- Examples: real-world examples of trade protection measures, and their economic impacts.

Chapter 29 – Arguments for and against trade controls/protection

[Paper 1 Exam Practice Question 29.1]

a) Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: trade protection and economically least developed country (ELDC).

- Explanation: that ELDCs face structural barriers and low levels of human capital, as well as being highly vulnerable to economic and environmental shocks as they can be highly specialized in the production of a few goods (often in the primary sector). Explanation of protection for firms in infant industries. Trade protection enables ELDCs to diversify their production without fear of loss from intense foreign competition. This will enable firms in ELDCs to achieve economies of scale and compete in export markets in the future, thus creating jobs and export-led growth.

- Diagram: Any trade control diagram explained in the context of the question.

b) Use the assessment criteria on page 2. Award up to the maximum marks as indicated. Answers may include:

- Definitions: balance of payments and current account.

- Explanation: An explanation of the relationship between the supply of a currency and balance of payment debits and/or the demand for a currency and balance of payment credits. In the case of a deficit (likely referred to in relation to the current account), trade protectionist measures reduce the demand for imports (or limit them in the case of a quota) which would create fewer debits for the country. Explanation of the implications in terms of the protection of domestic jobs and stimulating economic growth. Explanation of the disadvantages of trade protection, such as retaliation and inefficient production, which could have detrimental impacts on the balance of payments in the long run.

- Diagram: Any trade protection diagram to show the reduction in imports. Alternatively, HL candidates may choose to use the J-curve effect diagram to show the impact on a country's balance of payments.

- Synthesis (evaluate): Comparison of short-run and long-run consequences of the possible implications of trade protection on the balance of payments, as analyzed or discussed in the answer. Consideration of the impact on the balance of payments depending on the size of the tariff or quota used, the duration of the protectionist measure, the degree of retaliation from trading partner countries, and the size or magnitude of the balance of payments deficit to begin with.

- Examples: real-world examples of balance of payment issues, real-world examples of trade protectionist measures, such as the trade dispute between the USA and Scotland (see Paper 2 Exam Practice Question 29.2).

[Paper 2 Exam Practice Question 29.2]

Use the assessment criteria on page 3. Award up to the maximum marks as indicated. Answers may include:

- Definitions of tariff.
- An explanation of tariffs as a common form of trade protection during trade disputes, such as in the case study.
- An explanation of trade disputes arising from the involvement of trade protectionist measures.
- An explanation of the loss in economic efficiency due to trade disputes.
- A relevant and explained tariff diagram.
- Use of information and stimulus material from the text/data.

Discussions may include:

Economic outcomes in Scotland:

- Loss of 'thousands of jobs' in Scotland due to the ongoing trade dispute.
- Loss of profits to Scotch whisky producers ('company's profits being hit').
- Loss of jobs in rural areas of Scotland (longer-term unemployment of a structural nature).

Economic outcomes in the USA:

- Higher prices for consumers of Scotch whisky in the USA (lower supply of whisky, at a higher price).
- Loss of consumer surplus in the whisky market in the USA.
- Government revenue from the tariff of Scotch whisky.
- Inefficient production of whisky in the USA (as domestic firms are protected by the 25% tariff).
- Improved balance of payments (reduced current account deficit), ceteris paribus.

Other discussion points might include:

- Duration of the trade dispute.

- Scale and severity of retaliation from Scotland and the UK.

- The gravity of the enforcement of tariffs in the USA.

- *Any other reasonable discussion that directly addresses the question.*

Note: The command term 'discuss' requires candidates to offer a considered and balanced review that includes a range of arguments, factors, or hypotheses. Opinions or conclusions should be presented clearly and supported by appropriate evidence.

Note: It should be noted that definitions, theory and examples that have already been given in part (a), and then referred to in part (b), should be rewarded.

Chapter 30 – Economic integration

[Paper 1 Exam Practice Question 30.1]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definition: free trade area (FTA) and customs union.

- Explanation: that a free trade area (FTA) is a formal agreement between two or more countries to remove/eliminate barriers to trade, and that members of the FTA are free to maintain their own trade policies with other nations (non-members). Explanation that a customs union is a binding trade agreement between two or more countries to remove/eliminate tariffs and non-tariff barriers to trade, but members of the union are obliged to establish a common external barrier (CET) toward non-member countries.

