Essay Question 1:

Economists usually begin their analysis of decision-making by firms by assuming that the objective of a firm is to maximise its profit. In reality, however, there are many different objectives that a firm might adopt.

(a) Explain the likely effects on a firm's price and output when its objective changes from profit maximisation to profit satisficing.

(b) Discuss the most appropriate strategy that a firm could adopt if its objective was to reduce the competition that it faces.

Suggested Answer:

Part (a)

Introduction:
[Definition] Profits = Total revenue – total cost.

All firms ultimately, or traditionally, aim to maximise profits. However, in reality, firms do not necessarily set price and output at profit-maximising levels and may set price and output at profit satisficing levels, due to lack of information or violation of the ceteris paribus assumption, or unwanted attention from the government.

Body/ Development:

Topic sentence: For firms to maximise profit, they would produce and set prices where Marginal Cost is equivalent to Marginal Revenue (MC=MR), and where MC cuts MR from below.

Explain with economic analysis:
MC is the change in total cost as a result of producing an additional unit of output. It shows the extra cost of producing an additional unit of output. On the other hand, MR is the additional revenue gained by selling one more unit of output. Assuming that the firm is a large, dominant firm, Figure 1 shows the profit-maximising price and output, ceteris paribus.

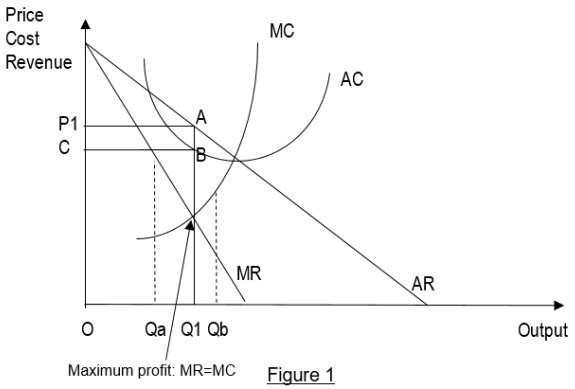

Figure 1

If the firm produces OQa where MR > MC, then producing the last unit of output adds more to revenue than to cost. This implies that the firm should increase its output till Q1 where MR = MC. Hence the total profit of the firm could be increased by producing another unit of output.

Conversely, if the firm produces OQb where MR < MC, then producing the last unit of output adds more to cost than to revenue. This implies that the firm should reduce its output till Q1 where MR = MC. Total profit could be increased if the last unit of output were not produced.
Thus, profit (area P1ABC) is maximised when the firm produces OQ1 where MC = MR provided MC cuts MR from below.

Topic sentence: The firm's price may rise and output may fall when its objective changes from profit maximisation to profit satisficing.

Explain with economic analysis:
Rather than trying to maximise profits, firms may aim to profit satisfice where managers aim for a profit level that will keep shareholders happy. This may be because they are reluctant to accept the increased risks and pressures associated with fiercely competitive policies, or because they are seeking to satisfy not only shareholders but also other stakeholders such as workers, consumers, suppliers, the local community and environmentalists. These groups may have different objectives: consumers want low prices and high quality; workers want high wages, job satisfaction and security; suppliers want a high price; the local community want employment but an absence of congestion; and environmental groups want a clean environment and the conservation of flora and fauna.

For example, rather than trying to maximise profits, firms may aim to profit satisfice when managers prize a positive work environment and employer-employee relationships over profit-maximisation. In such a case, a manager, instead of sacking underperforming workers and go through the difficulty of firing workers in the process creating a bad feeling in the workplace, may continue to employ them. All these will subsequently raise the MC and AC for the firm. The firm will then produce at a higher price of P2 and a lower output of Q2 where MC = MR provided MC cuts MR from below as seen in Figure 2. It will also reduce profits in the short run from area P1ABC to area P2C2CD. Although profits are lower than what the firm could have earned if it had chosen to maximise profits, the strategy keeps employees happy and still makes enough profits to keep shareholders satisfied. The same analysis could apply to firms which choose more costly but environmentally friendly production methods in line with beliefs rooted in sustainable living and are quite satisfied with lower profits of P2C2CD which are sufficient to keep shareholders and stakeholders satisfied. An example would be H&M, which has pledged to become 100% climate positive by 2040 by using renewable energy and increasing energy efficiency in all its operations, including making a commitment to make the first two tiers of its supply chain climate neutral by 2030. H&M has also pledged to use 100% recycled or sustainable materials by 2030, a pledge that is also evident in IKEA.

