

Fundamentals Level – Skills Module

Performance Management

March/June 2018 – Sample Questions



Time allowed: 3 hours 15 minutes

This question paper is divided into three sections:

Section A – ALL 15 questions are compulsory and **MUST** be attempted

Section B – ALL 15 questions are compulsory and **MUST** be attempted

Section C – BOTH questions are compulsory and **MUST** be attempted

Formulae Sheet is on page 6.

Do NOT open this question paper until instructed by the supervisor.

Do NOT record any of your answers on the question paper.

This question paper must not be removed from the examination hall.

F5 Paper

Think Ahead

ACCA

The Association of
Chartered Certified
Accountants

Section C – Both questions are compulsory and MUST be attempted

Please write your answers to all parts of these questions on the lined pages within the Candidate Answer Booklet.

31 The Portable Garage Co (PGC) is a company specialising in the manufacture and sale of a range of products for motorists. It is split into two divisions: the battery division (Division B) and the adaptor division (Division A). Division B sells one product – portable battery chargers for motorists which can be attached to a car's own battery and used to start up the engine when the car's own battery fails. Division A sells adaptors which are used by customers to charge mobile devices and laptops by attaching them to the car's internal power source.

Recently, Division B has upgraded its portable battery so it can also be used to rapidly charge mobile devices and laptops. The mobile device or laptop must be attached to the battery using a special adaptor which is supplied to the customer with the battery. Division B currently buys the adaptors from Division A, which also sells them externally to other companies.

The following data is available for both divisions:

Division B

Selling price for each portable battery, including adaptor	\$180
Costs per battery:	
Adaptor from Division A	\$13
Other materials from external suppliers	\$45
Labour costs	\$35
Annual fixed overheads	\$5,460,000
Annual production and sales of portable batteries (units)	150,000
Maximum annual market demand for portable batteries (units)	180,000

Division A

Selling price per adaptor to Division B	\$13
Selling price per adaptor to external customers	\$15
Costs per adaptor:	
Materials	\$3
Labour costs	\$4
Annual fixed overheads	\$2,200,000
Current annual production capacity and sales of adaptors – both internal and external sales (units)	350,000
Maximum annual external demand for adaptors (units)	200,000

In addition to the materials and labour costs above, Division A incurs a variable cost of \$1 per adaptor for all adaptors it sells externally.

Currently, Head Office's purchasing policy only allows Division B to purchase the adaptors from Division A but Division A has refused to sell Division B any more than the current level of adaptors it supplies to it.

The manager of Division B is unhappy. He has a special industry contact who he could buy the adaptors from at exactly the same price charged by Division A if he were given the autonomy to purchase from outside the group.

After discussions with both of the divisional managers and to ensure that the managers are not demotivated, Head Office has now agreed to change the purchasing policy to allow Division B to buy externally, provided that it optimises the profits of the group as a whole.

Required:

- (a) Under the current transfer pricing system, prepare a profit statement showing the profit for each of the divisions and for The Portable Garage Co (PGC) as a whole. Your sales and costs figures should be split into external sales and inter-divisional transfers, where appropriate. (9 marks)
- (b) Assuming that the new group purchasing policy will ensure the optimisation of group profits, calculate and discuss the number of adaptors which Division B should buy from Division A and the number of adaptors which Division A should sell to external customers.

Note: There are 3 marks available for calculations and 3 marks for discussion.

(6 marks)

Assume now that no external supplier exists for the adaptors which Division B uses.

- (c) Calculate and discuss what the minimum transfer price per unit would be for any additional adaptors supplied above the current level by Division A to Division B so that Division B can meet its maximum annual demand for the new portable batteries.**

Note: There are 2 marks available for calculations and 3 marks available for discussion. (5 marks)

(20 marks)

32 The Alka Hotel is situated in a major city close to many theatres and restaurants.

The Alka Hotel has 25 double bedrooms and it charges guests \$180 per room per night, regardless of single or double occupancy. The hotel’s variable cost is \$60 per occupied room per night.

The Alka Hotel is open for 365 days a year and has a 70% budgeted occupancy rate. Fixed costs are budgeted at \$600,000 a year and accrue evenly throughout the year.