- Diagram: not required for this question.

Award the use of relevant examples, which are likely to be used, although this is not a formal requirement of the question.

[Paper 1 Exam Practice Question 30.2]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definition: common market and monetary union.

- Explanation: that a common market is a form of economic integration that occurs when a group of countries agree to extend their free trade agreement (regarding trade in goods and services that is free from tariff and non-tariff barriers) to include the free movement of capital and labour resources. Explanation that monetary union is the ultimate form of economic integration whereby two or more countries unify their monetary system by using the same currency and establishing a common central bank.

- Diagram: not required for this question.

Award the use of relevant examples, such as the European Union with its European Central Bank, although this is not a formal requirement of the question.

[Paper 1 Exam Practice Question 30.3]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: monetary union and economic integration.

- Explanation: of the advantages of being part of a monetary union. These may include: greater price stability and price transparency, stable exchange rates (due to monetary union/a stronger single currency), interest rate convergence, and increased cross-border trade deals and investments between and beyond member states. Explanation of the disadvantages of being part of a monetary union, such as: loss of economic sovereignty (given monetary policy is devolved to the central bank of the monetary union), loss of exchange rate flexibility, asymmetric impacts of monetary policy on different member states, changeover costs (to the use of a single currency), and time lags in the implementation of monetary policy as there are more governments/states involved in decision-making,

- Diagram: not required for this question.

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Chapter 31 – Exchange rates

[Paper 2 and 3 Exam Practice Question 31.1]

As £1 = $1.35, then a $35,500 car = (1/1.35) × $35,500 = **£26,296.30**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

[Paper 2 and 3 Exam Practice Question 31.2]

   a) $65 × 0.65 = **£42.25**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

   b) $65 × 0.60 = **£39.00**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

[Paper 2 and 3 Exam Practice Question 31.3]

   a) 1:6.5 = 65:422.5
       Therefore, the price of the textbook = **CNY422.5**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

   b) 0.65:0.75 = 1:1.15
       Hence, the exchange rate is £1 = €1.15
       Accept answers that show that €1 = £0.87

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

[Paper 2 and 3 Exam Practice Question 31.4]

The diagram shows that £1 = $1.587

So, $1 = £1/$1.587 = £0.63

Hence, the exchange rate is terms of USD is $1 = **£0.63**

[Paper 2 and 3 Exam Practice Question 31.5]

Possible reasons could include:

- An increase in the demand for Kuwaiti exports would lead to an increase in the demand for the Kuwaiti currency from D_1 to D_2, causing an appreciation of KWD from 900 to 1,150.

- An increase in investment in Kuwait by Nigerian nationals, such as saving in Kuwaiti bank accounts, will mean that Nigerian nationals will need to purchase Kuwaiti dinars, which will increase the demand for Kuwaiti dinar from D_1 to D_2, causing an appreciation of KWD from 900 to 1,150.

- An increase in interest rates in Kuwait.

- Significantly more Nigerian tourists visiting Kuwait.

Award *0 marks* if the work does not reach a standard as described by the descriptors below.

Award *1–2 marks* if the written response is limited, or if only one reason outlined.

Award *3–4 marks* if the written response is accurate, with two reasons outlined, similar to the example above.

[Paper 1 Exam Practice Question 31.6]

a) Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:
- Definitions: exchange rate and currency appreciation.
- Explanation: of a currency appreciation as a sustained increase in the value of a currency relative to another currency, under a freely floating exchange rate system.
- Diagram: exchange rate diagram showing an increase in the demand or reduction in supply of a currency, thereby causing a currency appreciation.
- Examples: real-world examples of currency appreciation.

b) Use the assessment criteria on page 2. Award up to the maximum marks as indicated. Answers may include:
- Definitions: currency depreciation and devaluation.
- Explanation: of the possible consequences of a currency depreciation or devaluation, including an increase in employment (from an increase in the demand for exports), export-led economic growth, inflation (demand-pull and/or

imported inflation), and current account balance. HL candidates may also consider explanation of the Marshall-Lerner Condition.