Profit satisficing could also see a fall in price and rise in output compared to profit-maximising. This is particularly evident in sole proprietor mom-and-pop shops (usually small, independent and family-owned businesses). It is not uncommon for food hawkers to keep prices low despite hikes in production cost causing MC & AC to rise from AC1 & MC1 to AC2 & MC2 due to rising energy or ingredient prices. In this case price is kept at P1 instead of rising to P2 if the hawker had been profit-maximising and output remains at Q1 instead of falling to Q2, causing lower profits of P1AXY instead of P2C2D – which keeps the hawker satisficed as his customers can continue enjoying his dishes at affordable prices. Another example is when, for the benefit of society, a non-profit tuition agency hoping to reach out to and benefit as many underprivileged children as possible charges its tutees a price that is just enough to cover average cost of tutoring at PT where AR (=DD) = AC i.e., AC-pricing, choosing to earn normal profit at price PT & quantity QT rather than maximise profits at P1ABC by charging price P1 and providing Q1 amount of tuition services.

Such pricing and output behaviour could also be applied to a firm seeking not so much social good, but longer-term market share dominance. Such a firm might conduct AC-pricing where AR = AC in the short run, setting a price and output level (PT and QT) that is respectively lower and higher than that which maximises profits (P1 and Q1) and be satisfied with lower or even normal profit in the short-run (as opposed to P1ABC1) in order to maximise sales/growth so as to monopolise the market, charge higher prices and earn larger profits in the long run.

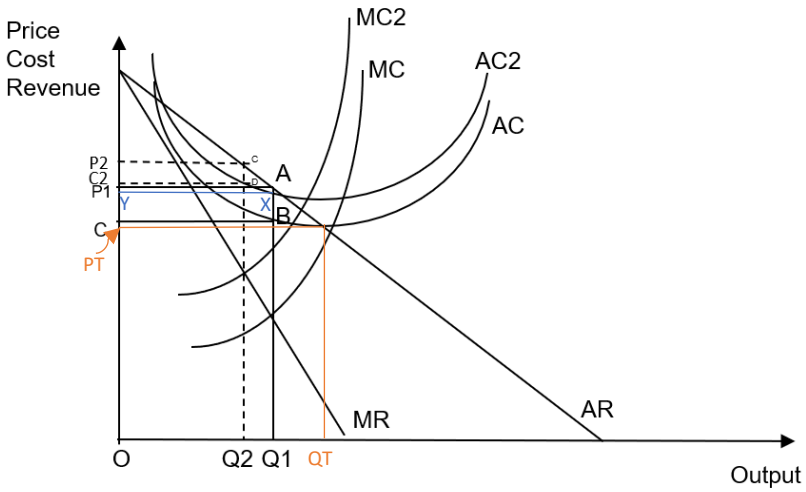

Figure 2

One example of profit satisficing that sees price higher and quantity lower than profit-max; and one where price is lower and quantity higher than profit-max.

Conclusion:

Firms can also have other objectives such entry deterrence to prevent the entry of new firms or aim to increase market share and hence market power via predatory pricing to reduce the competition that it faces.

Mark Scheme (a):

Level	Descriptors	Marks
L3	For a response which shows strong economic analysis to explain how firms determine price and output when maximising profits and the impact on price and output when there is change in the firm objectives changes from profit maximization to profit satisficing.	8-10
L2	For an under-developed explanation. Appropriate economic concepts and analysis is used but analysis lacking to address the change on the impact on price and output when there is change in the firm objectives changes from profit maximization to profit satisficing.	5-7
L1	For an answer that shows some knowledge of the objectives of profit maximisation and profit satisficing. OR an undeveloped answer that contain inaccuracies.	1-4

Part (b)

Introduction:

Firms can employ a range of price and non-price strategies to achieve its objective to reduce the competition that it faces by preventing entry of new firms or increasing its market share and hence market dominance.

Body/ Development:

Topic Sentence: Firms might be aware of potential entrants into the market. To reduce the competition that it faces and avoid losing market share to these new entrants, incumbent firms could decide to focus their non-price and price decisions to reduce competition as well as deter the entry of new firms.

