ST MARY’S UNIVERSITY

TWICKENHAM, LONDON

BA/BSc Degree Examination students registered for

Level **SIX**

Title: **Management Accounting**

Code: **MGT6011**

Semester: **TWO**

Date: **May 14th 2019**

Time: **9:30 – 11:30 AM**

TIME ALLOWED: **TWO** HOURS

Examination

(This assessment is worth 50% of the overall module grade.)

Instructions to Candidates:

PART A: **COMPULSORY** (Answer **ALL** parts of the Question) – 50 marks

PART B: Answer **TWO** questions– each question is worth 25 marks

Candidates are permitted to bring one approved calculator into this examination.

**PLEASE SUBMIT YOUR EXAMINATION PAPER WITH YOUR EXAMINATION SCRIPT. ENTER YOUR REGNUM IN THE SPACE BELOW:**

REGNUM: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**PART A: COMPULSORY SECTION**

**(**Answer **ALL** parts of the question**)**

The Production Director at IAC Ltd is unhappy about the differences reported to her on the basis of actual costs being compared with the production centre’s fixed budget. She seeks your help and asks you to prepare both the relevant fixed and flexible budgets based on the information below.

The following costs information, with related details, is provided:

|  |  |
| --- | --- |
| **Cost:** | **Details:** |
| Electricity | £15 per 100 hours up to 3,200 hours  £12 per 100 hours for hours above 3,200 |
| Business Rates | £40 per month |
| Maintenance | £30 up to 2,800 hours; £40 above 2,800 hours |
| Spares & Repairs | £75 up to 1,600 hours  Additional £25 for steps of 400 hours up to 3,200 hours  Additional £40 above 3,200 hours |
| Salaries | £3,000 |
| Indirect Labour | £20 per 100 hours |
| Insurance | £95 |
| Rent | £180 |
| Advertising | £250 |
| Heating | £45 from 1,200 to 2,000 hour inclusive  £55 above 2,000 and up to 3,000 hours  £60 above 3,000 |
| Other supplies | £12 per 100 hours |
| Depreciation | £400 up to 3,000 hours, £550 above 3,000 |
| Supervisors | £250 up to 2,000 hours  An extra £60 for steps of 400 hours above 2,000hrs  An additional £30 from 3,600 hours upward |

The machine workshop normally operates 3,000 hours in April 2019.

**Semi-Variable Costs:**

1. Telephone rental £75 a month: Metered calls £0.15 an hour

2. Power.

The budget figures are to be based on the costs for the previous four months (see table below).

|  |  |  |
| --- | --- | --- |
| **Month** | **Cost (£)** | **Workshop Hours** |
| December | 840 | 3,200 |
| January | 610 | 2,100 |
| February | 700 | 2,500 |
| March | 580 | 1,900 |

**REQUIRED:**

1. Compile a fixed budget and flexible budgets for 2,000, 2,800 and 3,600 hours for April 2019. *(Round to 2 decimal places)* (25 marks)
2. Evaluate the role of budgetary systems, processes and control in organisations. (25 marks)

**(TOTAL 50 MARKS)**

**PART B: Answer TWO questions ONLY** – **Each question is worth 25 marks**

**QUESTION 1:**

The Dragon Brewery is based in North Wales and currently brews three brands of beers using the distinctive water from the Snowdonia Mountains.

The cost data per mini-barrel is available for the next production period in the table below:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Conway  Special | Offa  Beer | Castle  Reserve |
|  | £ | £ | £ |
| Selling price | 4.00 | 12.00 | 16.00 |
| Premium malt | 0.50 | 1.00 | 2.50 |
| Grain, hops & yeast | 1.00 | 3.00 | 0.50 |
| Direct Labour | 1.50 | 2.00 | 3.00 |
| Variable costs | 0.50 | 1.50 | 2.00 |
| Fixed costs | 3.00 | 4.00 | 6.00 |
| Demand (mini-barrels) | 90,000 | 30,000 | 50,000 |

The following additional information is also supplied:

* Conway Special has always been the best-selling brand.
* Premium Malt costs £2.00 per kg.
* All the beer brands are brewed with premium malt, but this high grade malt is becoming increasingly difficult to source.
* Direct labour costs £10 per hour.
* Specialist master brewers are becoming difficult to employ in North Wales.

**REQUIRED:**

1. In order to maintain maximum profitability determine the product mix and quantities if:

i) Only 100,000 kg of premium malt can be sourced for the next production period. **(6 marks)**

ii) Only 30,000 direct labour hours would be available for the next production period.

