# S4 Tourism and Hospitality Practice Paper 1 | Visitor growth, time zones, theme park revenue, food cost, exchange rates and carrying capacity (with answers and marking scheme)

**Senior Secondary Tourism and Hospitality**

S4 Tourism and Hospitality paper: visitor growth, flight time zones, theme park revenue, food cost, exchange rates and carrying capacity, with answers and marks.

## 1. Visitor arrivals and market share (18 marks)

*In a given year Hong Kong recorded 40,120,000 visitor arrivals, 6,120,000 more than the previous year. Arrivals by market were: Mainland 26,000,000, short-haul 8,000,000, with the rest long-haul. Three years earlier arrivals were 26,500,000.*

| # | Question | Answer and marking notes |
|---|---|---|
| 1 | (a) Calculate the year-on-year growth rate of arrivals (percentage, 1 d.p.). | Answer: growth rate = 6,120,000 / 34,000,000 x 100% = 18.0%. |
| 2 | (b) Find the percentage share of the Mainland, short-haul and long-haul markets. | Answer: Mainland 64.8%, short-haul 19.9%, long-haul 15.3% (about 100% in total). |
| 3 | (c) Using the year three years earlier as the base, find the compound annual growth rate (CAGR, 1 d.p.). | Answer: CAGR = (34,000,000 / 26,500,000)^(1/3) - 1 = 8.7%. Arrivals rose by 7,500,000 over the three years. |
| 4 | (d) The long-haul market has the smallest share. Suggest one product idea a travel agent could use to attract it, with a reason. | Answer: offer a 4-5 night in-depth package bundling hotel, guided tours and transport. Long-haul visitors fly far and stay longer, so they value a complete, time-saving itinerary; a package cuts their planning cost and raises spend per visitor. |

## 2. Flight time and time zones (16 marks)

*A flight leaves Hong Kong (UTC+8) for London (UTC+0 in winter). Flying time is 13 h 30 min and departure is 23:45 Hong Kong time.*

| # | Question | Answer and marking notes |
|---|---|---|
| 5 | (a) Find the local arrival time in London (state which day after departure). | Answer: 23:45 HKT + 13 h 30 min = 13:15 HKT next day; London is 8 h behind, so local time is 05:15 on day two. |
| 6 | (b) The return flight leaves London at 18:20 local time and flies 12 h 45 min. Find the Hong Kong arrival time. | Answer: 18:20 London = 02:20 HKT next day; plus 12 h 45 min gives 15:05 HKT. |
| 7 | (c) If the passenger instead transits in Dubai with a 2 h 30 min layover, what is the total journey time? | Answer: 12 h 45 min + 2 h 30 min = 15 h 15 min. |

| # | Question | Answer and marking notes |
|---|---|---|
| **8** | (d) Besides journey time, state two other factors a traveller weighs when choosing a direct or connecting flight. | Answer: fare (connecting flights are often cheaper) and baggage or misconnection risk (transit may require re-checking bags or missing the connection, while direct flights are safer); frequency and comfort are also acceptable. |

## 3. Theme park ticket revenue and costs (18 marks)

*A theme park sold 2,400,000 adult tickets ($780 each), 2,100,000 child tickets ($560 each) and 700,000 annual passes (average $1,200 each). Annual operating cost was $2,900,000,000.*

| # | Question | Answer and marking notes |
|---|---|---|
| **9** | (a) Calculate the revenue from each ticket type and the total ticket revenue. | Answer: adults $1,872,000,000, children $1,176,000,000, annual passes $840,000,000; total $3,888,000,000. |
| **10** | (b) Find the average ticket revenue per visitor (1 d.p.). | Answer: $3,888,000,000 / 5,200,000 = $747.69. |
| **11** | (c) Find the annual profit and the profit margin (percentage, 1 d.p.). | Answer: profit = $3,888,000,000 - $2,900,000,000 = $988,000,000; margin = $988,000,000 / $3,888,000,000 x 100% = 25.4%. |
| **12** | (d) The park raises the adult price by 8%%. If adult visits then fall by 5%%, find the new adult ticket revenue and compare it with the original. | Answer: new price = $780 x 1.08 = $842.4; visits = 2,400,000 x 0.95 = 2,280,000; new revenue = $1,920,672,000, i.e. $48,672,000 more than the original $1,872,000,000 (about 2.6%), because the price rise outweighs the drop in visits. |

