BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTANCY

PROGRAMMES:

Bachelor of Accountancy (Honours) Degree

COST AND MANAGEMENT ACCOUNTING 2 (AC217)

EXAMINATION PAPER

DURATION: 3 HOURS

INSTRUCTIONS TO CANDIDATES:

1. Answer all questions in Section A and Section B.
2. No cell phones are allowed in the examination venue.
3. Use of silent and non-programmable calculators is allowed.

1. The key budget factor is:
   A. The highest value item
   B. A factor which limits the activities of the organization
   C. A factor common to all budget centres
   D. A factor controllable by the manager of the budget centre.

2. A company produces 3 products whose details are given below:

	Alpha	Beta	Theta
Demand (units)	1 000	1 500	800
	$	$	$
Selling price per unit	30	40	50
Variable costs per unit:			
Raw materials (at $5 per kg)	10	15	25
Overheads (at $3 per machine hour)	9	12	15

If raw materials are limited to 9 000kg and fixed costs are expected to be $18 000 for the period the maximum contribution that can be made is:

A $36 000
B $37 500
C $38 500
D $35 500

3. The following information is provided to you about output levels and respective costs:

Output (units)	1 000	2 000	3 000
Raw material cost	$3 000	$6 000	$9 000
Electricity	$700	$1 000	$1 300
Labour	$800	$1 100	$1 400
Rent	$300	$300	$300

Calculate the total production costs when 2 500 units are produced?

A $9 700
B $9 900
C $10 200
D $8 400

4. A machine costs $80,000. It will produce profits before depreciation of:

Year 1	$25 000
Year 2	$27 000
Year 3	$31 000
Year 4	$25 000

At the end of the project the machine will have a scrap value of $20,000.

What is the accounting rate of return for the project?

A 33.75%
B 29.06%
C 15.00%
D 8.75%

5. ABC factory usually has a quarterly wages cost of $4 500 000. Quarterly raw material cost are usually around $2 000 000. Management awarded all employees a 3% cushion allowance.

Which of the following variances for the latest quarter are worth investigating?

1. Direct material price variance of $300 Adverse
2. Labour rate variance $135 000 Adverse
3. Sales volume variance $3 000 000 A

A 1 and 3 only

B 1 and 2 only

C 1, 2 and 3

D 3 only

6. Bems ltd manufactures a single product Beta, for which standard material cost is as follows:

	$ per unit
14 kg raw Material at $3 per kg	42

During August 2021, 800 units of Beta were manufactured. 12 000kg of raw material were purchased for $33 600 of which 11 500 kg were issued to production.

Bems ltd values all inventory at standard cost.

What are the material price and usage variances for August 2021?

	Price	Usage
A	$2 300 F	$900 A
B	$2 300 F	$300A
C	$2 400 F	$900A
D	$2 400F	$840A

7. A company produces two joint products Ayee and Bee and by-product Zee from a single process. Zee is sold immediately after Split-off-point. Zee is sold at $6 per unit. Ayee and Bee are further processed and are sold at $50 and $60 per unit respectively. Data for January 2022 are as follows:

Joint costs that yielded:

	$
2 000 units (Ayee); 3 000 units of (Bee) and 500units (Zee)	120 000
Further processing costs for 2 000 units of Ayee	12 000
Further processing costs for 3 000 units of Bee	30 000

Joint costs are apportioned using net realisable value method.

What was the total cost of production for Ayee in January 2022?

A $44 000

B $55 800

C $75 000

D $105 000

8 BUSE Ltd has a policy of three years on investment projects and is considering investing in one of the following projects. BUSE Ltd has a maximum of $400 000 and can only invest in one project. Initial outlay for each project is $400 000.

	Printing press project	Transport project	
Year	Cash Inflow	Year	cash inflow
	$		$
1	125 000	1	125 000
2	125 000	2	175 000
3	200 000	3	200 000
4	170 000	4	95 000

5	130 000		5	82 000
6	30 000		6	35 000

The company's cost of capital is 8%.
What is the non-discounted payback period for transport project?
A 2 years and 2 months
B 2 years and 9 months C
2 years and 6 months D 2
years and 5 months

9. Mbare Converters manufactures three products for which you are supplied with the following data:

	Scotch carts	Cultivators	Harrows
Contribution to sales ratio	20%	25%	30%
The sales product mix	30%	50%	20%
Sales price per product	$4 000	$1 800	$1 000

Fixed costs are $52 500 for a month.

The production and sales mix at break- even point is:

	Scotch carts	Cultivators	Harrows
A	25	40	48
B	16	24	20
C	30	50	20
D	20	16	24

10. Which statement is true about linear programming as a decision making tool?
   A It can help solve short term profit maximising scenarios where there are multiple products with a single limiting factor
   B It can help solve a short term profit maximising scenarios where there are two products with several limiting factors
   C It can help solve short term profit maximising scenarios where there are multiple products with several limiting factors
   D In can help solve short term profit maximising scenarios where there are no limiting factors

11. Relevant costs are those costs which must be considered when making decisions that affect the future. Which observation is incorrect about relevant costs?
   A They are future costs

B They are differential costs

C They are incremental in nature

D They are unavoidable

12. Which **two** pieces of information are required when deciding, purely on financial grounds, whether or not to process a joint product further?

1. The final sales value of the joint product
2. The further processing cost of the joint product
3. The value of the common process costs.
4. The method of apportioning the common costs between the joint products.