Candidates just need to choose and explain 2 price and non-price strategies

Requirement #1: Explain how firm can employ non-price strategy – product development to reduce competition as well as deter the entry of new firms:
In order to reduce competition and prevent new firms from entering the market, existing firms may adopt strategies such as product development. New firms are deterred from entering the market as they may not have sufficient capital to invest in producing similar products. An example would be Uniqlo, which has diversified its clothing range to include Airism and Heattech series, and more recently, face masks during the COVID-19 situation. Another example would be Grab which has included new features such as GrabMart and GrabExpress and a reward system to build brand loyalty in its application. New firms are deterred from entering the market as they may not have sufficient capital to invest in producing similar products and hence reduce competition that the incumbent firm faces. Existing firms which do not have as deep enough pockets i.e., accumulated profits as Grab and Uniqlo to carry out such product development will also find themselves losing out in terms of non-price competitiveness to Grab and Uniqlo.

However, extensive product development to differentiate its products could result in higher costs and thus lower profits for the incumbent firm. However, if the product development is successful in reducing the degree of substitutability of the products (i.e. fall in XED value) and subsequently making the demand relatively more price inelastic (i.e. fall in PED value) as the availability of close substitutes falls, the existing firms can then increase prices and thus total revenue earned, ceteris paribus. Moreover, if the product development is successful this will lead to a favourable change in tastes & preference towards the product, thereby making a rise in demand and hence revenue for its products. Profits thus rise, assuming costs remain constant.

However, engaging in innovation would incur higher costs for firms, which could, in the short run, lower profits even further before total revenue rises in the longer run. This could even lead to subnormal profits, increasing the risk of closure in the short run.

[E/Criterion: Availability of resources / Type of market structure] Firms such as bubble tea outlets belonging to monopolistically competitive markets which are less concentrated due to weaker barriers to entry will very likely find themselves in such situations due to their lack of accumulated profits. As these firms tend to earn normal profit in the long run, they have hardly any reserves to withstand losses, increasing their risk of closure in the short run from such product development. In fact, it is even questionable whether firms in more competitive markets are able to carry out such product development to reduce competition, since they lack the financial reserves and are therefore only capable of small scale, cosmetic non-price competition in the form of product differentiation such as selling unusual concoctions or offering special drinks on certain days of the week – strategies which could be easily copied and so might be less effective in reducing competition.

Requirement #2: Explain how firm can employ price strategy – such as predatory pricing to induce exit of firms and so reduce competition:
In an attempt to increase the firm's market share and hence market power to reduce the competition that it faces, decisions could be made with the aim of driving rival firms out of the market.

For example, incumbents like Grab may deliberately make it difficult for the new entrants like Plum to stay in the online food delivery industry or deter new entrants into this industry by offering promotions such as a lower minimum order for free delivery which could be a predatory pricing strategy, since (1) the low price is insufficient to cover new firms' average costs due to its much smaller production scale that limits it from enjoying large internal EOS earn subnormal profits and (2) its high AVC is likely to exceed its low AR given its limited consumer base as it is a new firm that has yet gain consumers' trust and confidence in its food delivery services new entrant has to shut down and should the losses persist into the long term, it will exit the industry, evidenced from food delivery start-up Plum's exit from the online food delivery industry.

Firm engaging in predatory pricing involves the firm temporarily pricing its product below its average cost (C1) at P1 (Figure 4) in order to drive new entrants out of business. The firm will make a loss (i.e. subnormal profits) of area C1P1ba now or in the short run.

