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|  |  | Beginning(REVISE PRIORITY)Can you… | Developing(REVISE)NEED FOR 3-5Can you…  | Mastery HL CONTENT (REVISE IF TARGET 6/7)Can you… |
| Microeconomics:Competitive markets | Scarcity, Choice and opportunity cost | a.) Define Scarcity?b.) Identify the 3 economic problems?c.) Define the 4 factors of production?d.) draw a PPC?e.) define ceteris paribus?f.) define govern intervention?g.) define equity? | a.) Explain other uses of the word capital?b.) diagrams for constant and increasing opportunity costs?c.) explain the social scientific method?d.) distinguish between econ growth and econ development?e.) define sustainability?f.) define econ efficiency? |  |
| Introduction to competitive markets | 1. Explain the meaning of the term 'market'.
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| Demand | 1. Define 'demand'.
2. Draw a demand curve.
3. Identify the determinants of demand.
4. Explain that the demand curve represents the relationship between the price and the quantity demanded of a product, *ceteris paribus*.
5. Distinguish between a shift of and a movement along the demand curve.
 | 1. Draw diagrams to show differences between movements along the demand curve and shifts of the demand curve.
2. Describe the relationship between an individual consumer's demand and market demand.
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| Supply | 1. Define 'supply'.
2. Draw a supply curve.
3. Explain the law of supply verbally and using diagrams.
4. Explain that the supply curve represents the relationship between the price and the quantity supplied of a product, *ceteris paribus*.
5. Explain the determinants of supply.
6. Distinguish between a shift of and a movement along the supply curve.
7. Draw diagrams to show differences between movements along the supply curve and shifts of the supply curve.
 | 1. Describe the relationship between an individual producer's supply and market supply.
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| Market equilibrium | 1. Explain the concept of 'equilibrium'.
2. Explain, using diagrams, how demand and supply interact to produce market equilibrium.
3. Explain the concepts of 'excess demand' and 'excess supply'.
4. Analyse, using diagrams, how changes in the determinants of demand and/or supply result in a new market equilibrium.
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| The role of the price mechanism and market efficiency | 1. Explain the concept of 'consumer surplus'.
2. Explain the concept of 'producer surplus'.
3. Identify consumer and producer surplus on a demand and supply diagram.
 | 1. Evaluate the view that the best allocation of resources, from society's point of view, is at competitive market equilibrium, where community surplus is maximised.
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| ELASTICITIES | Price elasticity of demand (PED)   | 1. Explain the concept of price elasticity of demand (PED), understanding that it involves responsiveness of quantity demanded to a change in price, along a given demand curve.
2. Calculate PED using the following equation:
	* *PED = % change in quantity demanded / % change in price.*
3. State that the PED value is treated as if it were positive although its mathematical value is usually negative.
4. Explain the determinants of PED, including the number and closeness of substitutes, the degree of necessity, time and the proportion of income spent on the good.
5. Explain why PED varies along a linear demand curve and is not represented by the slope of the demand curve.
 | 1. Explain, using diagrams and PED values, the concepts of price elastic demand, price inelastic demand, unitary elastic demand, perfectly elastic demand and perfectly inelastic demand.
2. Calculate PED between two designated points on a demand curve using the PED equation above.
3. Examine the role of PED for firms in making decisions regarding price changes and their effect on total revenue.
4. Explain why the PED for many primary commodities is relatively low and the PED for manufactured products is relatively high.
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| Income elasticity of demand (YED) | 1. Explain the concept of income elasticity of demand (YED), understanding that it involves responsiveness of demand (and hence a shifting demand curve) to a change in income.
2. Calculate YED using the following equation:
	* *YED = % change in quantity demanded / % change in income.*
3. Show that normal goods have a positive value of YED and inferior goods have a negative value of YED.
4. Distinguish, with reference to YED, between necessity (income inelastic) goods and luxury (income elastic) goods.
 | 1. Examine the implications for producers and for the economy of a relatively low YED for primary products, a relatively higher YED for manufactured products and an even higher YED for services.
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| Price elasticity of supply (PES) | 1. Explain the concept of price elasticity of supply (PES), understanding that it involves responsiveness of quantity supplied to a change in price along a given supply curve.
