BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTANCY

PROGRAMMES: Bachelor of Accountancy (Honours) Degree

COST AND MANAGEMENT ACCOUNTING 2 (AC217)

EXAMINATION

DURATION: 3 HOURS (100 marks)

INSTRUCTIONS TO CANDIDATES:

1. Answer all questions.
2. Use of silent and non-programmable calculators is allowed.
3. Start each question on a fresh page.
4. No cell phones are allowed in the examination room.

SECTION A (30 marks)

1. ITC Ltd a manufacturer of cardboard boxes, provides the estimated data set out below for one of its products:

	July	August	September
Sales (units)	800	1 000	1 500

Company policy is that closing stock of this product in any month should be 20% of next month's sales. What was the budgeted production for the month of August?

A. 900 units
B. 1 000 units
C. 1 100 units
D. 1 200 units

2. A company manufactures and sells one product which requires 8kg of raw materials in its manufacture. The budgeted data relating to the next period are as follows:

		Units
Sales		19 000
Opening inventory of finished goods		4 000
Closing inventory of finished goods		3 000
Opening inventory of raw materials was	50 000 kg	
Closing inventory of raw materials was	47 000 kg	

What is the budgeted raw material purchases for next period (in kg)

A. 141 000
B. 147 000
C. 157 000
D. 163 000

3. Raw material opening inventories are budgeted to be as follows:

	April	May	June
	3 800kg	4 200kg	4 100kg
Production requirements(kg)	10 000	12 000	8 000

The closing inventory budgeted for June is 3 900 kg.

Material purchases are paid for in the month following purchase. What is the figure to be included in the cash budget for May in respect of payments for purchases?

A. $39 000

B. $52 000

C. $59 500

D. $50 600

4. X department is a division of W Plc. X department usually has a quarterly wages costs of $4 500 000. Quarterly material cost are usually around $2 000 000. W Plc made a central decision to award all employees a wages increase of 2%.

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

   1. Direct material price variance of $4 000A
   2. Labour rate variance $90 000 A
   3. Sales volume variance $40 000 A

   A. 1 and 3 only

   B. 1 and 2 only

   C. 1,2 and 3

   D. 3 only

5. A company is in the process of setting up standard cost units for the next period. Product J uses two types of raw material, P and S. 7kg of material P and 3kg of material S are needed, at a standard price of $4 per kg and $9 per kg respectively.

   Direct labour is expected to cost $7 per hour and each unit of J requires 5 hours of labour.

   Production overheads are to be recovered at a rate of $6 per direct labour hour, and general overhead is to be absorbed at a rate of 10% of production cost.

   What is the standard prime cost for one unit of product j?

   A. $55

   B. $90

C. $120

D. $132

6. Gold Limited makes and sales two products called A and U. the following information is available for May:

	Production	Sales
Product A	4 500 units	4 300 units
Product U	3 100 units	2 600 units

	Products	
	A	U
	$	$
Unit selling price	85	60
Unit variable costs:		
Direct materials	20	10
Direct labour ($3 /hr)	15	18
Variable production overheads	15	20

Fixed costs were $75 000 for May and are recovered on the basis of direct labour hours. There was no opening inventory for either product.

What is the profit recorded for May using marginal costing principles?

A. $72 700

B. $106 700

C. $153 700

D. $181 700

7. Buttercup and Stork margarine arise from the same joint process and they can be sold soon after split-off point. The following information is available for the outgoing period, assuming there were no opening inventories of either product.

Joint costs were $$97 020.

Product	Units produced	Units sold	Selling Price/unit
Buttercup margarine	10 000	8 000	$2, 50
Stork margarine	8 000	6 000	$3, 00

Using the sales value at split-off point method to apportion joint production costs, what was the value of closing inventory of stork margarine in the last period?

A. $9 900
B. $11 880
C. $10 780
D. $8 624

8. A company produces two joint products X and Y and by-product Z from a single process. By-product Z is sold immediately after Split-off-point at $0, 75 per kg. X and Y are further processed and are sold at $20 and $24 per unit respectively .Data for October 2023 are as follows:

	$
Joint costs that yielded 2 000 units (X); 3 000 units(Y) and 1 000 units (Z)	$47 750
Further processing costs for 2 000 units of X	$ 6 000
Further processing costs for 3 000 units of Y	$12 000

Joint costs are apportioned using physical units method.

What was the total cost of production for X in October 2023?

A. $18 800
B. $24 800
C. $28 200
D. $40 200

9. A company manufactures an agricultural chemical which is sold in 5 litre containers. The manufacturing process involves a 20% loss of a key raw material. What is the standard usage of the raw material per container?

A. 6,25 litres

B. 6,00 litres

C. 5,00 litres

D. 4,00 litres

10. 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 machine hours are limited to 10 000 and fixed costs are expected to be $18 000 for the period in order to maximise profits the production mix (units) should be:

	Alpha	Beta	Theta
A.	1 000	1 500	800
B.	1 000	750	800
C.	1 000	1 500	200
D.	1 000	800	760

11. Which statement is not correct about zero based budgeting?

A. It ignores previous budget provisions

B. It is based on justification of each priority item

C. It is an adjustment of previous budget items by a common index

D. It is cumbersome process in terms of time and other resources

12. You are provided with data for Perkins Ltd for the quarter ending 31 March 2024.

	units
Opening inventory	nil
Production for the quarter	4 000
Sales for the quarter	3 500
	$
Fixed production costs	49 000
Selling and distribution costs	14 000
Variable production costs	21 000
Selling price per unit	32

What is the profit per unit using marginal costing system?

