## UNIVERSITY OF BOLTON

## GREATER MANCHESTER BUSINESS SCHOOL

## BA (HONS) ACCOUNTANCY

## SEMESTER 1 EXAMINATIONS 2023/2024

## STRATEGIC MANAGEMENT ACCOUNTING

## MODULE NO: ACC6005

Date: Wednesday $10^{\text {th }}$ January 2024
Time: 10.00am - 1.00pm

There are FIVE questions on this paper.

Answer ALL questions.
All questions carry equal marks.

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## Question 1

You are a strategic management accountant and have been asked to assist with the following decision.

Payoff


## Required:

a) Calculate the size of café that should be chosen based on expected values of the Payoffs.

## Question 1 Continues on the next page

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## Question 1 Continued

b) You have been asked to prepare a presentation for the Board of Directors for your client. Label points A - D on the graph below and discuss the significance of these points for decision making.

Breakeven Chart

(Total 20 Marks)

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## Question 2

Caplan Limited produces two products, the $C$ and $P$. The direct costs of the two products are given below:

|  | $C$ | $P$ |
| :--- | :--- | :--- |
| Direct materials | $£ 3.50$ | $£ 4.80$ |
| Direct Labour | $£ 2.00$ | $£ 1.20$ |

The budgeted production for 120,000 units of $C$ and 50,000 units of $P$. The two main activities identified for the simple production process are material handling and production set ups.
Product C requires large production runs and large transfers of materials from stores. However, product $P$ is a more complex product with a number of different types of materials required and shorter and more frequent production runs.
The budgeted overheads of Caplan are $£ 800,000$ and they are made up as follows:
Materials handling are $£ 300,000$ and Production set up costs $£ 500,000$.

The use of these activities for each product is

|  | $C$ | $P$ |  |
| :--- | :--- | :--- | :--- |
| Number material requisitions |  | C |  |
| Number of production set ups | 100 | 800 |  |
|  |  |  |  |

Addionally the company also makes two other products the X and T - for these the following details are available:

|  | $X$ | $T$ |
| :--- | :--- | :---: |
| Selling Price | $£ 50$ | $£ 32$ |
| Materials | $£ 10$ | $£ 6$ |
| Direct Labour | $£ 20$ | $£ 15$ |
| Assembly time | 20 Minutes | 15 Minutes |
| Maximum demand | 1,500 units | 1,000 units |

The total assembly time is limited to 600 hours.
Required
a) Calculate the unit cost of each product ( $C$ and $P$ ) using the costing method of Activity Based Costing.
b) Using throughput accounting, calculate how many T's should be produced.

6 Marks
c) Critically discuss Activity Based Costing.

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## Question 3

H\&B Ltd produces two products, the Webb and the Ellis. Budgeted data relating to these products on a per unit basis for August 2016 are as follows:

|  | $\frac{\text { Webb }}{}$ |  |
| :--- | :---: | :--- |
| Selling price | $£ 150$ | $£ 100$ |
| Materials | $£ 80$ | $£ 30$ |
| Salesmen's commission | $£ 30$ |  |
| Each unit of product incurs costs of machining and assembly. The total capacity |  |  |
| available in August 2023 is budgeted to be |  |  |

700 hours of machining
1,000 hours of assembly,
The cost of this capacity being fixed at $£ 7,000$ and $£ 10,000$ respectively for the month, whatever the level of usage made of it. The number of hours required in each of these departments to complete one unit of output is as follows:

|  | $\frac{\text { Webb }}{}$ | $\frac{\text { Ellis }}{2 \text { hours }}$ |
| :--- | :---: | :--- |
| Machining | 1 hour | 2 hours |

In the market H\&B operates in, selling prices are fixed by European Union directives. The permitted output of either product in August is 400 units (i.e. H\&B Ltd may produce a maximum of 800 units of product). At the present controlled selling prices, the demand for the products exceeds this considerably.

## Required:

a) Calculate using Linear Programming H\&B's optimal production plan for August 2023.