## 4. Food cost percentage and menu pricing (16 marks)

*A restaurant's set meal costs $38 in ingredients per portion and sells at $95. Average daily sales are 320 portions over 30 trading days a month.*

| # | Question | Answer and marking notes |
|---|---|---|
| **13** | (a) Find the food cost percentage, the gross profit per portion and the gross margin. | Answer: food cost = $38 / $95 x 100% = 40.0%; gross profit = $95 - $38 = $57; margin = 60.0%. |
| **14** | (b) Calculate the total gross profit per day and per month. | Answer: per day = $57 x 320 = $18,240; per month = $18,240 x 30 = $547,200. |
| **15** | (c) If ingredient cost rises 12% and the restaurant keeps a 40% food cost, what should the new price be? | Answer: new cost = $38 x 1.12 = $42.56; new price = $42.56 / 0.4 = $106.40 (round to $106). |
| **16** | (d) Apart from raising prices, suggest one way to protect gross profit without changing the food cost percentage. | Answer: use standard portion control, cut wastage (prepare to forecast sales) or swap in seasonal substitutes for expensive ingredients, lowering cost per portion while holding the food cost percentage, so gross profit is protected. |

## 5. Exchange rates and travel budgeting (16 marks)

*A traveller plans to change HK$8,000 into Japanese yen. The bank quotes 19.2 yen per HK dollar and a money changer quotes 18.9.*

| # | Question | Answer and marking notes |
|---|---|---|
| **17** | (a) Calculate the yen obtained at the bank and at the money changer. | Answer: bank = 8,000 x 19.2 = 153,600 yen; money changer = 8,000 x 18.9 = 151,200 yen. |
| **18** | (b) What is the difference in yen, and roughly how many HK dollars is that at the bank rate? | Answer: difference = 153,600 - 151,200 = 2,400 yen; about 2,400 / 19.2 = HK$125.0. |
| **19** | (c) A traveller buys an item priced at 12,000 yen before 8% consumption tax. What is the tax-inclusive price? | Answer: tax-inclusive price = 12,000 x 1.08 = 12,960 yen. |
| **20** | (d) Airfare HK$4,200, hotel HK$900 per night for 5 nights, daily spending HK$600 for 6 days. Find the total trip cost and the surplus against a HK$15,000 budget. | Answer: hotel $4,500; meals $3,600; total $4,200 + $4,500 + $3,600 = $12,300; surplus against $15,000 is $2,700. |

## 6. Carrying capacity and waste management (16 marks)

*A site has a daily cap of 30,000 visitors and averages 27,500 on weekdays. Each visitor generates 0.85 kg of waste a day, the recycling rate is 35% and average transport emissions are 12 kg CO2 per visitor round trip.*

| # | Question | Answer and marking notes |
|---|---|---|
| **21** | (a) What is the weekday utilisation rate (1 d.p.)? State in one sentence whether it is close to the cap. | Answer: 27,500 / 30,000 x 100% = 91.7%, above 90% of the cap with only 2,500 places left, so the site is close to saturation. |
| **22** | (b) Find the total daily waste in kg and in tonnes (1 d.p.). | Answer: 27,500 x 0.85 = 23375 kg, about 23.4 tonnes. |
| **23** | (c) At the current recycling rate, find the daily waste sent to landfill; how much would be saved if the rate rose to 50%? | Answer: recycled 8181 kg, landfilled 15194 kg; at 50% landfill falls to 11688 kg, a cut of 3506 kg. |
| **24** | (d) Find the total daily CO2 from visitor transport and suggest one measure to manage carrying capacity. | Answer: 27,500 x 12 = 330,000 kg CO2. Measure: require online timed booking to spread arrivals away from peaks and promote shuttle bus or ferry travel to lower emissions per visitor. |