S5 Tourism and Hospitality Practice Paper: Hotel Occupancy and RevPAR, Exchange Rates, Flight Duration and Time Zones, Load Factor, Food Cost and Menu Pricing, Tour Costs, Arrivals Growth and Market Share, Carrying Capacity and Carbon Footprint, Pricing and Payback

Level: S5 | Subject: Tourism and Hospitality Studies | Time allowed: 90 minutes | Total: 100 marks | 24 questions

A. Hotel Operations and Occupancy (18 marks)

Occupancy = rooms sold / rooms available x 100 %; ADR = room revenue / rooms sold; RevPAR = room revenue / rooms available, which also equals occupancy x ADR.

1. A hotel has 320 rooms, sells 272 on one night at an ADR of HK$880. Find the occupancy rate and RevPAR. (4 marks)

> **Answer:** Occupancy = 272 / 320 x 100 = 85 %; RevPAR = 880 x 85 % = HK$ 748, which also equals 272 x 880 / 320.

2. A visitor budgets US$1,250 at US$1 = HK$7.80. If the rate becomes US$1 = HK$7.50, find the difference in HK dollars and the percentage effect of the stronger dollar. (5 marks)

> **Answer:** At the old rate: 1 250 x 7.80 = HK$ 9750; at the new rate: 1 250 x 7.50 = HK$ 9375; difference = HK$ 375, i.e. 3.85 % less. A stronger HK dollar raises the cost of a Hong Kong trip.

3. A flight leaves Hong Kong at 23:40 (UTC+8) and lands in London at 05:30 the next day (UTC+0). Find the flight time. (5 marks)

> **Answer:** Departure in UTC = 23:40 - 8 h = 15:40; arrival in UTC = 05:30. From 15:40 to 05:30 next day is 13 h 50 min (830 minutes). Convert to one time zone before subtracting.

4. An aircraft has 240 seats and carries 204 passengers. Find the load factor and explain why airlines watch it. (4 marks)

> **Answer:** Load factor = 204 / 240 x 100 = 85 %. It drives unit cost: an empty seat earns nothing, so airlines adjust fares and frequencies to fill capacity.

B. Food Cost and Menu Pricing (17 marks)

Food cost % = food cost / food sales x 100 %; target price = food cost per cover / target cost %; prime cost % = (food cost + labour cost) / sales x 100 %.

5. A restaurant has food cost of HK$42,000 on food sales of HK$140,000. Find the food cost percentage. (4 marks)

> **Answer:** Food cost % = 42 000 / 140 000 x 100 = 30 %, within the usual 30 % to 35 % target range.

6. A dish costs HK$48 in food per cover and the target food cost is 32 %. Find the selling price. (4 marks)

> **Answer:** Price = 48 / 0.32 = HK$ 150; below this the food cost ratio would exceed 32 % and squeeze gross profit.

7. A restaurant has sales of HK$1,250,000, food cost HK$400,000 and labour cost HK$350,000. Find the prime cost percentage and gross profit percentage. (5 marks)

> **Answer:** Prime cost = HK$ 750 000, i.e. 60 % of sales; gross profit = 1 250 000 - 400 000 = HK$ 850 000, i.e. 68 %.

8. The restaurant served 5,000 covers that month. Find the average spend per cover. (4 marks)

> **Answer:** Average spend = 1 250 000 / 5 000 = HK$ 250 per cover, read together with menu pricing and upselling.

C. Itinerary, Transport and Baggage Costs (16 marks)

Total itinerary time is the sum of travel, activity and meal time; cost per person = total coach cost / number of passengers; excess baggage fee = excess kg x charge per kg.

9. A 45-person tour hires a coach for HK$3,600 return plus a 5 % driver gratuity. Find the total cost and the cost per person. (4 marks)

> **Answer:** Gratuity = HK$ 180, total = HK$ 3780; per person = 3780 / 45 = HK$ 84.

10. A tour departs at 09:30, with 1 h 15 min of travel, 2 h 30 min at a site and 1 h for lunch. Find the total duration and the return time. (4 marks)

> **Answer:** Total = 75 + 150 + 60 = 285 minutes = 4 h 45 min; 09:30 + 4 h 45 min = 14:15. Build in slack for traffic delays.