- Diagram: Macroeconomic diagram demonstrating an increase in aggregate demand.

- Synthesis (evaluate): Discussion of the extent to which a currency depreciation or devaluation will impact an economy, which will depend on factors such as the magnitude of the currency depreciation, its duration, and the country's specific trading partners. HL candidates may also consider the Marshall-Lerner condition (price elasticity of demand).

- Examples: real-world examples of falling currencies and macroeconomic consequences of this.

[Paper 3 Exam Practice Question 31.7 – HL only]

a) $\$128,802/\$3,101,700 \times 100 = 4.15\%$

Award *1 mark* for the correct answer.

b) Possible reasons include:

- China's current account surplus relative to that of the USA's – an increase in foreign currency reserves may simply reflect China's larger current account surplus.

- China's desire for the central bank to hold foreign reserves in order to intervene in the foreign exchange market (to provide a more favourable economic environment for the country.

- To facilitate China's growing dominance in world and international trade – an increase in foreign trade would require the use of local (foreign) currencies.

- To support China's monetary policy objectives.

Award *1 mark* for a possible reason for China's relatively larger foreign currency reserve relative to that of the USA's, and *1 mark* for a correct explanation.

Chapter 32 – Balance of payments

[Paper 2 and Paper 3 Exam Practice Question 32.1]

Balance of trade for Country K ($ billion)

Exports	85
Goods	57
Services	28
Imports	88 + 15 = **103**
Goods	88
Services	15
Balance of trade in goods	57 – 88 = **(31)**
Balance of trade in services	28 – 15 = **13**
Trade balance	(31) + 13 = **(18)**

Award *1 mark* for each correct answer, up to the maximum of *4 marks*.

Apply the own-figure rule (error carried forward) where appropriate.

[Paper 2 and Paper 3 Exam Practice Question 32.2]

a) Net income refers to the overall investment income (rent, wages, profit and interest) earned from assets owned and located overseas.

Award *1 mark* for a definition that shows limited understanding.

Award *2 marks* for an accurate definition that shows a good understanding of net income.

b) Balance of trade = Trade in goods – Trade in services
Balance of trade = –$18.3bn + $21.8bn = **+$3.5bn**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

c) Current account = Balance of trade + Net income + Net transfers
Current account = $3.5bn + $6.7bn + –$5.6bn = **$4.6bn**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

[Paper 2 and Paper 3 Exam Practice Question 32.3]

a) Current account = (Exports of goods – Imports of goods) + (Exports of services – Imports of services) + Net income + Net current transfers

- = (235 – 440) + (320 – 235) + 20 – 30

- = –205 + 85 + 20 – 30 = –130

- = **–$130 billion**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

b) Financial account = Net direct investment + net portfolio investment

- = 65 + 38 = 103

- = **$103 billion**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

c) Capital account = Capital transfers + Trade in non-produced, non-financial assets

- = 26 + 20 = 46

- Hence, the capital account balance is **$46 billion**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

d) The Balance of payments must balance, so:

- Current account = (Financial account + Capital account + Errors and omissions)

- –$130bn = $103bn + $46bn + x

- –$130bn = $149bn + x

- x = –$16bn

- Hence, errors and omissions for Country J = **–$16 billion**

Award *1 mark* for the correct answer, and *1 mark* for appropriate working out.

Summary (for illustrative purposes only):

	$billions		$billions
Exports of goods	235	Net current transfers	–30
Exports of services	320	Net direct investment	65
Imports of goods	–440	Net portfolio investment	38
Imports of services	–235	Capital transfers	26
Net income	20	Trade in non-produced, non-financial assets	20

Red = used to calculate the current account balance
Blue = used to calculate the financial account
Green = used to calculate the capital account

[Paper 2 Exam Practice Question 32.4]

a) The balance of trade is the difference between a country's total export earnings and its total import expenditure on both goods and services, i.e. the difference between the value of a country's total export earnings and its total import expenditure on goods and services. It is the largest component of a country's current account on the balance of payments.