2. Calculate PES using the following equation:
	* *PES = % change in the quantity supplied / % change in price.*
3. Explain, using diagrams and PES values, the concepts of elastic supply, inelastic supply, unitary elastic supply, perfectly elastic supply and perfectly inelastic supply.
4. Explain the determinants of PES, including time, mobility of factors of production, unused capacity and ability to store stock.
 | 1. Explain why the PES for primary commodities is relatively low and the PES for manufactured products is relatively high.
2. Explain, using diagrams and PES values, the concepts of elastic supply, inelastic supply, unitary elastic supply, perfectly elastic supply and perfectly inelastic supply.
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| GOVERNMENT INTERVENTION | Indirect taxes | 1. Explain, using diagrams and PES values, the concepts of elastic supply, inelastic supply, unitary elastic supply, perfectly elastic supply and perfectly inelastic supply.
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| **Indirect (excise) taxes: market outcomes, social welfare and tax incidence (higher level topic)**   | a.) Discuss the consequences of imposing an indirect tax on the stakeholders in a market, including consumers, producers and the government.  |  | * 1. Explain, using diagrams, how the incidence of indirect taxes on consumers and firms differ, depending on the price elasticity of demand and on the price elasticity of supply.
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| Subsidies   | 1. Explain why governments provide subsidies and describe examples of subsidies.
2. Draw a diagram to show a subsidy and analyse the impact of a subsidy on market outcomes.
3. Discuss the consequences of providing a subsidy on the stakeholders in a market, including consumers, producers and the government.
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| **Subsidies: market outcomes and social welfare (higher level topic)** |  | a.) Plot demand and supply curves for a product from linear functions and then illustrate and/or calculate the effect of the provision of a subsidy on the market (on price, quantity, consumer expenditure, producer revenue, government revenue, consumer surplus and producer surplus). |  |
| Price Controls | 1. Explain why governments impose price ceilings and describe examples of price ceilings, including food price controls and rent controls.
2. Draw a diagram to show a price ceiling and analyse the impacts of a price ceiling on market outcomes.
3. Examine the possible consequences of a price ceiling, including shortages, inefficient resource allocation, welfare impacts, underground parallel markets and non-price rationing mechanisms.
4. Discuss the consequences of imposing a price ceiling on the stakeholders in a market, including consumers, producers and the government.
5. Explain why governments impose price floors and describe examples of price floors, including price support for agricultural products and minimum wages.
6. Draw a diagram of a price floor and analyse the impacts of a price floor on market outcomes.
 | * 1. Calculate possible effects from the price ceiling diagram, including the resulting shortage and the change in consumer expenditure (which is equal to the change in firm revenue).
1. Examine the possible consequences of a price floor, including surpluses and government measures to dispose of the surpluses, inefficient resource allocation and welfare impacts.
2. Discuss the consequences of imposing a price floor on the stakeholders in a market, including consumers, producers and the government.
 | * 1. Plot demand and supply curves for a product from linear functions and then illustrate and/or calculate the effect of the imposition of a specific tax on the market (on price, quantity, consumer expenditure, producer revenue, government revenue, consumer surplus and producer surplus).
1. Plot demand and supply curves for a product from linear functions and then illustrate and/or calculate the effect of the provision of a subsidy on the market (on price, quantity, consumer expenditure, producer revenue, government revenue, consumer surplus and producer surplus).
2. Calculate possible effects from the price ceiling diagram, including the resulting shortage and the change in consumer expenditure (which is equal to the change in firm revenue).
3. Calculate possible effects from the price floor diagram, including the resulting surplus, the change in consumer expenditure, the change in producer revenue, and government expenditure to purchase the surplus.
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| Market Failure | The meaning of market failure: allocative inefficiency   | 1. Analyse the concept of market failure as a failure of the market to achieve allocative efficiency, resulting in an over-allocation of resources (over-provision of a good) or an under-allocation of resources (under-provision of a good).
2. Describe the concepts of marginal private benefits (MPB), marginal social benefits (MSB), marginal private costs (MPC) and marginal social costs (MSC).
3. Describe the meaning of externalities as the failure of the market to achieve a social optimum where MSB = MSC.
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| Negative externalities of production and consumption   | 1. Explain, using diagrams and examples, the concepts of negative externalities of production and consumption, and the welfare loss associated with the production or consumption of a good or service.
