

**BOTSWANA COLLEGE OF DISTANCE AND OPEN LEARNING**

**In collaboration with**

**THE VIRTUAL UNIVERSITY FOR SMALL STATES OF THE COMMONWEALTH  
(VUSSC)**

**Bachelor of Business Entrepreneurship**

**MANAGEMENT ACCOUNTING**

**MA221**

**SESSIONAL EXAMINATION**

**Time 3 Hours**

**Marks: 100**

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**Instructions:**

1. The examination consists of three sections: A, B and C.
2. Begin each answer to a new question on a new page.
3. Answer questions according to instructions given in each section.
4. Write answers in the answer booklet provided.
5. Write in grammatical English.

SECTION A – MULTIPLE CHOICE QUESTIONS

[20 MARKS]

Answer ALL questions. Each question from 1 to 5 carries ONE (1) mark and 6 to 10 carries THREE (3) marks.

1. \_\_\_\_\_ is not a function of management accounting?
  - A. providing reports useful to different range of users.
  - B. providing information to the management for decision making.
  - C. providing reports necessary for planning decisions.
  - D. Giving different alternatives, advising managers on the best course of action.
  
2. \_\_\_\_\_ is not an advantage of the just in time (JIT) inventory policy?
  - A. Costs associated with handling and theft are minimised.
  - B. There is low investment in inventory.
  - C. Less warehousing facilities are required.
  - D. It is very useful if future supplies become scarce.
  
3. \_\_\_\_\_ costs are costs that can be accurately identified as forming part of a cost centre.
  - A. Marketing
  - B. Fixed
  - C. Indirect
  - D. Direct
  
4. Which of the following best describes sunk costs
  - A. Costs which are relevant because they have been incurred and cannot be recouped.
  - B. Costs incurred in the past and are irrelevant for decision making, because they have been incurred.
  - C. Cost that are relevant with a particular decision, whether in the past or in the future.
  - D. Resources sacrificed to achieve a certain benefit.

5. In general, and within the relevant range, as production increases \_\_\_\_\_.
- A. Per unit fixed costs and per unit variable costs both stay the same.
  - B. Per unit variable costs go down, and per unit fixed costs stay the same.
  - C. Per unit fixed costs go down, and per unit variable costs stay the same.
  - D. Per unit fixed costs and total variable costs both stay the same.
6. For the next 5 years, Masego will receive a pension of P10,000. \_\_\_\_\_ is the present value of these future amounts assuming rate of return of 12%.
- A. P40,000
  - B. P36,048
  - C. P50,000
  - D. None of the above

For questions 7, 8 and 9, use the information below:

A certain product with a selling price of P60 has a manufacturing variable cost of P30 per unit. Its selling and administration cost per unit is P10. There are no fixed selling and administration cost but fixed manufacturing cost totals P5, 000.

7. The product's unit marginal income \_\_\_\_\_.
- A. P40
  - B. P20
  - C. P30
  - D. P10
8. Using absorption costing, \_\_\_\_\_ is gross profit for 1000 units?
- A. P25,000

- B. P60,000  
C. P15,000  
D. P30,000
9. The contribution margin ratio for the product \_\_\_\_\_.
- A. 16.67%  
B. 50%  
C. 25%  
D. 33.3%
10. The following transactions of Lobatse Enterprises took place during October 2015 in respect of a component used in production:

| Date                    | Description       | Amount                  |
|-------------------------|-------------------|-------------------------|
| 1 <sup>st</sup> October | Opening inventory | 50 units @ P10 per unit |
| 5 <sup>th</sup>         | Purchases         | 40 units @ P11 per unit |
| 26 <sup>th</sup>        | Sales             | 80 units                |

The value of closing inventory as at 31<sup>st</sup> October using FIFO method is \_\_\_\_\_

- A. P110  
B. P100  
C. P500  
D. P400

**SECTION B – SHORT ANSWER QUESTIONS**

**[40 MARKS]**

**Answer ALL questions in this Section.**

- 1.** **[16 Marks]**
- (a) Identify the four original components of balanced score card. **(4 Marks)**