Award *1 mark* for an answer that shows some understanding of the term *balance of trade.*

Award *2 marks* for a definition that shows an accurate understanding of the term *balance of trade.*

b) For much of the period shown, France has experienced a falling trade balance and a deficit in its trade balance throughout 2016–2020. Possible causes of this persistent deficit in its balance of trade include:

- Deteriorating international competitiveness, leading to a fall in exports from France, e.g. the price and/or quality of cars from Germany, Japan and America are more attractive for customers in France.

- Appreciation of the currency (euro) which reduces the demand for exports from Asia and the USA.

- Higher prices of imported raw materials and essential products such as crude oil and food.

- Intense competition from other countries supplying medicines, thereby reducing France's competitiveness in exporting these goods.

- The value of expenditure on France's car imports is far greater than the export revenues from selling medicines.

- Decline in tourism revenues after multiple terrorist attacks and the global outbreak of the coronavirus.

- *Accept any other relevant possible cause that is explained.*

Award *0 marks* if the work does not reach a standard as described by the descriptors below.

Award *1–2 marks* if the written response is limited or only one reason is explained.

Award *3–4 marks* if the written response is accurate. Two reasons are given and accurately explained.

[Paper 3 Exam Practice Question 32.5 – HL only]

a) A current account surplus exists when the total value of a country's credit items exceeds the total value of its debit items, over a given period of time. This is mainly due to a higher demand for the country's exports and/or lower demand for imports.

Award *1 mark* for an answer that shows some understanding of the term *current account surplus.*

Award *2 marks* for a definition that shows an accurate understanding of the term *current account surplus.*

b) Consequences, be they positive or negative, of Australia's persistent current account surplus include:

- Employment opportunities due to the higher demand for exports from Australian firms.

- Improved standards of living as the country receives more foreign currency than it spends on imports (although the lack of access to imports can hinder the standards of living for some people in Australia).

- Inflationary pressures as more money enters the economy, which raises costs of living and can damage the international competitiveness of Australian firms in the long run.

- A higher value of the exchange rate (Australian dollar) due to the continually high demand for Australian exports. However, given it is one of the world's largest net exporters of coal – the demand for which is price inelastic due to the lack of close substitutes – this might be positive for the economy.

- Greater foreign direct investments (FDI) from abroad bring funds to Australia, thus aiding its economic growth and development.

- *Accept any other relevant consequence that is accurately explained.*

Award *0 marks* if the work does not reach a standard as described by the descriptors below.

Award *1–2 marks* if the written response is limited or only one reason is explained.

Award *3–4 marks* if the written response is accurate. Two reasons are given and accurately explained.

Chapter 33 – Sustainable development

[Paper 2 Exam Practice Question 33.1]

a) The gender gap is the difference between the opportunities of women and men as reflected in social, political, intellectual, cultural and economic activities, attitudes and prospects. Reducing or closing the gender gap could facilitate sustainable population growth, as more women focus on their professional careers rather than other priorities expected by society. In Rwanda, women tend to be engaged in work such as water collection, growing and harvesting of crops, transportation of agricultural output to market stalls as well as the highly demanding task of raising children and looking after the family. There are usually no direct financial returns for doing so, so much of this vital work is unaccounted for in official economic statistics. Hundreds of millions of people could come out of extreme poverty if women were given equal access rights to productive resources and economic opportunities.

Award *1–2 marks* if the written response is limited and descriptive, partially explaining the relationship between gender inequality and sustainable development.

Award *3–4 marks* if the written response is accurate, similar to the explanation above and has application to the context of Rwanda.

b) Use the assessment criteria on page 3. Award up to the maximum marks as indicated. Answers may include:

- Definition: sustainable development, development, and growth.

- Explanation: of differences and similarities between economic growth and economic development showing an understanding of the source(s) of economic growth and development, especially in the context of Rwanda. Explanation of possible interventionalist policies to achieve sustainable development, in the form of investments in education, the reduction of interest rates to encourage capital investment, and/or offering subsidies in the energy sector. Explanation of market-based policies to achieve sustainable development, such as a reduction in direct taxes, improvements in governance, eradicating corruption, export-led growth strategies, import substitution policies, encouraging foreign direct investment (FDI) and diversification. Explanation of possible supply-side policies to improve the quality/quantity of factors of production to achieve sustainable development. Explanation of how Rwanda's income inequality, in the midst of rapid economic growth, could further worsen. The explanations should focus on how to achieve sustainable development, written in the context of Rwanda.

