Suggested Answers H2 Prelim CSQ Q1

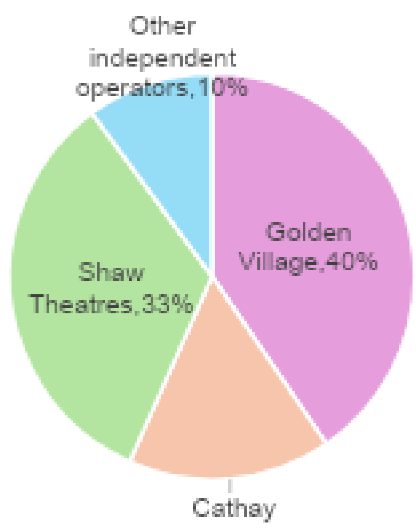
Question 1: The Cinema Scene in Singapore

Figure 1: Cinema Attendance in Singapore (in millions of persons)

Source: Singapore Film Commission, retrieved 10 July 2025

Figure 2: Cinema Operator Market Share^ in Singapore (2023)

^Based on number of movie screens



Source: www.dollarsandsense.sg, 30 March 2025

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Extract 1: Hollywood – A Cost Savings Heaven for Film Makers

From the early years of the twentieth century, right down to the present, the United States has been the world's major commercial producer of films and movies. Films and movies production in the United States as a whole, generated revenues of $26.7 billion in 2023, with Hollywood (located in Los Angeles) alone being responsible for almost 85% while other states in the United States account for the remaining 15%.

Hollywood offers film makers access to a dense network of specialized suppliers, such as computer generated imagery (CGI) studios and costume designers, which streamlines production. The availability of a large pool of skilled labour such as editors, stunt coordinators, and cinematographers makes hiring of professionals faster for film production. The clustering of film activity also enables shared use of advanced infrastructure like Universal Studios and post-production facilities such as Technicolor and Deluxe Entertainment, which provide services like colour grading, visual effects, and sound mixing. All these enables film makers to achieve cost savings when they locate their productions in Hollywood.

Adapted: Yale Global Online, accessed 9 July 2025

Extract 2: Impact of a rise in GST on the entertainment industry

Singapore will raise its goods and services tax, otherwise known as the GST, from 7% to 8% in 2023. It's the first of two scheduled hikes of the GST, with the second slated to take place in January 2024, when the GST will be raised from 8% to 9%.

Euston Quah, Head of Economics at the Nanyang Technological University (NTU) said "Some business sectors may be more affected than others. Businesses such as theatre plays will be more affected by the hike than businesses that sell basic necessities, such as supermarkets."

"The difficulty of persuading people to spend money on non-essential entertainment is not new, though it is becoming more and more challenging", said Sing'theatre artistic director Nathalie Ribette: "We cannot raise the ticket prices more."

Source: Adapted from CNBC, 28 December 2022

Table 1: Singapore Cathay Cineplex Movie Ticket Pricing

	Adult	**Student**	**Senior Citizen (Aged 55 and above)**
Weekdays	$11	$7 (before 6pm)	$5 (before 6pm)

Source: www.cathaycineplexes.com.sg, accessed 10 July 2025

Extract 3: Cathay Cineplex at Parkway Parade to cease operations

Entertainment company mm2 Asia, which operates the Cathay brand of cinemas in Singapore, will be shutting yet another cinema complex – its third closure in just over a year. The announcement of the latest cinema closure comes after mm2 Asia reported a loss of $22.7 million for the financial year 2022.

Retail experts said changing consumer habits have impacted ticket sales, as more streaming options become readily available. Ms Karen Chia**,** assistant director at Nanyang Polytechnic's School of Business Management, said: "The cinema landscape in Singapore is facing a triple threat: the meteoric rise of streaming giants like Disney+ and Netflix, higher operating costs due to tight labour market and rising rental cost, and dwindling ticket sales post-Covid-19 restrictions. It's a tough time, causing major cinema operators to throw in the towel."

Source: The Straits Times, 21 August 2023

Extract 4: Cinemas can bounce back with some novel ideas

Shaw Theatres, which runs eight cineplexes across the island, said it aimed to keep ticket prices as affordable as possible by leveraging on technology to counter rising labour cost. The operator also has two cinemas in Balestier and Changi Airport's Jewel mall dedicated to families with young children, complete with bean bags, ball pits and toys. Shaw Theatres said that it has observed a growing demand for its premium experiences and that these offerings really took off after the Covid-19 pandemic. The operator has also enhanced the cinema experience through luxurious offerings like their Premiere and Lumiere halls, featuring amenities such as plush, reclining seats, individual USB charging ports, and in-hall dining options. Shaw Premiere also provides a premium experience with lounge access, deluxe leather seats, and dine-in services.