2. Explain that demerit goods are goods whose consumption creates external costs.
3. Evaluate, using diagrams, the use of policy responses, including market-based policies (taxation and tradable permits) and government regulations, and the problem of negative externalities of production and consumption.
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| Positive externalities of production and consumption   | 1. Explain, using diagrams and examples, the concepts of positive externalities of production and consumption, and the welfare loss associated with the production or consumption of a good or service.
2. Explain that merit goods are goods whose consumption creates external benefits.
 | a.) Evaluate, using diagrams, the use of government responses, including subsidies, legislation, advertising to influence behaviour, and the direct provision of goods and services.  |  |
| Lack of public goods   | 1. Define a public good.
2. Using the concepts of rivalry and excludability, and, providing examples, distinguish between public goods (non-rivalrous and non-excludable) and private goods (rivalrous and excludable).
3. Explain, with reference to the free rider problem, how the lack of public goods indicates market failure.
4. Discuss the implications of the direct provision of public goods by the government.
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| Common access resources and the threat to sustainability   | 1. Describe, using examples, common access resources.
2. Describe sustainability.
3. Explain that the lack of a pricing mechanism for common access resources means that these goods may be overused/depleted/degraded as a result of activities of producers and consumers who do not pay for the resources that they use, and that this poses a threat to sustainability.
 | 1. Explain, using negative externalities diagrams, that economic activity requiring the use of fossil fuels to satisfy demand poses a threat to sustainability.
2. Explain that the existence of poverty in economically less developed countries creates negative externalities through over-exploitation of land for agriculture, and that this poses a threat to sustainability.
3. Evaluate, using diagrams, possible government responses to threats to sustainability, including legislation, carbon taxes, cap and trade schemes, and funding for clean technologies.
 | 1. Explain, using examples, that government responses to threats to sustainability are limited by the global nature of the problems and the lack of ownership of common access resources, and that effective responses require international cooperation.
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|  | Asymmetric information (higher level topic)   | 1. Explain, using examples, that market failure may occur when one party in an economic transaction (either the buyer or the seller) possesses more information than the other party.
 | 1. Evaluate possible government responses, including legislation, regulation and provision of information.
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| Abuse of monopoly power (higher level topic)   | 1. Explain how monopoly power can create a welfare loss and is, therefore, a type of market failure.
 | 1. Discuss possible government responses, including legislation, regulation, nationalisation and trade liberalisation.
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| Behavioral Economics(higher level topic) | a.) Be able to critique and evaluate the model of the Econ.b.) Demonstrate awareness and be able to identify key cognitive biases/heuristics c.) Give examples of the biases and heuristicsd.) Demonstrate awareness of the research and ideas of Daniel Kahneman and Richard Thaler, such as ‘The Nudge’ and ‘Nudge theory’1. Be able to give examples of how ‘Nudges’ in practice and identify which cognitive biases and heuristics they have sought to address.
2. Demonstrate understanding that ‘nudges’ are designed to maintain ‘consumer sovereignty’ and be able to explain what this means.
3. Demonstrate how ‘consumer nudges’ shift the demand curve to the left and therefore may be preferable to other market based approached such as indirect taxation or command approaches like regulations.
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| Rational producer behavior | **Production in the short run: the law of diminishing returns****Introduction to costs of production: economic costs****Costs of production in the short run****Production and costs in the long run** | 1. Distinguish between the short run and long run in the context of production.
2. Define total product, average product and marginal product, and construct diagrams to show their relationship.
3. Explain the law of diminishing returns.
4. Calculate total, average and marginal product from a set of data and/or diagrams.
5. Explain the meaning of economic costs as the opportunity cost of all resources employed by the firm (including entrepreneurship).
6. Distinguish between explicit costs and implicit costs as the two components of economic costs.
7. Explain the distinction between the short run and the long run, with reference to fixed factors and variable factors.
8. Distinguish between total costs, marginal costs and average costs.
9. Calculate total fixed costs, total variable costs, total costs, average fixed costs, average variable costs, average total costs and marginal costs from a set of data and/or diagrams.
