S6 Tourism and Hospitality Studies Practice Paper

S6 | Tourism and Hospitality Studies | Time: 75 minutes | Total: 100 marks | 24 questions

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Part 1: Tourism Receipts and Economic Contribution

Study the data below and answer the questions, showing all steps.

1. An economy receives 40 million visitor arrivals spending HK$6,500 each. Its GDP is HK$3 trillion. Find total tourism receipts in billion dollars and their share of GDP.

Answer: Receipts = 40 million x 6,500 = HK$260 billion, which is 8.67% of GDP. Tourism is an export of services, so receipts enter GDP directly, but a high share also means the economy is exposed to external demand, exchange rates, epidemics and geopolitics.

2. Of the visitors, 28 million stay overnight and spend HK$7,800 each; the other 12 million are same-day visitors spending HK$1,900 each. Find total receipts and spend per visitor.

Answer: Overnight receipts = HK$218.4 billion; same-day = HK$22.8 billion; total HK$241.2 billion, or HK$6,030 per visitor. Overnight visitors are 70% of arrivals but 90.5% of receipts, so lengthening stays beats simply raising headcount.

3. A tour operator sells a package at HK$4,800 with direct costs of HK$3,600. Find the gross profit and gross margin.

Answer: Gross profit = 4,800 - 3,600 = HK$1,200; margin = 1,200 / 4,800 x 100% = 25%. The margin must cover labour, rent and promotion before any operating profit, and off-season discounting erodes it further.

4. Arrivals rise by 12% and spend per visitor rises by 4%. Find the growth rate of total receipts.

Answer: Index = 1.12 x 1.04 = 1.1648, so growth is 16.48%. The effects multiply rather than add because both apply to the expanded base; exchange-rate moves would need separate adjustment.

Part 2: Aviation Load Factor and Fuel Cost

Study the data below and answer the questions, showing all steps.

5. Aircraft on a route have 320 seats and a 85% load factor. There are 6 departures a day each way, 365 days a year. Find passengers per flight and annual one-way traffic.

Answer: Passengers per flight = 320 x 0.85 = 272; annual one-way = 272 x 6 x 365 = 595,680. Each point of load factor is 3 more seats sold per flight, or 7,008 a year, so yield management beats adding frequency blindly.

6. The sector takes 3.5 hours and burns 2,400 kg of fuel an hour. Find fuel per flight, fuel per passenger and CO2 per passenger at 3.16 kg CO2 per kg of fuel.

Answer: Fuel per flight = 2,400 x 3.5 = 8,400 kg; per passenger = 30.88 kg; CO2 = 30.88 x 3.16 = 97.59 kg. A higher load factor spreads emissions over more passengers, while new aircraft, sustainable aviation fuel and direct routings are the main abatement options.

7. The average fare is HK$1,450 and the operating cost per flight is HK$300,000. Find revenue, profit and profit margin per flight.

Answer: Revenue = 272 x 1,450 = HK$394,400; profit = HK$94,400; margin = 23.94%. With very high fixed costs, each extra passenger adds almost pure fare revenue, which is why late discounting still raises profit.

8. Using the figures above, find the break-even passenger number and load factor.

Answer: Break-even passengers = 300,000 / 1,450 = 206.9, so 207 seats; load factor = 64.66%. The current 85% leaves a cushion of 20.3 points, but higher fuel prices push the break-even up and may force cuts in frequency or fare rises.

Part 3: Hotel Occupancy and RevPAR

Study the data below and answer the questions, showing all steps.

9. A hotel has 300 rooms and a 82% annual occupancy. Find room nights sold in the year and the average per day.

Answer: Room nights = 300 x 0.82 x 365 = 89,790; per day = 246. Occupancy drives rostering, linen and food purchasing, and peak periods need overbooking policy to absorb cancellations.

10. Average daily rate (ADR) is HK$1,250. Find RevPAR and annual room revenue.

Answer: RevPAR = 1,250 x 0.82 = HK$1,025; room revenue = 89,790 x 1,250 = HK$112,237,500. RevPAR blends price and volume, so it compares performance better than occupancy or rate alone.

11. Food and beverage revenue is HK$60 million and payroll is HK$46.5 million. Find total revenue and the payroll ratio.

Answer: Total revenue = HK$172.2 million; payroll ratio = 27.0%, within the usual 25-35% band for labour-intensive hotels. Self check-in and part-time rostering cut the ratio but can hurt service quality.

12. If ADR falls to HK$1,150 and occupancy rises to 88%, find the new RevPAR, the change, and judge whether it is worthwhile.