And Cathay Cineplex, despite its recent closures, began operations at Century Square Mall in Tampines last year and presented its own attempt at a novel cinema. All its six halls feature neon signs and reclined lounges in the form of wave-shaped seats, aim at providing extra comfort and luxury to its customers.

Source: Channel NewsAsia, 29 September 2024

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Questions

(a) With the aid of a diagram, explain one cost advantage for film makers when they locate their productions in Hollywood. [3]

(b) With reference to Extract 2, explain the impact of rising GST on consumers expenditure on non-essential entertainment such as watching a movie. [3]

(c) Using Figure 2, explain the type of market structure in which the cinema industry in Singapore is operating in. [2]

(d) **(i)** Using appropriate examples, distinguish between fixed cost and variable cost in the cinema industry. [4]

(ii) Using relevant case material, assess whether revenue or cost factors are more significant in contributing to the shutting down of cinemas in Singapore. [8]

(e) Discuss how far the concepts of price elasticity of demand and income elasticity of demand are useful to a firm like Shaw Theatres to raise its total revenue. [10]

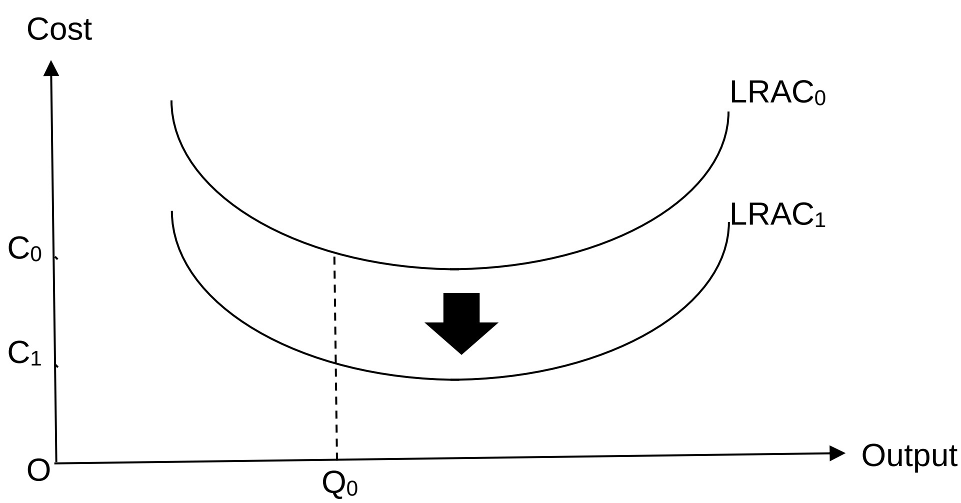
[Total:30]

(a) With the aid of a diagram, explain one cost advantage for film makers when they locate their productions in Hollywood. [3]

External economies of scale occur due to the **geographical concentration** of firms in the industry. By locating at Hollywood, film makers can enjoy lowering of long run average cost from $LRAC_0$ to LRAC1 as seen in Figure 1 due to the expansion of the industry.

Evidence from Extract 1: “competitive advantages generated by its unrivalled technical and organizational capacities and its unique pool of talent drawn from many different countries”

Figure 1: External Economies of



Development of Industry Facilities

The clustering of film-related activities in Hollywood has resulted in the development of advanced, industry-specific infrastructure that all firms can use. This includes purpose-built sound stages, production studios, editing suites, and transportation networks tailored for film logistics. Such shared resources eliminate the need for individual firms to make large fixed investments, thereby lowering long-run average costs. For instance, multiple studios often use the same production lots owned by Paramount or Warner Bros, significantly reducing overhead expenses.

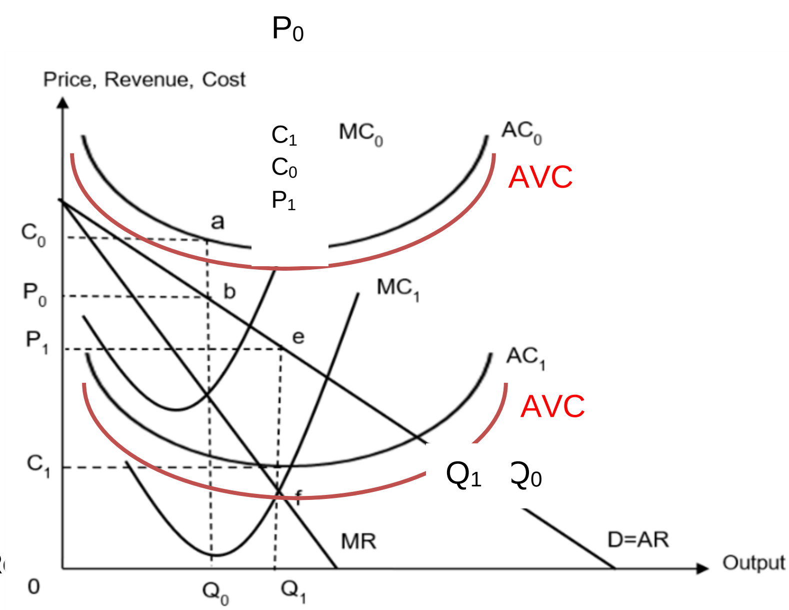
Availability of local skilled labour force