10. Distinguish between increasing returns to scale, decreasing returns to scale and constant returns to scale.
11. Explain, using a diagram, the reason for the shape of the long-run average total cost curve.
12. Describe factors giving rise to economies of scale, including specialisation, efficiency, marketing and indivisibilities.
13. Describe factors giving rise to diseconomies of scale, including problems of coordination and communication.
 | a.) Draw diagrams illustrating the relationship between marginal costs and average costs, and explain the connection with production in the short run.b.) Explain the relationship between the product curves (average product and marginal product) and the cost curves (average variable cost and marginal cost), with reference to the law of diminishing returns.c.) Outline the relationship between short-run average costs and long-run average costs. |  |
| **Revenues** | 1. Distinguish between total revenue, average revenue and marginal revenue.
2. Calculate total revenue, average revenue and marginal revenue from a set of data and/or diagrams.
 | a.) Draw diagrams illustrating the relationship between total revenue, average revenue and marginal revenue.  |  |
| **Profit** | 1. Describe economic profit (abnormal profit) as the case where the total revenue exceeds the economic cost.
2. Describe normal profit (zero economic profit) as the case where total revenue is equal to total economic costs or the situation in which the amount of revenue earned is just sufficient to keep the firm in its current line of business.
3. Explain that economic profit (abnormal profit) is profit over and above normal profit (zero economic profit), and that the firm earns a normal profit when economic profit (abnormal profit) is zero.
4. Explain why a firm will continue to operate even when it earns zero economic profit (abnormal profit).
5. Explain the meaning of loss as negative economic profit arising when total revenue is less than total cost.
6. Calculate different profit levels from a set of data and/or diagrams.
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| **Goals of firms** | 1. Explain the goal of profit maximisation where the difference between total revenue and total cost is  maximised or where marginal revenue equals marginal cost.
2. Describe alternative goals of firms, including revenue maximisation, growth maximisation, satisficing and corporate social responsibility.
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| **Market Structures** | **Perfect competition** | 1. Describe, using examples, the assumed characteristics of perfect competition: a large number of firms; a homogeneous product; freedom of entry and exit; perfect information; perfect resource mobility.
2. Explain, using a diagram, that the perfectly competitive firm’s average revenue and marginal revenue curves are derived from market equilibrium for the industry.
3. Explain, using diagrams, that it is possible for a perfectly competitive firm to make economic profit (abnormal profit), normal profit (zero economic profit) or negative economic profit in the short run based on the marginal cost and marginal revenue profit maximisation rule.
4. Explain, using a diagram, why, in the long run, a perfectly competitive firm will make normal profit (zero economic profit).
5. Explain, using a diagram, how a perfectly competitive market will move from short- run equilibrium to long-run equilibrium.
6. Distinguish between the short run shut-down price and the break-even price.
7. Explain, using a diagram, when a loss-making firm would shut down in the short run.
8. Calculate the short run shut-down price and the break-even price from a set of data.
9. Explain the meaning of the term allocative efficiency.
10. Explain that the condition for allocative efficiency is P = MC (or, with externalities, MSB = MSC).
11. Explain, using a diagram, why a perfectly competitive market leads to allocative efficiency in both the short run and the long run.
12. Explain the meaning of the term productive/technical efficiency.
13. Explain that the condition for productive efficiency is that production takes place at minimum average total cost.
 | a.) Explain, using a diagram, the shape of the perfectly competitive firm’s average revenue and marginal revenue curves, indicating that the assumptions of perfect competition imply that each firm is a price taker.b.)Explain, using a diagram, why a perfectly competitive firm will be productively efficient in the long run, though not necessarily in the short run. c.) Calculate the short run shut-down price and the break-even price from a set of data.d.) Calculate the short run shut-down price and the break-even price from a set of data. |  |
| **Monopoly** | 1. Describe, using examples, the assumed characteristics of a monopoly: a single or dominant firm in the market; no close substitutes; significant barriers to entry.
2. Describe, using examples, barriers to entry, including economies of scale, branding and legal barriers.
3. Explain that the average revenue curve for a monopolist is the market demand curve, which will be downward sloping.
4. Explain, using a diagram, the relationship between demand, average revenue and marginal revenue in a monopoly.
5. Explain why a monopolist will never choose to operate on the inelastic portion of its average revenue curve.
6. Explain, using a diagram,
	* the short- and long-run equilibrium output and pricing decision of a profit maximising (loss minimising) monopolist, identifying
	* the firm’s economic profit (abnormal profit), or losses.