**(6 marks)**

1. It has been suggested that as demand for the Offa Beer is only forecasted at 30,000 mini- barrels for the next period production of this brand should cease. The sales team is confident that demand for Conway Special will increase to 150,000 mini-barrels as drinkers of Offa Beer switch to the lower priced brand and drinkers of other beers follow the 'popularity' trend of buying Conway Special. Assuming the constraints of labour and premium malt do not apply, what are the profitability implications for the Dragon Brewery if production of Offa Beer is stopped? **(4 marks)**
2. Discuss any other relevant matters that the Dragon Brewery should consider from your analysis for parts a) & b). **(9 marks)**

**(Total 25 Marks)**

**QUESTION 2:**

Alanna Ltd. is a medium sized company that produces one product and uses a standard costing system. During April 2019, actual output of product units matched the budgeted target and all wage increases had been allowed for in the standard costs.

Standard costs set:

LABOUR Rate A - £7.00 per hour

Rate B - £10.50 per hour

MATERIALS Grade 1 - £10.00 per kg

Grade 2 - £85.00 per kg

The following data was available from the management accounts for April 2019:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Budget | Actual | Total Actual |
|  |  |  |  | £ |
| Labour | Rate A | 140 Hours | 120 Hours | 1080 |
|  | Rate B | 700 Hours | 740 Hours | 8880 |
|  |  |  |  |  |
|  |  |  |  |  |
| Materials | Grade 1 | 12.0 Kgs | 13.0 Kgs | 117 |
|  | Grade 2 | 2.0 Kgs | 2.2 Kgs | 176 |
| Variable overheads | Efficiency losses £100 | £ 4300 |  | 4700 |
| Fixed overheads | Volume gains £240 | £ 9800 |  | 10700 |

**REQUIRED:**

1. Provide an explanation of ‘variance analysis’ and why it is useful. **(5 marks)**
2. Construct a statement showing all the relevant variances from the data for April 2016. Identify possible reasons for the variances together with suggestions as to where responsibility for specific variances might lie within the organisation. Clearly identify those figures which need to be acted upon. **(20 marks)**

**(Total 25 Marks)**

**QUESTION 3:**

Bannister Electronics Ltd has incurred expenditure of £5 million over the past three years researching and developing an inexpensive DAB Radio to fit into vehicles. The radio is now fully developed, and the directors are considering which of the three mutually exclusive options should be taken to exploit the potential of the new product. The options are as follows:

OPTION 1

The business could manufacture the DAB radio itself. This would be a new departure, since the business has so far concentrated on research and development projects. However, the business has manufacturing space available that it currently rents to another business for £100,000 a year. The business would have to purchase additional plant and equipment costing £9 million and invest £3 million in working capital immediately for production to begin.

A market research report, for which the business has already paid £50,000, indicates that the new radio has an expected life of five years – after which other manufacturers (probably from Asia) with have researched and be able to deliver even newer technologies. Sales of the radio during this period are predicted as follows:

Year Year Year Year Year

1 2 3 4 5

Number of units (000s) 800 1,400 1,800 1,200 500

The selling price per unit will be £30 in the first year but will fall to £22 in the following three years. In the final year of the product’s life, the selling price will fall to £20. Variable production costs are predicted to be £14 a unit, and fixed production costs (including depreciation) will be £2.4 million a year. Marketing costs will be £2 million a year.

The business intends to depreciate the plant and equipment using the straight-line method and based on an estimated residual value at the end of five years of £1 million. The business has an annual cost of capital of 10%.

OPTION 2

Bannister Electronics Ltd could agree to another business manufacturing and marketing the radio under licence. A Birmingham based multi-national business, Fraser (Redditch) plc, has shown an interest in manufacturing and marketing the radios, and in return will make a royalty payment to Bannister Enterprises Ltd of £5 per unit. It has been estimated that the annual number of sales of the DAB radio will be 10% higher if the multinational business, rather than Bannister Electronics Ltd, manufactures and markets the product.

OPTION 3

B.E. Ltd could sell the patent rights to Fraser (Redditch) plc for £24 million, payable in two equal instalments. The first instalment would be payable immediately and the second at the end of two years. This option would give Fraser (Redditch) plc the exclusive right to manufacture and market the new product.

**REQUIRED:**

a) Calculate the net present value for each year for each of the 3 options available to B. E. Ltd **(17 Marks)**

b) State which option is the most suitable for B.E. Ltd and why **(4 Marks)**

c) Identify and report any other factors that Bannister Electronics Ltd should consider before arriving at a decision. **(4 Marks)**

**(Total 25 Marks)**

|  |  |
| --- | --- |
|  | **Discount factor** |
| Year | 10% |
| 1 | 0.909 |
| 2 | 0.826 |
| 3 | 0.751 |
| 4  5 | 0.683  0.621 |

**QUESTION 4:**

**ANSWER EITHER**

1. Analyse the role of strategic management accounting (SMA) used by organisations as a management accounting system.**(25 Marks)**

**OR**

1. Evaluate environmental management accounting and how it can be used by organisations to assist in the management and control of environmental costs. **(25 Marks)**

**(Total 25 Marks)**

**END OF EXAMINATION**