A. $30 625
B. $44 625
C. $44 000
D. $58 000

13. When there is no opening inventory of finished goods but there is closing inventory of finished goods, which statement below is correct about cost accumulation systems?

A. Marginal costing profit will be higher than Absorption costing profit

B. Absorption costing profit will be higher than marginal costing profit

C. Profit will be the same whichever costing system is applied

D. Marginal costing profit will be lower than absorption costing profit

14. When preparing management accounting reports using either marginal costing system, which statement is correct about treatment of advertising costs?

A. Advertising costs are treated as a product cost

B. Advertising costs are treated as a period cost

C. Advertising costs are ignored in calculation of profit for the period

D. Advertising costs are considered as a sunk cost

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

Output (units)	**1000**	**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 fixed cost component in electricity charges?

A. $500
B. $400
C. $600
D. $300

SECTION B (70 marks)

Question 1

Carpenter Ltd makes 3 furniture products namely Chairs, Stools and Desks. The budgeted unit cost and resource requirements of each of these items are detailed below:

	Chair	**Stool**	**Desks**
	$	$	$
Cost of timber	10,00	30,00	20,00
Direct labour cost	8,00	20,00	16,00
Variable overhead cost	6,00	15,00	12,00
Fixed overhead cost	5,00	9,00	8,00
	29,00	74,00	56,00
Budgeted volumes (units)	8,000	4,000	3,000

These volumes are believed to be equal to the demand of these products.

The fixed overheads are attributed to the 3 products on the basis of direct hours.

The labour rate is $4,00 per hour. Cost of timber is $2,00 per square metre.

A memo from the Purchasing manager advises that because of the problem with the supplier, the timber used in manufacturing, is limited to 40,000 square metres.

The Sales manager had already accepted an order for 1,000 chairs, 200 stools and 300 desks which if not supplied would incur a financial penalty of $4,000.These quantities are already included in the market demand estimates above. The selling prices of the 3 products are:

Chair	$40
Stool	$100

Desk	$90

Required:

(a) Calculate contribution per limiting factor and indicate the order of profitability. (6 marks)

(b) Indicate the optimum production mix (14 marks)

(c) The maximum profit at optimum production mix (5 marks)

[Total marks: 25]

Question 2

Part A

Perkins Ltd operates a process that produces three joint products and one By-product .Only the By- product needs no further refining. The operating results of the process for December 2024 are shown below are shown below.

Output from process:

Product A	100 tonnes
Product B	80 tonnes
Product C	80 tonnes
By-product X	3 tonnes

The month's operating costs were $1 300 000. The closing inventories were 20 tonnes of A, 15 tonnes of B, and 5 tonnes, of C. By-product X can be sold at $2 per kg. The value of the closing stock is calculated by apportioning costs according to physical units method. There were no opening inventories and the balance of the output was sold to a refining company at the following prices:

Product A	$5 per kg
Product B	$4 per kg
Product C	$9 per kg

Required:

(a) Prepare an operating statement showing the relevant trading results for December 2024. (10 marks)

Part B

The management of Perkins Ltd are considering a proposal to establish their own refining operations.

The current market prices of the refined products are:

Product A	$13 per kg
Product B	$15 per kg
Product C	$19.50 per kg

The estimated unit costs of the refining operation are:

	Product A ($ per kg)	**Product B** ($ per kg)	**Product C** ($ per kg)
Direct materials	0.50	0.75	2.50
Direct labour	2.00	3.00	4.00
Variable overheads	1.50	2.25	5.50

Prime costs are variable. Fixed overheads, amounting to $2 400 000 per annum, would arise due to the refining operation. Special equipment is required for refining product B and this would be rented at an annual cost of $ 1 080 000 per annum.

Assuming that there is a weight loss of 2% for each of the products because of the refining process, and that the quantity refined each month would be similar to December's output shown above:

Required:

Using supporting calculations, advise management on whether or not the refining should be done (15 marks)

[Total marks: 25]

Question 3

(a)

Buse Limited manufactures three products: X, Y and Z details of which are supplied below:

Sales	**Product**	**Quantity (Units)**	**Price each $**
	X	2, 000	50
	Y	4, 000	60
	Z	3,000	70

Material used in the company's products

Material	MA	MB	MC
Unit cost	$2	$3	$5

Quantities used in:

	MA (Units)	**MB (Units)**	**MC (Units)**
Product X	4	2	-
Y	3	3	2
Z	2	1	1

Finished Inventory	**Product X**	**Product Y**	**Product Z**
Quantities:			
1 January	500	750	250
31 January	550	825	275

Material Inventory	**MA (Units)**	**MB (Units)**	**MC (Units)**
1st January	13 000	10 000	6 000
31st January	15 600	12 000	7 200

Required:

Using the information given above, to prepare budgets for the month of January for:

(i) Sales values, including total value; (2 marks)

(ii) Production quantities (3 marks)

(iii) Material usage in quantities (4 marks)

(iv) Material purchases in quantity and values, including total value (6 marks)

(b)

The monthly budgets for manufacturing overhead of a business for two levels of activities were as follows:

Capacity	60%	70%
Budgeted production in units	600	700
	$	$
Wages	1 200	1400
Consumable stores	900	1 050
Maintenance	1 100	1 200
Power and fuel	1 600	1 800
Depreciation	4 000	4 000
Insurance	1 000	1 000
Total	9 800	10 450

Required:

(i) Indicate which of the above expenses are variable, semi-variable and fixed. (3 marks)

(ii) Prepare flexed budget at 80% capacity. (7 marks)

[Total marks :25]

END OF EXAMINATION PAPER