During the first quarter (Q1) of the year the room occupancy rates are significantly below the levels expected at other times of the year with the Alka Hotel expecting to sell 900 occupied room nights during Q1. Options to improve profitability are being considered, including closing the hotel for the duration of Q1 or adopting one of two possible projects as follows:

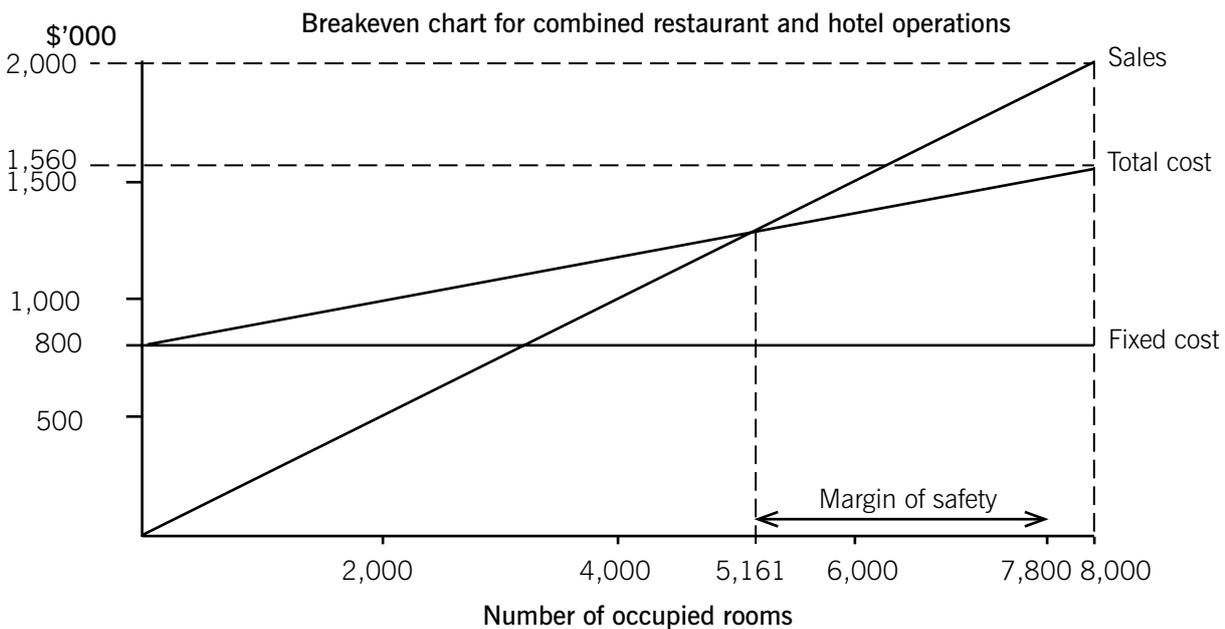
Project 1 – Theatre package

For Q1 only the Alka Hotel management would offer guests a ‘theatre package’. Couples who pay for two consecutive nights at a special rate of \$67·50 per room night will also receive a pair of theatre tickets for a payment of \$100. The theatre tickets are very good value and are the result of long negotiation between the Alka Hotel management and the local theatre. The theatre tickets cost the Alka Hotel \$95 a pair. The Alka Hotel’s fixed costs specific to this project (marketing and administration) are budgeted at \$20,000.

The hotel’s management believes that the ‘theatre package’ will have no effect on their usual Q1 customers, who are all business travellers and who have no interest in theatre tickets, but will still require their usual rooms.

Project 2 – Restaurant

There is scope to extend the Alka Hotel and create enough space to operate a restaurant for the benefit of its guests. The annual costs, revenues and volumes for the combined restaurant and hotel are illustrated in the following graph:



Note: The graph does not include the effect of the ‘theatre package’ offer.

Required:

- (a) Using the current annual budgeted figures, and ignoring the two proposed projects, calculate the breakeven number of occupied room nights and the margin of safety as a percentage. (4 marks)
- (b) Ignoring the two proposed projects, calculate the budgeted profit or loss for Q1 and explain whether the hotel should close for the duration of Q1. (4 marks)
- (c) Calculate the breakeven point in sales value of Project 1 and explain whether the hotel should adopt the project. (4 marks)
- (d) Using the graph, quantify and comment upon the financial effect of Project 2 on the Alka Hotel.

Note: There are up to four marks available for calculations.

(8 marks)

(20 marks)

Formulae Sheet

Learning curve

$$Y = ax^b$$

Where Y = cumulative average time per unit to produce x units

a = the time taken for the first unit of output

x = the cumulative number of units produced

b = the index of learning ($\log LR / \log 2$)

LR = the learning rate as a decimal

Demand curve

$$P = a - bQ$$

$$b = \frac{\text{change in price}}{\text{change in quantity}}$$

a = price when Q = 0

$$MR = a - 2bQ$$

End of Question Paper