As the Hollywood film industry expands, it attracts a large and concentrated pool of skilled labour, including actors, directors, editors, and technicians. This readily available talent pool allows firms to recruit experienced professionals without incurring high training or relocation costs. The presence of such expertise also raises productivity and reduces production errors, contributing to lower long-run average costs. For instance, a film studio can easily hire an experienced cinematographer in Los Angeles without conducting a global talent search.

	<u>Disintegration</u> Hollywood's industry growth has led to the development of numerous specialized suppliers and support services, such as costume designers, set builders, visual effects studios, and sound engineers. Firms benefit by outsourcing these services rather than investing heavily in internal departments, thereby reducing capital expenditure and operational costs. For example, many studios use third-party visual effects firms like Industrial Light & Magic, which offer economies of scale themselves, allowing smaller producers to access high-quality services at lower unit costs. *Accept any logical reasoning for external EOS reaped <u>without the need to state the type of eEOS</u> 1m – explain one example for eEOS reaped 1m – explain how it leads to cost savings for film makers (don't need to name the "types" of eEOS) 1m – diagram (need to show lowering of LRAC)
(b)	With reference to Extract 2, explain the impact of rising GST on consumers expenditure on non-essential entertainment such as watching a movie. [3]
	The Goods and Services Tax (GST) is an example of an indirect tax, which is compulsory payment to the government. It is imposed on the consumers via the producers during the consumption of goods and services. [Supply fell] The increase in GST will lead to a higher cost of production for cinema operators as they need to pay the tax revenue directly to the government regardless of their ability to transfer the tax to consumers. This lowers the willingness and ability of cinema operators to produce movie screening services. Supply for movie screening will fall, creating a shortage at initial market price and eventually leading to an upward pressure on equilibrium price to clear the shortage. Equilibrium quantity will also fall. [PED: elastic] The demand for movie screening is price elastic due to the low degree of necessity. As such, an increase in price of movie screening will lead to a more than proportionate fall in quantity demanded of movie screening. [Impact on consumer expenditure] The increase in consumer expenditure due to the increase in price is smaller than the fall in consumer expenditure due to the fall in quantity demanded. As a result, consumers expenditure on non-essential entertainment e.g. watching a movie will fall. 1m: Rising COP leading to falling supply 1m: state and explain the PED for non-essential entertainment e.g. watching movie 1m: Impact on consumers expenditure (To compare the increase vs decrease in CE)

c)	Using Figure 2, explain the type of market structure in which the cinema industry in Singapore is operating in. [2]
	The cinema industry is operating in an oligopoly as the **3-Firm concentration ratio is 90%**. This shows that the cinema industry is dominated by **a few large firms e.g Cathay, Golden Village and Shaw Theatre**. 1m – dominated by a few large firms (Cathay, Golden Village and Shaw Theatre) 1m – use of firm-concentration ratio
d(i)	Using appropriate examples, distinguish between fixed cost and variable cost in the cinema industry. [4]
	The differentiation applies to the short run period, when a firm has gone into production. These two costs differ in terms of the relationship with the change in output level. ● Once a firm has committed its resources into a business (short run period), the total fixed cost does not rise with rising (or falling) output. An example of a fixed cost is the rental cost incurred by the cinema operators. Even if there are more ticket sales, the amount of rental cost incurred is the same OR Even if the cinema close operation for the day, the amount of rental cost incurred is the same. ● Total variable cost on the other hand will rise when output level rises and vice versa. An example of a variable cost is the wage cost incurred. With ticket sales, the cinema operators will need to hire more part-time workers for ticket sales, F&B counters and cleaning. This increases the wage cost incurred by the cinema operators as the number of ticket sales increases. 2m - Differentiation between fixed and variable cost 2m – Contextualised Examples (one for each type of cost) *Note: Students can also use sunk cost as an example of fixed cost.
(d)(ii)	Using relevant case material, assess whether revenue or cost factors are more significant in contributing to the shutting down of cinemas in Singapore. [8]
	Falling revenue due to changes in taste and preferences of consumers towards online streaming and rising labour and rental cost as mentioned in Extract 3 have contributed to the shutting down of cinemas in Singapore. **Requirement 1: Explain how changing taste and preference can lead to falling AR** The rise of online streaming has reduced the profits of cinema operators. Online movie streaming has been gaining popularity due to the rising convenience. Together with the wide range of movies from many different genre and original content, this convenience of access to