(b) With examples differentiate direct and indirect costs. **(6 Marks)**

(c) Describe each of the following costs as fixed, variable or semi-variable (mixed):

1 The cost is P500 per unit at a production level of 50 units, and P500 per unit at a production level of 100 units. **(2 marks)**

2 The cost is P500 in total at a production level of 50 units, and P1,000 in total at a production level of 100 units. **(2 marks)**

3 The cost is P500 in total at a production level of 5 units, and P100 per unit at a production level of 10 units. **(2 marks)**

**2. [10 Marks]**

Hukuntsi Traders (Pty) Ltd manufactures leather bags. The following information was extracted from their budget for the year ended 31 December 2014.

Selling price per unit P40

Variable cost per unit P30

Total sales 1000 units

Fixed costs P8,000

Calculate the following: (where applicable round off to the nearest Pula)

(a) Breakeven quantity **(3 Marks)**

(b) Breakeven value using contribution margin ratio **(4 Marks)**

(c) Margin of safety (by value) **(3 Marks)**

3. Three former students at BOCODOL formed a manufacturing company, Batho & Mondo Enterprises. The company specialises in production of office stationary.

The standard costs for each unit of product PP2 are:



|                 |                         |
|-----------------|-------------------------|
| Direct material | 10kg at P35 per kg      |
| Direct labour   | 3 hours at P10 per hour |

Actual figures of Batho & Mondo Enterprises for product PP2 for October 2015 are:

|                  |                              |
|------------------|------------------------------|
| Total Production | 17000 units                  |
| Direct material  | 175,000kg at P33.50 per kg   |
| Direct labour    | 53 550 hours at P12 per hour |

Required:

- (a). Define standard cost (3 Marks)
- (b) Calculate the material quantity variance (4Marks )
- (c) Calculate the labour rate variance (3 Marks)
- (d) Calculate Total material variance (4 Marks)

**SECTION C - [40 MARKS]**

**Answer ALL question in this section.**

**1. [20 Marks]**

Quolala is a merchandising company. Quolala expects unit sales for the coming year as follows:

|       |        |
|-------|--------|
| March | 15,000 |
| April | 23,000 |
| May   | 31,000 |
| June  | 47,000 |
| July  | 56,000 |

The average selling price is P23 per unit. The company's policy is to maintain month-end inventory levels at 30% of next month's anticipated sales. All sales are made on credit and expected collections are as follows:

- 70% collected in the month of sale
- 20% collected in the month following the sale
- 10% collected in the second month following the sale

Cost of goods sold equals 80% of the sales price. The company pays cash for all purchases of inventory, at the time of purchase.

Required:

- (a) How much inventory (in units) will Quolala expect to purchase in June? **(3 Marks)**
- (b) Prepare debtors (receivables) collection schedule for April-June **(10 Marks)**
- (c) Amount payable for purchase of inventory in May and June **(4 Marks)**
- (d) Expected gross profit in July **(3 Marks)**

2

**[20 Marks]**

Batho & Mondo Enterprises intends buying a new machine and has the option of buying one of the following two machines.

|                          | Machine A | Machine B |
|--------------------------|-----------|-----------|
| Purchase price           | P220,000  | 250,000   |
| Expected economic life   | 4 years   | 5 years   |
| Scrap value              | P20,000   | 0         |
| Expected net cash inflow | R         | R         |
| End of year 1            | P50,000   | P90,000   |
| 2                        | P90,000   | P90,000   |
| 3                        | P150,000  | P90,000   |
| 4                        | P110,000  | P90,000   |

|   |   |         |
|---|---|---------|
| 5 | - | P90,000 |
|---|---|---------|

Minimum required rate of return is 14%. Depreciation is on fixed installment method.