7. Explain the role of barriers to entry in permitting the firm to earn economic profit (abnormal profit).
8. Explain, using a diagram, the output and pricing decision of a revenue maximising monopoly firm.
9. Compare and contrast, using a diagram, the equilibrium positions of a profit maximising monopoly firm and a revenue maximizing monopoly firm.
10. Calculate from a set of data and/or diagrams the revenue maximising level of output.
11. With reference to economies of scale, and using examples, explain the meaning of the term 'natural monopoly'.
12. Draw a diagram illustrating a natural monopoly.
13. Explain, using diagrams, why the profit maximizing choices of a monopoly firm lead to allocative inefficiency (welfare loss) and productive inefficiency.
14. Explain why, despite inefficiencies, a monopoly may be considered desirable for a variety of reasons, including the ability to finance research and development (R&D) from economic profits, the need to innovate to maintain economic profit (abnormal profit), and the possibility of economies of scale.
15. Evaluate the role of legislation and regulation in reducing monopoly power.
16. Draw diagrams and use them to compare and contrast a monopoly market with a perfectly competitive market, with reference to factors including efficiency, price and output, research and development (R&D) and economies of scale.
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| **Monopolistic competition** | 1. Describe, using examples, the assumed characteristics of a monopolistic competition: a large number of firms; differentiated products; absence of barriers to entry and exit.
2. Explain that product differentiation leads to a small degree of monopoly power and therefore to a negatively sloping demand curve for the product.
3. Explain, using a diagram, the short-run equilibrium output and pricing decisions of a profit maximizing (loss minimizing) firm in monopolistic competition, identifying the firm’s economic profit (or loss).
4. Explain, using diagrams, why in the long run a firm in monopolistic competition will make normal profit.
5. Distinguish between price competition and non-price competition.
6. Describe examples of non- price competition, including advertising, packaging, product development and quality of service.
7. Explain, using a diagram, why neither allocative efficiency nor productive efficiency are achieved by monopolistically competitive firms.
8. Compare and contrast, using diagrams, monopolistic competition with perfect competition, and monopolistic competition with monopoly, with reference to factors including short run, long run, market power, allocative and productive efficiency, number of producers, economies of scale, ease of entry and exit, size of firms and product differentiation.
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| **Oligopoly**  | 1. Describe, using examples, the assumed characteristics of an oligopoly: the dominance of the industry by a small number of firms; the importance of interdependence; differentiated or homogeneous products; high barriers to entry.
2. Explain why interdependence is responsible for the dilemma faced by oligopolistic firms – whether to compete or to collude.
3. Explain how a concentration ratio may be used to identify an oligopoly.
4. Explain how game theory (the simple prisoner’s dilemma) can illustrate strategic interdependence and the options available to oligopolies.
5. Explain the term 'collusion', give examples, and state that it is usually (in most countries) illegal.
6. Explain the term 'cartel'.
7. Explain that the primary goal of a cartel is to limit competition between member firms and to maximise joint profits as if the firms were collectively a monopoly.
8. Explain the incentive of cartel members to cheat.
9. Analyse the conditions that make cartel structures difficult to maintain.
10. Describe the term 'tacit collusion', including reference to price leadership by a dominant firm.
11. Explain that the behaviour of firms in a non-collusive oligopoly is strategic in order to take account of possible actions by rivals.
12. Explain, using a diagram, the existence of price rigidities, with reference to the kinked demand curve.
13. Explain why non-price competition is common in oligopolistic markets, with reference to the risk of price wars.
14. Describe, using examples, types of non-price competition.
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| **Price discrimination** | 1. Describe price discrimination as the practice of charging different prices to different consumer groups for the same product, where the price difference is not justified by differences in cost.
2. Explain that price discrimination may only take place if all of the following conditions exist: the firm must possess some degree of market power; there must be groups of consumers with differing price elasticities of demand for the product; the firm must be able to separate groups to ensure that no resale of the product occurs.
3. Draw a diagram to illustrate how a firm maximises profit in third-degree price discrimination, explaining why the higher price is set in the market with the relatively more inelastic demand.
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