12 Marks
b) Discuss the limitations of Linear Programming as a decision-making technique.

## Question 4

Glove Co makes high quality, hand-made gloves which it sells for an average of $£ 180$ per pair. The standard cost of labour for each pair is $£ 42$ and the standard labour time for each pair is three hours. In the last quarter,

Glove Co had budgeted production of 12,000 pairs, although actual production was 12,600 pairs in order to meet demand. 37,000 hours were used to complete the work and there was no idle time. The total labour cost for the quarter was $£ 531,930$. At the beginning of the last quarter, the design of the gloves was changed slightly. The new design required workers to sew the company's logo on to the back of every glove made and the estimated time to do this was 15 minutes for each pair.

However, no-one told the accountant responsible for updating standard costs that the standard time per pair of gloves needed to be changed. Similarly, although all workers were given a $2 \%$ pay rise at the beginning of the last quarter, the accountant was not told about this either. Consequently, the standard was not updated to reflect these changes. When overtime is required, workers are paid $25 \%$ more than their usual hourly rate.

## Required:

(a) Calculate the total labour rate and total labour efficiency variances for the last quarter.

4 Marks
(b) Analyse the above total variances into component parts for planning and operational variances in as much detail as the information allows.

8 Marks
(c) Assess the performance of the production manager for the last quarter.

8 Marks
(Total 20 Marks)

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## Question 5

You are the strategic management accountant of a plastic cup manufacturing company, and you've been tasked with providing a quote for the production of a special set of plastic cups. This project would be an addition to the routine manufacturing operations of the company. To fulfil this order, some shift work would be necessary to complete the production of the plastic cups. The following cost estimate has already been compiled: -

|  |  |
| :--- | :--- |
|  | $£$ |
| Direct materials - plastic | 4,000 |
|  | - colorants (purchase price) |
| Direct labour | - skilled 250 hours @ $£ 4.00$ |
|  | 2,800 |
|  | - unskilled 100 hours @ $£ 3.50$ |
| Variable overhead 450 hours @ $£ 4.00$ | 350 |
| Plastic moulding machine depreciation 300 hours @ $£ 2.00$ | 1,800 |
| Fixed production costs 400 hours @ $£ 6.00$ | 600 |
| Costing department costs | 1,400 |
| Total | 1,000 |
|  |  |
|  |  |

Relevant notes to the cost estimate are as follows:
(1) The plastic to be used is currently in stock at a value of $£ 5,000$. It has a unique colour that hasn't been utilised for some time. The replacement cost of the plastic is $£ 8,000$, while the scrap value of the plastic in stock is $£ 3,000$. The production manager does not foresee any alternative use for the plastic if it is not used for this special order of plastic cups.
(2) The additional colorants required are not currently held in stock. They would need to be purchased in bulk at a cost of $£ 4,000$. Eighty percent ( $80 \%$ ) of the colorants purchased would be used in manufacturing the special plastic cups. No other use is foreseen for the remaining colorants.
(3) Skilled direct labour is currently at full capacity, but additional labour can be hired.

To accommodate the production of the special plastic cups, $50 \%$ of the required time would be worked on weekends, for which a premium of $25 \%$ above the normal hourly rate is paid. The normal hourly rate is $£ 4.00$ per hour.
(4) Currently, there is a lack of sufficient utilisation of unskilled labour., with 200 hours per week recorded as idle time. If the manufacturing work is carried out on a special shift, 25 unskilled hours would be necessary at this time. The employees concerned would be given two hours' time off (for which they would be paid) in lieu of each hour worked.
(5) Variable overhead represents the cost of operating the plastic moulding machine.

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## Question 5 Continued

(6) When not in active use by the company, the plastic moulding machine is hired to outside companies for $£ 8.00$ per hour. This earns a contribution of $£ 4.00$ per hour. There is unlimited demand for this facility.
(7) Fixed production costs refer to expenses that are accrued and integrated into the production process, employing an hourly rate derived from planned activity budgets.
(8) The costing department represents time spent in discussions with the client concerning the production of the special plastic cup order.

## Required:

(a) Prepare a revised cost estimate using a relevant cash flow approach, showing clearly the minimum price that the company should accept for the order. Give reasons for each resource valuation in your cost estimate.

12 Marks
(b) Critically discuss the concept of opportunity cost and its role in decision making.