- (a) Calculate payback period for both machines (answer must be expressed in years and months) **(5 Marks)**
- (b) Calculate the Accounting Rate of Return (ARR) for machine A **(5 Marks)**
- (c) For both machines calculate NPV and advice on the best alternative **(7 Marks)**
- (d) Calculate Internal Rate of Return (IRR) for Machine B **(3 Marks)**

END OF PAPER

| Period | 1%     | 2%     | 3%     | 4%     | 5%     | 6%     | 7%     | 8%     | 9%     | 10%    | 11%    | 12%    | 13%    | 14%    | 15%    | 16%    | 17%    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1      | 0.9901 | 0.9804 | 0.9709 | 0.9615 | 0.9524 | 0.9434 | 0.9346 | 0.9259 | 0.9174 | 0.9091 | 0.9009 | 0.8929 | 0.8850 | 0.8772 | 0.8696 | 0.8621 | 0.8547 |
| 2      | 0.9803 | 0.9612 | 0.9426 | 0.9246 | 0.9070 | 0.8900 | 0.8734 | 0.8573 | 0.8417 | 0.8264 | 0.8116 | 0.7972 | 0.7831 | 0.7695 | 0.7561 | 0.7432 | 0.7305 |
| 3      | 0.9706 | 0.9423 | 0.9151 | 0.8890 | 0.8638 | 0.8396 | 0.8163 | 0.7938 | 0.7722 | 0.7513 | 0.7312 | 0.7118 | 0.6931 | 0.6750 | 0.6575 | 0.6407 | 0.6244 |
| 4      | 0.9610 | 0.9238 | 0.8885 | 0.8548 | 0.8227 | 0.7921 | 0.7629 | 0.7350 | 0.7084 | 0.6830 | 0.6587 | 0.6355 | 0.6133 | 0.5921 | 0.5718 | 0.5523 | 0.5337 |
| 5      | 0.9515 | 0.9057 | 0.8626 | 0.8219 | 0.7835 | 0.7473 | 0.7130 | 0.6806 | 0.6499 | 0.6209 | 0.5935 | 0.5674 | 0.5428 | 0.5194 | 0.4972 | 0.4761 | 0.4561 |
| 6      | 0.9420 | 0.8880 | 0.8375 | 0.7903 | 0.7462 | 0.7050 | 0.6663 | 0.6302 | 0.5963 | 0.5645 | 0.5346 | 0.5066 | 0.4803 | 0.4556 | 0.4323 | 0.4104 | 0.3898 |
| 7      | 0.9327 | 0.8706 | 0.8131 | 0.7599 | 0.7107 | 0.6651 | 0.6227 | 0.5835 | 0.5470 | 0.5132 | 0.4817 | 0.4523 | 0.4251 | 0.3996 | 0.3759 | 0.3538 | 0.3332 |
| 8      | 0.9235 | 0.8535 | 0.7894 | 0.7307 | 0.6768 | 0.6274 | 0.5820 | 0.5403 | 0.5019 | 0.4665 | 0.4339 | 0.4039 | 0.3762 | 0.3506 | 0.3269 | 0.3050 | 0.2848 |
| 9      | 0.9143 | 0.8368 | 0.7664 | 0.7026 | 0.6446 | 0.5919 | 0.5439 | 0.5002 | 0.4604 | 0.4241 | 0.3909 | 0.3606 | 0.3329 | 0.3075 | 0.2843 | 0.2630 | 0.2434 |
| 10     | 0.9053 | 0.8203 | 0.7441 | 0.6756 | 0.6139 | 0.5584 | 0.5083 | 0.4632 | 0.4224 | 0.3855 | 0.3522 | 0.3220 | 0.2946 | 0.2697 | 0.2472 | 0.2267 | 0.2080 |
| 11     | 0.8963 | 0.8043 | 0.7224 | 0.6496 | 0.5847 | 0.5268 | 0.4751 | 0.4289 | 0.3875 | 0.3505 | 0.3173 | 0.2875 | 0.2607 | 0.2366 | 0.2149 | 0.1954 | 0.1778 |
| 12     | 0.8874 | 0.7885 | 0.7014 | 0.6246 | 0.5568 | 0.4970 | 0.4440 | 0.3971 | 0.3555 | 0.3186 | 0.2858 | 0.2567 | 0.2307 | 0.2076 | 0.1869 | 0.1685 | 0.1520 |
| 13     | 0.8787 | 0.7730 | 0.6810 | 0.6006 | 0.5303 | 0.4688 | 0.4150 | 0.3677 | 0.3262 | 0.2897 | 0.2575 | 0.2292 | 0.2042 | 0.1821 | 0.1625 | 0.1452 | 0.1299 |
| 14     | 0.8700 | 0.7579 | 0.6611 | 0.5775 | 0.5051 | 0.4423 | 0.3878 | 0.3405 | 0.2992 | 0.2633 | 0.2320 | 0.2046 | 0.1807 | 0.1597 | 0.1413 | 0.1252 | 0.1110 |
| 15     | 0.8613 | 0.7430 | 0.6419 | 0.5553 | 0.4810 | 0.4173 | 0.3624 | 0.3152 | 0.2745 | 0.2394 | 0.2090 | 0.1827 | 0.1599 | 0.1401 | 0.1229 | 0.1079 | 0.0949 |