- Diagram: showing the long-run aggregate supply (LRAS) curve shifting to the right or an outward shift of the production possibility curve, indicating development in the long run.

- Synthesis (evaluate): the strengths and limitations of using market-based and interventionalist policies to achieve sustainable development, written in the context of Rwanda. Acknowledgement and consideration of how economic growth alone does not lead to sustainable development. Consideration of unregulated growth, which would lead to Rwanda experiencing a more unequal distribution of income and wealth. Reference to other policies that may be more (or less) effective to achieve sustainable development.

- Examples: using the stimulus material (real-world examples from the text and/or the candidate's knowledge of economics, written in the context of Rwanda).

Note: 'Discuss' requires students to offer a considered and balanced review that includes a range of arguments, factors, or hypotheses. Opinions or conclusions should be presented clearly and supported by appropriate evidence.

Chapter 34 – Measuring development

[Paper 2 and 3 Exam Practice Question 34.1]

As the exchange rate is 1 dems = 3.5 dans, then 3.5 dems = **12.25 dans**

Award *1 mark* for the correct answer and *1 mark* for showing accurate working out.

[Paper 2 and 3 Exam Practice Question 34.2]

- Pre-population growth in GNI per capita = $50bn ÷ 68m = $735.3
- Post-population growth in GNI per capita = $54bn ÷ 71m = $760.6
- Hence, the change in real GNI per capita is an increase of approximately **$25.30**

Award *1 mark* for the correct answer and *1 mark* for showing accurate working out.

[Paper 2 and 3 Exam Practice Question 34.3]

a) The **Human Development Index** (HDI) is a composite indicator of living standards and economic development in a country by measuring three dimensions of human development: education, healthcare and income.

Award *1 mark* for a vague definition that shows some understanding of the term *Human Development Index*.

Award *2 marks* for an accurate definition of the term *Human Development Index*.

b)

Country	HDI	Country	HDI
Australia	0.939	Vietnam	0.694
Russia	0.816	Ethiopia	0.463

Australia is most likely to have an HDI of 0.939 because the high HDI suggests it has the highest standards of living/human development (as measured by the composite index of health care, education, and income levels).

Similarly, Ethiopia is likely to have the lowest HDI of 0.463 to show that it has the lowest standards of living/human development of the four listed countries.

Russia being relatively more economically developed than Vietnam is likely to have a HDI of 0.816 compared to Vietnam's 0.694.

Award *1 mark* for each correctly identified and explained answer, up to *[4 marks]*.

Note: there is no need to explain the HDI for all four countries as the lines of reasoning will be similar.

[Paper 2 and 3 Exam Practice Question 34.4]

- Pre-growth income gap = $35,000 – $2,000 = $33,000

- Post-growth income gap = ($35,000 × 1.025) – ($2,000 × 1.025) = $35,875 – $2,050 = $33,825

- Hence, the change in the income gap = $33,825 – $33,000 = $825

- In other words, the income gap has widened by $825, despite the same percentage change in per capita income.

Chapter 35 – Barriers to growth and/or economic development

[Paper 1 Exam Practice Question 35.1]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: economic growth and development.

- Explanations: that a weak institutional framework (the legal system, ineffective taxation structures, banking system and property rights), gender inequality, the lack of good governance (anti-corruption), and unequal political power and status are four key categories of political and social barriers to economic growth and/or development. Explanation of economic factors that work as barriers to growth and development, including: rising economic inequalities, the lack of access to infrastructure and appropriate technology, low levels of human capital (i.e. a lack of access to healthcare and education), over-dependence on primary sector production, the lack of access to international markets, the informal economy, capital flight, indebtedness, geography (including landlocked countries), and tropical climates and endemic diseases.

- Diagram: not needed for this question, although some candidates may choose to use an LRAS or PPC diagram to demonstrate economic growth and development.

[Paper 1 Exam Practice Question 35.2]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: economic growth, development, and barriers to development.