Answer: New RevPAR = HK$1,012, which is HK$13 (1.27%) lower. Extra room nights do not offset the rate cut, so it is not worthwhile unless the additional guests spend heavily on food, beverage and ancillary services.

Part 4: Food and Beverage Cost Control and Menu Pricing

Study the data below and answer the questions, showing all steps.

13. A dish costs HK$24 in ingredients and the target food cost rate is 32%. Find the selling price and gross profit.

Answer: Price = 24 / 0.32 = HK$75; gross profit = HK$51. The food cost rate is the key control ratio, but waste, complimentary items and staff meals must be costed in or the actual rate will exceed target.

14. The outlet serves 4,200 covers a month at an average check of HK$180. Find revenue, food cost and gross profit.

Answer: Revenue = HK$756,000; food cost = HK$241,920; gross profit = HK$514,080. Labour, rent and utilities still come out of that, and net margins in food service are typically only 5-15%.

15. Monthly purchases are HK$260,000 with 5% spoilage. Find usable cost, the value lost and how much the true unit cost exceeds the purchase price.

Answer: Loss = HK$1,500,000; usable cost HK$247,000. True unit cost is 1.0526 times the purchase price, 5.26% higher, so stock rotation, first-in-first-out and portion control directly improve the cost rate.

16. A dish sells at HK$88 with a cost of HK$30.8. Find the current food cost rate and the price needed to hit 32%.

Answer: Current rate = 35%, above the 32% target. The price needed is 30.8 / 0.32 = HK$96.25. Options are a HK$8.25 increase, substituting ingredients or trimming the portion, supported by menu engineering that highlights high-margin dishes.

Part 5: Carrying Capacity and Sustainability

Study the data below and answer the questions, showing all steps.

17. A place has a population of 7.5 million and 40 million arrivals a year. Find tourism intensity, that is arrivals per resident.

Answer: Intensity = 40 million / 7.5 million = 5.33 arrivals per resident. A higher ratio means more pressure on residents, transport and public facilities, and comparisons should also consider overnight share and seasonal concentration.

18. A beach has a daily carrying capacity of 2,500 people but peaks at 4,200 in high season. Find the utilisation rate and the percentage overload.

Answer: Utilisation = 168%, which is 68% over capacity or 1,700 extra people. Exceeding physical capacity causes erosion, litter and rescue difficulties; booking systems, dispersal to other sites and peak pricing are the usual remedies.

19. The local tourism sector emits 4.8 million tonnes CO2e a year. Find emissions per arrival, and the new cap per arrival if emissions must fall 25%.

Answer: Per arrival = 0.12 tonnes; a 25% cut gives 0.090 tonnes. Transport dominates tourism emissions, so abatement must target aviation, hotel energy and local transport rather than relying on recycling or water saving.

20. A hotel has 300 rooms at 82% occupancy, 2 guests per occupied room and 340 litres per guest-night. Find daily and annual water use in cubic metres.

Answer: Room nights per day = 246, giving 492 guest-nights and 167.28 m3 a day, or 61,057 m3 a year. Sensor taps, linen reuse schemes and greywater recycling typically save 15-25%.

Part 6: Event Tourism and the Multiplier Effect

Study the data below and answer the questions, showing all steps.

21. A major event draws 45,000 attendees, 62% from overseas, each spending HK$8,200. Find the number of overseas attendees and the direct economic impact.

Answer: Overseas attendees = 27,900; direct impact = HK$228.8 million. Impact studies normally count only additional spending from outside the host economy, since local spending is largely displaced rather than new.

22. With a multiplier of 1.8 and an event cost of HK$150 million, find total impact, net benefit and the benefit-cost ratio.

Answer: Total impact = HK$411.8 million; net benefit = HK$261.8 million; ratio = 2.75. Each dollar spent yields about 2.75 in impact, though the multiplier assumes spare local capacity, otherwise the extra demand mainly raises prices.

23. Tickets average HK$680 and all 45,000 attend. Find total ticket revenue.

Answer: Ticket revenue = HK$30.6 million, only 7.4% of total impact. Judging an event on box office alone misses spending on accommodation, food, retail and transport.

24. Fixed cost is HK$24 million and variable cost per ticket is HK$180. Find break-even attendance and assess feasibility at 45,000 attendees.

Answer: Contribution per ticket = HK$500; break-even = 48,000 attendees, which is 3,000 above the 45,000 expected, so ticketing loses about HK$1.50 million. Ticketing alone is not viable without sponsorship, public funding, or a price of at least HK$713.33.