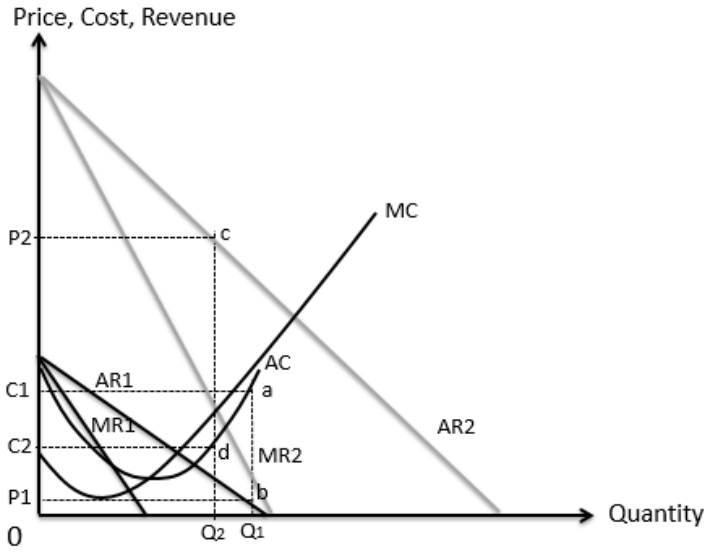

Figure 4

Once the predator's rivals drop out of the market in the long run, the firm's demand rises to AR2. It can then restrict output and charges a market dominant price (P2), well above its production cost (C2). It makes supernormal profit of area P2C2dc. This will be a profitable strategy if the firm can charge the market dominant price for a long period to offset the losses it experienced while driving its rivals out of business.

However, this means that the firm employing predatory pricing would be earning subnormal profits/making losses in the short run.
[E/Criterion: Availability of resources]: The viability of the strategy is dependent on the ability of the firm to recoup its short run losses in the long run. This strategy will only work and ensure profitability if Grab can charge the monopoly price for a long period to offset the losses it experienced while driving its rivals out of business. Otherwise, if the firm continues to earn subnormal profits in the long run, they may end up having to shut down since AR<AC. Therefore Grab will need to ensure they have the ability to recoup their losses in the long run if they decide to pursue this objective. In this instance, Grab, being an established firm, and having enjoyed supernormal profits as the dominant firm, is likely to have deep enough pockets due to accumulated supernormal profits, to withstand these losses. This is unlike newcomers which have yet to make any profit and so will likely shut down and exit the industry.

Moreover, being an established firm serving a sizeable proportion of the market, Grab is likely to enjoy much lower unit cost due to internal economies of scale compared to newcomers – this means Grab is able to charge a much lower price than newcomers to inflict huge losses on them and increase the likelihood of them shutting down and exiting the industry.

Other possible strategies: Mergers & acquisitions, limit pricing

Conclusion:

Whether the strategy to reduce competition is appropriate depends on the following criterion:

[Criterion]: Time Period
In the short run, it would be appropriate for the firms to reduce the competition it faces by predatory pricing. However, predatory pricing leads to subnormal profits which are strategies that can only be applied for a short time and not sustainable in the long run. This may even lead to firms shutting down if they do not have enough supernormal profits to fund these strategies. Hence, employing non-price strategy of product innovation would be a more appropriate long-term policy.

[Criterion]: Government intervention
The appropriateness of the strategy depends on whether the government will actively intervene to protect consumers' welfare. This is because if firms employ predatory pricing to drive out rival firms to increase the market share and charge high price to earn high profits, governments may step in to intervene to prevent exploitation of consumers. As such, to reduce unwanted attention from the government, predatory pricing would be the least appropriate policy to reduce the competition that the firm faces. For instance, Competition & Consumer Commission of Singapore (CCCS) imposes anti-trust laws to prevent anti-competitive behaviour of firms as predatory pricing is considered an abusive tactic/dominant undertaking and is against the law.

Mark Scheme (b):

Level	Knowledge, Application, Understanding & Analysis	Marks
L3	Well-developed and balanced analysis with good scope and depth that clearly analyses both price- and non-price strategies to reduce competition that a firm faces.	**8-10**
L2	For an underdeveloped answer • that does not have sufficient scope; explains only price or non-price strategies OR • lacks a clear explanation of how the various strategies reduce competition that a firm face	**5-7**
L1	For an answer that shows some knowledge of the various strategies that can be employed to reduce the competition that a firm face.	**1-4**
Evaluation		
E3	For a well substantiated evaluative judgement on the appropriateness of the strategy that firms can employ to reduce the competition that they face with a summative conclusion on whether price or non-price strategies are most appropriate using a specified criterion.	**5**
E2	For an answer that makes some attempt at an evaluation on the most appropriate strategy that firms can employ to reduce the	**3-4**

	competition that they face but is underdeveloped or lacking a summative conclusion.	
E1	For an answer that gives an unsupported evaluative statement(s) that addresses the question.	**1-2**