- Explanations: of the economic factors that work as barriers to economic growth and development, such as: rising economic inequalities, the lack of access to infrastructure and appropriate technology, low levels of human capital (the lack of access to quality healthcare and education), the dependence on primary sector production, a lack of access to international markets, the scale and magnitude of activities in the informal economy, capital flight, indebtedness, geography (including landlocked countries), and tropical climates and endemic diseases.

- Diagram: not needed for this question, although some candidates may choose to use an LRAS or PPC diagram to demonstrate economic growth and development.

[Paper 1 Exam Practice Question 35.3]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: growth and development, and political/social barriers to development.

- Explanations: of a weak institutional framework (legal system, ineffective taxation structures, banking system and property rights), gender inequalities, the lack of good governance (anti-corruption), and the unequal political power and status being the four key categories of political and social barriers to economic growth and/or development.

- Diagram: not needed for this question, although some candidates may opt to use an AD–AS diagram to show the impacts of using taxation policies to influence economic growth and development.

[Paper 2 Exam Practice Question 35.4]

a) Human capital is the accumulation of skills, knowledge, and experience of the workforce, viewed in terms of their value or cost in economic transactions.

Award *1 mark* for a vague definition that shows some understanding of human capital.

Award *2 marks* for an accurate definition of human capital, similar to the example given above.

b) Use the assessment criteria on page 3. Award up to the maximum marks as indicated. Answers may include:

- Definition: economic development and credit. Other relevant definitions could include: economic growth, fiscal policy, capital expenditure, current account deficit, demand-side policies and supply-side policies.

- Explanation: of how Somalia could use different ways (such as micro-credit providers) to offer credit to the poorest members of society. Explanation of possible interventionalist policies in the form of investment in education and/or reducing interest rates to encourage investment. Explanation of market-based policies (such as reducing direct tax, an improvement in governance, the reduction in corruption, export-led growth strategies, import substitution strategies, foreign direct investment and diversification), written in the context of Somalia. Explanation of possible interventionist supply-side policies to improve the quality/quantity of factors of production to improve Somalia's prospects of economic development. Explanation of how Somalia's income inequality could worsen in the pursuit of rapid economic growth. Explanation of other possible interventionist policies in the form of cutting a current account

deficit, enhancing participation in international relations, and policies to encourage more capital spending in Somalia.

- Diagram: showing the long-run aggregate supply (LRAS) curve shifting to the right and/or an outward shift of the production possibility curve (PPC), indicating growth and development.

- Synthesis (evaluate): strengths and limitations of using market-based and interventionalist policies to achieve economic development, written in the context of Somalia. Consideration of how economic growth alone may not be sufficient to achieve sustainable development, such as growth causing Somalia to have a potentially more unequal distribution of income and wealth.

- Examples: real-world examples from the text, plus other relevant real-world examples written in the context of Somalia.

Note: the command term 'Examine' requires candidates to form an argument in a way that uncovers the assumptions and interrelationships of the issue.

Chapter 36 – Economic growth and/or economic development strategies

[Paper 1 Exam Practice Question 36.1]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: economic growth and development. Other relevant definitions may include import substitution, export promotion, economic integration, and specialization.

- Explanation: of any two trade strategies such as import substitution, export promotion and economic integration. Explanation that import substitution is an inward-looking growth and development strategy that encourages domestic production and the purchase of domestic output through protectionist policies such as tariffs and quotas. Explanation that export promotion is an outward-looking strategy used to achieve economic growth and development that focuses on greater international trade. Explanation that economic integration is the process of countries becoming more interdependent and economically unified, mainly through the reduction and removal of barriers to trade, that is, through the partial or full abolition of tariff and non-tariff restrictions.

- Diagram: a diagram showing a rightward shift of the aggregate demand (AD) curve resulting from policies that promote trade, thereby increasing real national income. Alternatively, candidates may choose to use a production possibility curve (PPC) showing a movement or an outward shift as a result of trade strategies.

[Paper 1 Exam Practice Question 36.2]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: economic growth and development, trade liberalization, privatization, and deregulation.

