Performance Management (PM)

September/December 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 5.

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.
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 One Stop Car Co (OSC Co) offers a range of services for car owners at its 55 service centres across the country. The car maintenance business is extremely competitive in all regions across the country. Each service centre operates autonomously and managers are able to choose how to package up the services they offer. OSC Co’s aim is to ‘make the task of car maintenance a pleasure and not a chore’.

Its national website states the following:

– Range of service packs available, including express service and full valet
– ‘We work whilst you wait’ service, with average wait times of only two hours
– Watch our friendly, experienced mechanics producing high quality work
– Freshly made tea and coffee and free internet in our comfortable lounges
– Monthly free prize draw for all customers completing an online feedback form

Customers initially access the national website, but depending on their location, they are automatically redirected to the website of their nearest service centre so that they can view the offers available at that centre. All bookings are made through the OSC website.

Results for one of the service centres, the Midlands Service Centre (MSC), for the year which has just ended are given below. The column headed ‘OSC’ shows the average figures for all of OSC Co’s 55 service centres:

<table>
<thead>
<tr>
<th>Notes</th>
<th>MSC</th>
<th>OSC Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales revenue ($)</td>
<td>760,500</td>
<td>890,365</td>
</tr>
<tr>
<td>Gross profit ($)</td>
<td>304,200</td>
<td>328,146</td>
</tr>
<tr>
<td>Number of mechanics: senior</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Number of mechanics: junior</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Number of new service packs developed</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Number of website hits</td>
<td>14,000</td>
<td>18,260</td>
</tr>
<tr>
<td>Total number of jobs booked and completed</td>
<td>9,506</td>
<td>11,870</td>
</tr>
<tr>
<td>Number of jobs from repeat customers only</td>
<td>1,500</td>
<td>1,660</td>
</tr>
<tr>
<td>Total time spent completing jobs (hours)</td>
<td>23,100</td>
<td>24,800</td>
</tr>
<tr>
<td>Percentage of customer feedback forms showing score of 9 or 10</td>
<td>4</td>
<td>80%</td>
</tr>
</tbody>
</table>

Notes:

(1) Mechanics are classified as ‘senior’ if they have been qualified for more than five years.

(2) ‘Junior’ mechanics includes both trainee mechanics who are unqualified and mechanics who have been qualified for less than five years.

(3) The MSC introduced three new service packs during the year:

– free valets for orders over $100
– a safety check costing only $20, instead of the usual $40, for all customers booking a full service
– a $10 air conditioning efficiency check, which usually costs $20, for all customers booking an oil change.

These three new service packs produced revenues of $66,000, $58,000 and $54,000 respectively. Two comparable new service packs developed by other centres produced revenues of $44,000 and $42,000.

(4) The online feedback form asks customers to rate the centre from 1 to 10, with 10 being the best.

The CEO of OSC Co has recently attended a business seminar and heard about Fitzgerald and Moon’s building block model of performance management. The CEO is interested in how the dimensions block could be applied at OSC Co. The dimensions of performance identified in the model are: competitiveness, financial performance, quality of service, flexibility, resource utilisation and innovation.
Required:

(a) For each of the dimensions of the building block model, calculate one performance indicator for MSC and one for the OSC average using the data available. Briefly justify your choice of performance indicator and discuss MSC’s performance relative to the other OSC service centres. (16 marks)

(b) Explain how the standards and rewards blocks support the dimensions block in Fitzgerald and Moon’s building block model. (4 marks)
Kappa Co produces Omega, an animal feed made by mixing and heating three ingredients: Alpha, Beta and Gamma. The company uses a standard costing system to monitor its costs.

The standard material cost for 100 kg of Omega is as follows:

<table>
<thead>
<tr>
<th>Input</th>
<th>Kg</th>
<th>Cost per kg</th>
<th>Cost per 100 kg of Omega</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>($)</td>
<td>($</td>
</tr>
<tr>
<td>Alpha</td>
<td>40</td>
<td>2·00</td>
<td>80·00</td>
</tr>
<tr>
<td>Beta</td>
<td>60</td>
<td>5·00</td>
<td>300·00</td>
</tr>
<tr>
<td>Gamma</td>
<td>20</td>
<td>1·00</td>
<td>20·00</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td></td>
<td>400·00</td>
</tr>
</tbody>
</table>

Notes

(1) The mixing and heating process is subject to a standard evaporation loss.

(2) Alpha, Beta and Gamma are agricultural products and their quality and price varies significantly from year to year. Standard prices are set at the average market price over the last five years. Kappa Co has a purchasing manager who is responsible for pricing and supplier contracts.

(3) The standard mix is set by the finance department. The last time this was done was at the product launch which was five years ago. It has not changed since.

Last month 4,600 kg of Omega was produced, using the following inputs:

<table>
<thead>
<tr>
<th>Input</th>
<th>Kg</th>
<th>Cost per kg</th>
<th>Total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>($)</td>
<td>($)</td>
</tr>
<tr>
<td>Alpha</td>
<td>2,200</td>
<td>1·80</td>
<td>3,960</td>
</tr>
<tr>
<td>Beta</td>
<td>2,500</td>
<td>6·00</td>
<td>15,000</td>
</tr>
<tr>
<td>Gamma</td>
<td>920</td>
<td>1·00</td>
<td>920</td>
</tr>
<tr>
<td>Total</td>
<td>5,620</td>
<td></td>
<td>19,880</td>
</tr>
</tbody>
</table>

At the end of each month, the production manager receives a standard cost operating statement from Kappa Co’s performance manager. The statement contains material price and usage variances, labour rate and efficiency variances, and overhead expenditure and efficiency variances for the previous month. No commentary on the variances is given and the production manager receives no other feedback on the efficiency of the Omega process.

Required:

(a) Calculate the following variances for the last month:

(i) the material usage variance for each ingredient and in total; (4 marks)

(ii) the total material mix variance; (4 marks)

(iii) the total material yield variance. (3 marks)

(b) Discuss the problems with the current system of calculating and reporting variances for assessing the performance of the production manager. (9 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