A 1 and 3

B 3 and 4

C 1 and 2

D 2 and 3

13. Which statement below best explains price-skimming strategy?

A It is the concept of initially charging a low price initially to gain market acceptance

B It is an attempt to exploit customers who are insensitive to price changes

C It is charging different prices to different market segments

D It is pricing above competition on a permanent basis because the product is exclusive

14. The following statements have been made about flexible budgets.

(1) Flexible budgets enable proper comparisons to be made between actual and expected revenues and costs.

(2) In every variance reporting system with flexible budgets that compares budgeted and actual profit, there must be a sales volume variance.

Which of the above statements is/are true? A

1 only

B 2 only

C Neither 1 nor 2

D Both 1 and 2

15. A company operates in the energy market, and its operational cash flows are affected by movements in the price of oil, which is highly volatile. As a result, the company has great difficulty in establishing a budgeting system that is reliable for more than two or three months ahead.

Which of the following approaches to budgeting would be most appropriate for this company's situation?

A Flexible budget
B Incremental budget
C Rolling budget
D Zero based budget

SECTION B (70 marks)

Question 1

Pams Ltd. is a small clothing company operating in Bindura. You have recently joined them as the trainee management accountant, after successfully completing a Bachelor of Accountancy from BUSE University.

One particular garment has a standard material cost of $13.50, comprising 3 metres of cloth at $4.50 per metre. The standard labour time allowed for making up the garment is 15 minutes, and employees are paid at a rate of $5 per hour. For the month of August 2021, the company was able to produce 10,000 garments. The budgeted output level was 9,000 garments.

The purchasing manager was very pleased as he had managed to buy 45,000 metres of cloth for $4.25 per metre. However, the production manager was not so pleased because he claims the cloth was of poor quality which resulted in operational inefficiency.

Actual data for August 2021 is as follows:-

Wages paid	$12 740
Hours worked	2,600 hours
Cloth issued	32,000 metres.

Required:

(a) Calculate for August 2021:

(i) material usage variance (3 marks)

(ii) material price variance (3 marks)

(iii) labour efficiency variance (3 marks)

(iv) labour rate variance (3 marks)

(b) Comment on each of the views by the purchasing manager and the production manager. Do you think the purchasing manager was correct to buy the cloth at $4.25 per metre if it was responsible for operational problems? (8 marks)

(c) What do you understand by the term "inter-relationship of variances"? (5 marks)

[Total 25 marks]

Question 2

Command Construction Ltd constructs a standard house which sells for $30,000.The company's costs can be separated between fixed and variable costs. Budgeted data for the coming six months includes the following:

	Sales (in units)	**Profit $**
January	18	70,000
February	20	100,000
March	30	250,000
April	22	130,000
May	24	160,000
June	16	40,000

The fixed costs for the six months have been spread evenly over the period under review to arrive at the monthly profit projections.

Required:

(a) **Calculate:**

(i) The variable cost per house **(3 marks)**

(ii) The total fixed costs **(3 marks)**

(iii) The break-even point in units and revenue **(3 marks)**

(iv) The margin of safety for the total budgeted sales (in units) **(3 marks)**

The Chief executive is worried about the low level of sales. The sales director says that if the selling price of a house is reduced by $3000, the company would be able to sell 20% more units. Fixed costs will increase by $80 000 and variable expenses are expected to decrease by 10 % because of higher economies of scale.

(b) Required:

Determine whether the company should reduce the selling price to attract new sales in order to maximize profit. Show workings to support your answer **(6 marks)**

(c)

Critique any two assumptions of breakeven analysis **(2 marks)**

[Total marks 20]

Question 3

Smart Technology is thinking of investing in an innovative new product, an electric car charging system made from Lithium that has an expected useful economic life of 6 years. Smart Technology has approached your Management consultancy firm and they supply the following details:

(i) A special machine will be required to produce the charging systems. The Company has already got a machine in its factory which had cost $300,000, eight months ago. This machine was purchased to make another product but was not, in the end, needed for that product. The special machine can be modified at a cost of $60,000 and will be able to be used on the new product. Service costs are expected to be $5,000 per annum and the machine can be sold for $15,000 scrap at the end of the product's life.

The company's depreciation policy is to depreciate the machine using the reducing balance method with a rate of 20% per annum.

(ii) The Company expects to be able to make 1750 electric charging systems per annum which will be sold for $85.00 per unit for the first three years. Thereafter the electric car charging system will be sold for $70 per unit.

(iii) Each unit of the innovative electric car charging system requires

10 hours of labour

2 kg of Lithium

3 kg of Carbon rods

(iv) At the present time skilled labour is paid at $5.00 per hour. This is expected to increase by 10 cents per annum from next year

(v) The company has a lot of Lithium material in stock, acquired last year at a price of 80c per kg. The current price of Lithium is 84c. The company has enough quantity of Lithium for the first two years of production but will have to buy Lithium thereafter. It is expected that the price of Lithium will increase by 4 cents each year

Carbon rods costs $2.50 per kg and will have to be purchased each year. The price of Carbon rods is forecast to increase by 2c each year.

(vi) The current level of fixed costs of the company are $400,000 and this is not expected to increase due to the new product. The company will apportion $50,000 of the fixed costs to the new product per annum.

(vii) A consultancy report, undertaken six months ago at a cost of $10,000 had deemed the project feasible.

Required

(a) What are relevant costs for investment decision purposes? Identify which costs are relevant and which are not for the above decision, giving reasons for your choices. (10 marks)

(b) Should the company invest in the new product assuming that the Company has a cost of capital of 10%? (15 marks)

[Total 25 marks]

END OF EXAMINATION PAPER