	online movies causes a change in taste and preference of consumers. Since online movie streaming and the movies screened at the cinemas are substitutes in consumption, consumers will switch over from watching movie at physical cinemas to online movie screening instead. Demand for movies at the physical cinemas will fall from D_0 to D_1. The total revenue of cinema operators to fall from OP_0eQ_0 to OP_1bQ_1. Assuming no change in total cost, supernormal profits of cinema operators will fall from C_0P_0ef to a subnormal profit of P_1C_1ab. If the fall in AR is very significant to the extent that the AR < AVC, the cinema operators will shut down the cinema to minimize losses.



R **an lead to rising AC and MC**

Rental is a fixed cost incurred by the cinema operators for the use of shop space while labour can be a fixed or variable cost depending on whether they are part timers or full time staff. With rising rental and labour wage cost, the MC and AC of the cinema operators will increase from AC_0 and MC_0 to AC_1 and MC_1 respectively. Initially rise in AC and MC will cause the initial supernormal profits of the cinema operators from C_0P_0ef to fall to a subnormal profit of P_1C_1ab. If the rise in MC is very significant to the extent that the AVC > AR, the cinema operators will shut down the cinema to minimize losses.

MC_1 AC_1

C_1

P_1 MC_0

P_0 AC_0

C_0

[Evaluation – Perspective]
While the tight labour market will continue to persist, the cinema operators can easily invest in labour saving technology to reduce the reliance on labour. They can also locate at heartland malls which have a lower rental cost as compared to prime areas which have a relatively higher rental cost. However, the changes in taste and preference of consumers is a permanent change. This can be further supported by Figure 1 when there is a weak recovery in cinema attendance (more than 50% fall compared to pre-covid) despite the post-covid period when the social distancing measures have been lifted and income of consumers have been rising. Hence the revenue factor seems to be more significant in contributing to the shutting down of cinemas in Singapore.

Level	Description	Marks
L2	Developed explanation on the how the rise of online movie streaming and rising cost can lower the profit level of cinema operators, causing AR < AVC	4-6
L1	Undeveloped explanation on the how the rise of online movie streaming and rising cost can lower the profit level of cinema operators, causing AR < AVC	1-3

A further 2 marks is awarded for evaluation points on ways whether the subnormal profits will persist into the long run and how cinema operators can respond to the falling profits.

(e) Discuss how far the concepts of price elasticity of demand and income elasticity of demand are useful to a firm like Shaw Theatres to raise its total revenue. [10]

Focus: PED, YED concepts, link to Total Revenue
Tools of analysis: DD/SS
Context: Cinema market in Singapore

[Outline approach]

- PED can be used in analysing the extent rise in quantity demanded for cinema visits due to use of price strategy and subsequently, the impact on total revenue.
- YED can be useful in analysing the impact on rise in demand for cinema services given the provision of premium cinema experience and subsequently, the impact on total revenue.

Introduction:

[Brief overview of context]
The market for movie-going and cinema shows has been facing dwindling ticket sales and higher operating costs.

There is thus the need for cinema operators, like Shaw Theatres to change their business models and current firm strategy in order to attracting more cinema goers to raise the total revenue. To do so, cinema operators like Shaw Theatres may have to consider the useful of elasticities of demand such as PED and YED.

[Define key terms]

- Total revenue is the product of equilibrium price and quantity (TR = P X Q).
- Price elasticity of demand (PED), which measures the degree of responsiveness of the change in quantity demanded of a good given the change in price of the same good, ceteris paribus.
- Income elasticity of demand (YED), which measures the degree of responsiveness of the demand for a good to a change in the income of consumers, ceteris paribus.