| Period | 1%     | 2%     | 3%     | 4%     | 5%     | 6%     | 7%     | 8%     | 9%     | 10%    | 11%    | 12%    | 13%    | 14%    | 15%    | 16%    | 17%    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1      | 0.9901 | 0.9804 | 0.9709 | 0.9615 | 0.9524 | 0.9434 | 0.9346 | 0.9259 | 0.9174 | 0.9091 | 0.9009 | 0.8929 | 0.8850 | 0.8772 | 0.8696 | 0.8621 | 0.8547 |
| 2      | 1.9704 | 1.9416 | 1.9135 | 1.8861 | 1.8594 | 1.8334 | 1.8080 | 1.7833 | 1.7591 | 1.7355 | 1.7125 | 1.6901 | 1.6681 | 1.6467 | 1.6257 | 1.6052 | 1.5852 |
| 3      | 2.9410 | 2.8839 | 2.8286 | 2.7751 | 2.7232 | 2.6730 | 2.6243 | 2.5771 | 2.5313 | 2.4869 | 2.4437 | 2.4018 | 2.3612 | 2.3216 | 2.2832 | 2.2459 | 2.2096 |
| 4      | 3.9020 | 3.8077 | 3.7171 | 3.6299 | 3.5460 | 3.4651 | 3.3872 | 3.3121 | 3.2397 | 3.1699 | 3.1024 | 3.0373 | 2.9745 | 2.9137 | 2.8550 | 2.7982 | 2.7432 |
| 5      | 4.8534 | 4.7135 | 4.5797 | 4.4518 | 4.3295 | 4.2124 | 4.1002 | 3.9927 | 3.8897 | 3.7908 | 3.6959 | 3.6048 | 3.5172 | 3.4331 | 3.3522 | 3.2743 | 3.1993 |
| 6      | 5.7955 | 5.6014 | 5.4172 | 5.2421 | 5.0757 | 4.9173 | 4.7665 | 4.6229 | 4.4859 | 4.3553 | 4.2305 | 4.1114 | 3.9975 | 3.8887 | 3.7845 | 3.6847 | 3.5892 |
| 7      | 6.7282 | 6.4720 | 6.2303 | 6.0021 | 5.7864 | 5.5824 | 5.3893 | 5.2064 | 5.0330 | 4.8684 | 4.7122 | 4.5638 | 4.4226 | 4.2883 | 4.1604 | 4.0386 | 3.9224 |
| 8      | 7.6517 | 7.3255 | 7.0197 | 6.7327 | 6.4632 | 6.2098 | 5.9713 | 5.7466 | 5.5348 | 5.3349 | 5.1461 | 4.9676 | 4.7988 | 4.6389 | 4.4873 | 4.3436 | 4.2072 |
| 9      | 8.5660 | 8.1622 | 7.7861 | 7.4353 | 7.1078 | 6.8017 | 6.5152 | 6.2469 | 5.9952 | 5.7590 | 5.5370 | 5.3282 | 5.1317 | 4.9464 | 4.7716 | 4.6065 | 4.4506 |