11. An airline allows 20 kg free checked baggage and charges US$15 per excess kg. A bag weighs 26.5 kg and US$1 = HK$7.80. Find the excess fee in US and HK dollars. (5 marks)

> **Answer:** Excess = 26.5 - 20 = 6.5 kg; fee = 6.5 x 15 = US$ 97.5, equal to HK$ 760.5 at 7.80.

12. A coach covers 168 km in 2 h 20 min. Find the average speed. (3 marks)

> **Answer:** Time = 140 minutes = 2.33 h; average speed = 168 / 2.33 = 72 km/h.

D. Visitor Flows and Market Data (17 marks)

Growth = (current - previous) / previous x 100 %; market share = own turnover / total market turnover x 100 %; spend per visitor = total receipts / number of visitors.

13. Arrivals rise from 4,800,000 to 5,520,000. Find the growth rate and, given 45 % stay overnight, the number of overnight visitors. (5 marks)

> **Answer:** Growth = (5 520 000 - 4 800 000) / 4 800 000 x 100 = 15 %; overnight visitors = 5 520 000 x 45 % = 2,484,000. Overnight visitors spend more and drive receipts.

14. A city has 8,000 hotel rooms and sells 6,800 on one night. Find the occupancy rate. (4 marks)

> **Answer:** Occupancy = 6 800 / 8 000 x 100 = 85 %, above the 65 % to 75 % long-run average, i.e. a peak night.

15. Overnight visitors total 2,484,000 and receipts reach HK$49,680 million. Find the spend per visitor. (4 marks)

> **Answer:** Spend per visitor = 49 680 000 000 / 2 484 000 = HK$ 20000.

16. A travel agency turns over HK$86,000,000 in a market worth HK$430,000,000. Find its market share. (4 marks)

> **Answer:** Share = 86 000 000 / 430 000 000 x 100 = 20 %; a rising share does not always mean rising profit, so check margins.

E. Sustainable Tourism and Carrying Capacity (16 marks)

Overload % = (actual - capacity) / capacity x 100 %; emissions = distance x emissions per passenger-km; trees = total emissions / annual uptake per tree, rounded up.

17. A site has a daily carrying capacity of 3,000 visits but records 3,600 in peak season. Find the overload percentage. (4 marks)

> **Answer:** Overload = (3 600 - 3 000) / 3 000 x 100 = 20 %. Overloading speeds up wear and disturbs residents, so booking systems and timed entry are used.

18. A 3,200 km flight emits 0.15 kg of CO2 per passenger-km. Find the emissions per passenger and the number of trees needed to offset them at 21 kg per tree per year. (5 marks)

> **Answer:** Emissions = 3 200 x 0.15 = 480 kg; trees = 480 / 21 = 22.86, so 23 trees. Offsetting only compensates; cutting unnecessary flights comes first.

19. A 240-room hotel uses 350 litres per room per day. Find the daily total in litres and cubic metres, and the saving from a 12 % cut. (4 marks)

> **Answer:** Total = 240 x 350 = 84000 litres = 84 cubic metres; saving = 12 % = 10080 litres a day.

20. A resort produces 1,250 kg of waste a day and recycles 375 kg. Find the recycling rate. (3 marks)

> **Answer:** Recycling rate = 375 / 1 250 x 100 = 30 %, leaving 875 kg to be sorted and treated.

F. Pricing, Profit and Payback (16 marks)

Mark-up pricing: price = cost x (1 + mark-up); discounted price = list price x discount, then add service charge; profit margin = profit / sales x 100 %; payback = investment / annual net cash flow.

21. A package costs HK$2,400 and the agency applies a 25 % mark-up on cost. Find the selling price and gross profit per package. (4 marks)

> **Answer:** Price = 2 400 x 1.25 = HK$ 3000; gross profit = HK$ 600 per package.

22. A room is listed at HK$4,800, discounted 20 % in low season, then a 10 % service charge is added. Find the amount paid. (5 marks)

> **Answer:** After discount = HK$ 3840; with service charge = 3840 x 1.10 = HK$ 4224, a net reduction of 12 % from the list price.

23. A tour earns revenue of HK$860,000 on total cost of HK$645,000. Find the profit and profit margin. (4 marks)

> **Answer:** Profit = HK$ 215000; margin = 215000 / 860 000 x 100 = 25 %.

24. Equipment costs HK$1,200,000 and generates HK$240,000 net cash flow a year. Find the payback period. (3 marks)

> **Answer:** Payback = 1 200 000 / 240 000 = 5 years; with uneven cash flows, accumulate year by year until the outlay is recovered.