Requirement 1: Explain how PED can be useful to raise total revenue of cinema operators

- Cinema operators e.g. Shaw Theatre can identify the PED for their movie tickets by the different consumer group and adopting pricing strategy accordingly.
- E.g. Table 1 shows Cathay Cineplex adopting price discriminate based on the PED for different consumers group.
- The demand for movie tickets by students and senior citizens tends to be more price elastic due to the larger proportion of income spent on the movie especially when they are not actively working and earning an income.
- By charging a lower price for them, there will be a more than proportionate increase in quantity demanded. The increase in TR due to the increase in quantity demanded

	will be greater than the fall in TR due to the fall in price. Shaw's Theatre will be able increase its total revenue. ● On the other hand, the demand for movie tickets by adults tends to be more price inelastic due to the lower proportion of income spent on the movie. ● Despite a higher price charged for this group of consumers, there will be a less than proportionate fall in quantity demanded. The increase in TR due to the increase in price will be greater than the fall in TR due to the fall in quantity demanded. Shaw's Theatre will be able to increase its total revenue. ● Hence, PED is useful to Shaw Theatre in formulating pricing strategies to increase total revenue. (Note: If product differentiation is mentioned, it must still be linked to pricing strategy i.e. making demand more price inelastic and how Shaw Theatre can increase price to increase total revenue) EVR1: [Reality vs Theory] PED is estimated from historical data or surveys, but consumer preferences, income levels, and substitutes can change over time. This makes the responsiveness of quantity demanded uncertain. For example, past data may not reflect future reactions if new substitutes enter the market and, in this case, the presence of online streaming have presented a strong substitute for movies at the cinema. This can make the demand for movies at the cinema price elastic for the consumers of all age group who are more tech-savvy. Adopting pricing strategy by segmenting consumers by their age group might not work as intended. **Requirement 2: Explain how YED can be useful to raise total revenue of cinema operators** [Rise in Demand by more than proportionate given usefulness of YED ● Given Singapore moves into post-covid and her economy recovering, average households incomes will be increasing. The increase in households purchasing power can lead to an increase in the demand for normal goods especially for the case of luxury goods (YED > 1) which will experience a more than proportionate increase in demand. In view of this, Shaw Theatre may use the YED concept to design strategies to raise its total revenue. ● [Which product to produce] Shaw Theatre can enhance the movie experience and make the cinema movie experience more luxurious. This is seen in Extract 4 when Shaw Theatre offers luxurious experiences with amenities such as plush, reclining seats, individual USB charging ports, and in-hall dining options and even lounge access, deluxe leather seats, and dine-in services to attract higher income consumers. The strategies appears to have paid off as Shaw Theatres observed a growing demand for its premium experiences after the Covid-19 pandemic.

- The significant increase in demand for Shaw's premium movie experience will lead to an increase in both price and quantity, causing Shaw Theatre's total revenue to increase significantly.

EVR2:

- **[Short Run vs Long Run]** The upgrading of cineplex is costly and takes time for renovation to be completed. As the cinema industry is operating in an oligopolistic market structure, Shaw Theatres does have the financial ability from the accumulated profits to upgrade and provide more premium movie experience. However the increase in total revenue will only be more observable in the long run.
- Furthermore, as seen in Figure 1, the cinema attendance has been weak despite post-covid period where the social distancing rules have already been lifted. This suggests that the change in taste and preference in favour of online stream will continue to persist and cinema operators need to work on creating a unique movie experience in order to attract customers again and increase profits.

Conclusion:

- **[Stand + Situation]** The understanding of PED and YED concepts can help firms such as Shaw Theatres to a large extent in planning for its price and non- price strategies to raise total revenue.
- **[Assumption]** The above analysis on the use of elasticity concepts (PED, YED) assumed ceteris paribus– holding all other factors constant. However, factors such as changes in rival firms' strategies may also result in smaller rise in the demand of Shaw Theatres- depending on the closeness of substitutes (XED).
- **[Situation]** The uncertainty in the strategies outcome remains given the presence of imperfect information as the change in consumers' taste and preferences during the post- covid has been largely unprecedented for cinema operators such as Shaw Theatres.
  In the long run, when more consumers are willing to go to the cinema to watch movies again instead of online streaming, cinema operators will be able to enjoy increase in revenue for the longer term.

Marking Scheme

Level	Knowledge, Application/Understanding and Analysis	Marks
L2	For a developed answer that: ● Theoretical explanation of PED and linking it to the impact of total revenue	4 – 7

	• Theoretical explanation of YED and linking it to the impact of total revenue • Use of examples related to cinema operator, Shaw Theatres	
L1	For an underdeveloped answer that: • Theoretical explanation of PED and/ or YED • but lacks the depth of economic concepts or lacks the accurate of the economic concepts used • Lacking in the use of examples related to cinema firms, Shaw Theatres	1 – 3

Level	Evaluation Synthesis	Marks
E2	• A good conclusion that addresses both PED and YED • Good reasoning on the extent of the usefulness of the two strategies	3
E1	• Learnt evaluation of PED and/ or YED with reference to rising total revenue	1 – 2