- Explanation: of any **two** market-based strategies, such as trade liberalization, privatization, and deregulation. Explanation that trade liberalization refers to growth and development policies that encourage free trade, including the free movement of capital flows, by removing barriers to international trade such as tariffs, quotas, subsidies, and administrative barriers. Explanation that privatization is a form of market-based policy to achieve growth and development by selling or transferring public sector assets to the private sector in order to stimulate competition and incentives. Explanation that deregulation is the reduction or removal of statutory barriers to entry into certain industries, thus enabling the price mechanism to allocate resources more effectively.

- Diagram: an AD–AS diagram showing a rightward shift of the aggregate demand (AD), increasing real national income. An alternative diagram is a production possibility curve (PPC), showing a movement or an outward shift as a result of the market-based strategies.

[Paper 1 Exam Practice Question 36.3]

Use the assessment criteria on page 1. Award up to the maximum marks as indicated. Answers may include:

- Definitions: merit goods, economic growth, and development.

- Explanation: that despite their social benefits, merit goods such as education programmes, healthcare programmes, and infrastructure are under-provided and under-consumed in the free market (in the absence of government intervention), yet the consumption of such goods and services would create positive benefits to society. Explanation that offering educational programmes ensures there are spillover benefits to the country because the social benefits accrued from education and training surpass the private benefits in the long run, thereby creating opportunities for growth and development. Explanation that a good healthcare system not only enables the workforce of the country to be healthy and productive, but also helps to minimize absenteeism from work, which reduces the number of working days lost due to illness. Explanation that investment in infrastructure (such as transportation networks, telecommunications networks, social infrastructure, and public utilities) is vital for growth and development.

- Diagram: an AD–AS diagram showing a rightward shift of the aggregate supply (AS) in the long run, indicating an increase in the real income. An alternative approach is to use a production possibility curve (PPC), showing an outward shift as a result of investment in merit goods.

[Paper 2 Exam Practice Question 36.4]

a) Foreign direct investment (FDI) refers to the long-term capital expenditure of multinational companies in overseas markets, such as foreign oil-refining companies operating in Egypt.

Award *1 mark* for a vague definition that shows some understanding of the term foreign direct investment (FDI).

Award *2 marks* for an accurate definition of the term foreign direct investment (FDI), similar to the example given above.

b) As the data in the table indicate, the foreign direct investment (FDI) in Egypt falls quite considerably, affecting the GDP of the country in a negative way. This can be explained using a poverty cycle diagram. The overall investment in Egypt was shrunk as the long-term capital expenditure of multinational companies reduced, resulting in lower productivity and lower income. This is particularly true for a country like Egypt as the bulk of the investment comes through FDI. The low income resulted in Egyptian households saving less and investing less in education and healthcare. Over time, a less educated and less healthy workforce lacks the ability, skills, training and enthusiasm to contribute to the economy.
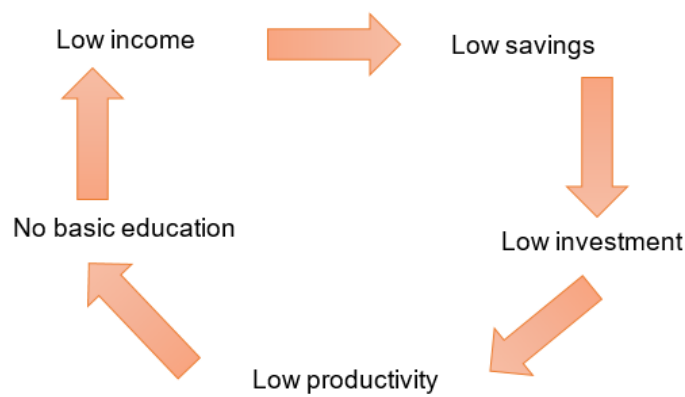

Figure – The poverty cycle

Mark as a *2 + 2.*

Award up to another *2 marks* for an appropriate poverty cycle diagram, that is accurately labelled.

Award up to *2 marks* for explaining how a fall in foreign direct investment (FDI) could lead to a fall in economic growth or development.

[Paper 1 Exam Practice Question 36.5]

Use the assessment criteria on page 2. Award up to the maximum marks as indicated. Answers may include:

- Definitions: interventionist approach, market-based approaches, economic growth, and development.

- Explanation: of different forms of interventionist policies and market-based policies a government may use to achieve economic growth and/or development. Explanation of the benefits of interventionalist policies such as the provision of essential infrastructure, investments in human capital, the provision of a social safety net, and an ability to tackle income and wealth inequalities. Explanation of the limitations of interventionalist policies, such as excessive bureaucracy and

poor planning leading to corruption and delays in production. Explanation of the strengths of market-based policies to achieve economic growth and development, such as higher efficiency, greater competitiveness, the benefits of free trade, and better investment opportunities. Explanation of the limitations of using market-based policies to achieve economic growth and development, including market failures and development of a dual economy, as well as income and wealth inequalities.

- Diagram: an AD–AS diagram showing a rightward shift of the aggregate supply (AS) in the long run, indicating an increase in real GDP. An alternative approach is to use a production possibility curve (PPC) diagram, showing an outward shift of the PPC as a result of investments, such as the spending on merit and public goods.

- Synthesis (evaluate): strengths and limitations of both market-based and interventionist policies in achieving growth and development. Consideration of contexts in which these policies may succeed or fail, and why this may be so.

- Examples: real-world examples of countries making significant investments in infrastructure (such as China, Turkey and Australia) and social capital (such as Singapore, Hong Kong, South Korea and Ireland), highly corrupt countries (such as Somalia, South Sudan or North Korea – based on the Corruption Perception Index), pro-business economies (such as New Zealand, Singapore and Hong Kong), countries with high income inequalities (such as Zambia, Honduras and South Africa), and least wealth inequalities (such as Norway and Sweden). Real-world examples could also include different countries adopting strategies during emergency crises like Covid-19.

Note: 'Discuss' requires students to offer a considered and balanced review that includes a range of arguments, factors, or hypotheses. Opinions or conclusions should be presented clearly and supported by appropriate evidence.

[Paper 2 Exam Practice Question 36.6]

a)

i. Purchasing power parity (PPP) refers to the exchange rate that enables residents to buy a common basket of goods and services in different countries.

Award *1 mark* for a vague definition that shows some understanding of the term purchasing power parity.

Award *2 marks* for an accurate definition of the term purchasing power parity, similar to the example above.

ii.   External debt (or foreign debt) is the money owed to foreign creditors (lenders),
such as foreign commercial banks, foreign governments, and international
financial institutions such as the World Bank and the International Monetary
Fund (IMF).

Award *1 mark* for a vague definition that shows some understanding of the term foreign
debt.

Award *2 marks* for an accurate definition of the term foreign debt, similar to the example
above.

b) Use the assessment criteria on page 3. Award up to the maximum marks as
indicated. Answers may include:

- Definitions: economic growth and economic development.

- Explanation: of how macroeconomic reforms can stabilize a war- and
corruption-trodden country like Mozambique. Explanation of how foreign aid
could be used to support the country's recovery, growth and development in
the long run. Explanation of how debt forgiveness and debt rescheduling under
the IMF's Heavily Indebted Poor Countries (HIPC) initiative could help
Mozambique alleviate the burden of foreign debt. Explanation and application
of GDP, employment composition, and the key economic indicators from the
case study. Explanation of possible different market-based and interventionist
policies and how these might help to improve Mozambique's national income.

- Diagram: an AD–AS diagram showing a rightward shift of the aggregate supply
(AS) curve in the long run, indicating an increase in the real GDP. An alternative
approach is to use a production possibility curve (PPC) diagram, showing an
outward shift of the PPC as a result of investments in human capital and
infrastructure.

- Synthesis (evaluate): strengths and limitations of both market-based and
interventionist policies. Consideration of contexts in which a particular policy
might succeed or fail. Evaluation of policies that might be most effective or least
effective in the context of Mozambique, using the stimulus material.

- Examples: real-world examples from the case study. Award candidates who
may choose to use other relevant examples to strengthen their reflective and
critical thinking.

Note: 'Discuss' requires students to offer a considered and balanced review that
includes a range of arguments, factors or hypotheses. Opinions or conclusions should
be presented clearly and supported by appropriate evidence.