

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTANCY

MAR 2024

PROGRAMMES:

Bachelor of Accountancy (Honours) Degree

COURSE: Cost and Management Accounting 1(AC215)

DURATION: 3 HOURS

INSTRUCTIONS TO CANDIDATES:

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

SECTION A (Multiple Choice:30 marks).

1. What are fixed costs conventionally deemed to be?
 - A Constant per unit of input
 - B Constant in total when production volume changes
 - C Outside the control of management
 - D Those not affected by inflation
2. Which of the following would be classified as indirect labour?
 - A Salary of assembly workers in a company manufacturing mobile phones
 - B Salary of a stores assistant in a factory storeroom
 - C Salary of an audit clerk in affirm of auditors
 - D Wages of plasterers in a construction company

3. A cost is described as constant over a certain activity range and then increases but remaining stable over a revised activity range in the short term. What type of cost is this?
- A. a fixed cost
 - B. a variable cost
 - c. a semi-variable cost
 - d. a stepped fixed cost
4. A manufacturing company has four types of products namely T1; T2, T3 and T4. The total cost for each type of two different production levels is :

	125 units	180 units
	\$	\$
Cost type: T1	1000	1260
T2	1750	2520
T3	2475	2826
T4	3225	4644

- Which two cost types would be classified as being semi-variable?
- A. T1 and T3
 - B. T1 and T4
 - C. T2 and T3
 - D. T2 and T4
5. Holding costs are included in the EOQ model. Which of the following are examples of holding costs?
- 1. Warehouse rent
 - 2. Interest on inventory investment
 - 3. Carriage inwards
 - 4. Inventory theft
- A. 1 and 2 only
 - B. 1 and 3 only
 - C. 3 and 4 only
 - D. 1, 2 and 4

6. The following information relates to a raw material stock item:

EOQ=800 calculated using the formula

$$\sqrt{\frac{2AO}{H}}$$

Where A=annual demand =12000 units

H=Holding cost per unit per annum=\$1,50

O=Order cost= ?

What is the cost of placing an order?

- A. \$27
B. \$ 40
C. \$71
D. \$80
7. A differential piece work scheme has a basic rate of \$0,50 per unit. Output in addition to 500 units is paid at higher rates . The premiums over and above basic rates , which apply only to additional units over the previous threshold are :

Output (units)	premium (per unit)
501-600	\$0,05
601 and above	\$0,10

What is the total amount paid if output is 620 units?

- A \$317
B \$318
C \$ 322
D \$372
8. An overhead absorption rate of \$12 per direct labour hour was established based on a budget of 2100 hours. Actual direct labour hours worked were 2180 and actual overhead expenditure was \$25 470.

What was the over/under absorption of overhead?

- A. \$270 under absorbed
B. \$690 over absorbed
c. \$960 over absorbed
D. \$960 under absorbed

9. Overheads of a production department for a period are :

Budget \$74,600; Absorbed \$ 71890; Actual \$73 220

What is the overhead over/under absorption?

- A. \$1330 over absorbed
 - B. \$1330 under absorbed
 - C. \$2710 over absorbed
 - D. \$2710 under absorbed
10. Overhead in a factory are apportioned in four production departments (P1,P2,P3 and P4).

The following information is available:

	P1	P2	P3	P4
1. Overhead expenses (\$)	18 757	29 025	46 340	42 293
2. Direct labour hours	3 080	6750	3760	2420
3. Machine hours	580	1310	3380	2640

Direct hours are used to absorb overheads of P1 and P2 and machine hours are used to absorb overheads of P3 and P4.

Which production department has the highest hourly overhead absorption rate?

- A Production department P1
 - B Production department P2
 - C Production department P3
 - D Production department P4
11. For which costing method is the concept of equivalent units relevant?
- A Job costing
 - B Batch costing
 - C Process Costing
 - D Service Costing
12. 4000 litres of a chemical were manufactured in a period. There is a normal loss of 6% of the material input to the manufacturing process. There was an abnormal loss of 4% of the material input in the period. How many litres of material (to nearest litre) were input during the period?

- A 3600
- B 4250
- C 4400
- D 4444

13. 12000kg of a material were input to a process in a period. The normal loss is 10% of input. There is no opening or closing work-in-progress. Output in the period was 10920kg. What was the abnormal gain/loss in the period?

- A Abnormal gain of 120kg
- B Abnormal loss of 120 kg
- C Abnormal gain of 1080 kg
- D Abnormal loss of 1080 kg

14. Completed output from a manufacturing processing in a period totalled 5640 units. There was no work-in progress at the beginning of the period but 780 units , 75% complete, remained in the process at the end of the period.

What are the equivalent units of the closing work -in progress?

- A. 195
- B. 585
- C. 780
- D. 6225

15. A company operates a manufacturing process which produces joint products X and Y and by-product Z. Total manufacturing costs for the period were \$272 926. Output quantities and expected selling price for each unit was as below:

Product	output	Selling price/unit
X	16000kg	\$6,10
Y	53200kg	\$7,50
Z	2770kg	\$0,80

What was the cost per unit for product X using the sales value basis for allocating joint cost?

- A. \$4,10
- B. \$3,33

C. \$3,00

D. \$3,24

SECTION B (70 marks)

Question 1

ZM Ltd is a manufacturing firm which uses job costing to assign costs to individual products provided to its customers. The following are estimated fixed production overhead costs for its five departments for the year 2021:

	\$
Machining	300 000
Assembly	125 000
Finishing	75 000
Stores	50 000
Maintenance	<u>40 000</u>
	<u>590 000</u>

Stores and Maintenance departments are service departments. Previous analysis indicates that their costs should be apportioned to the user departments as follows:

	Machining	Assembly	Finishing	Stores	Maintenance
Stores	40%	30%	20%	-	10%
Maintenance	55%	20%	20%	5%	-

The number of machine hours and labour hours budgeted for 2021 are as below:

	Machining	Assembly	Finishing
Machine hours	25 000	1 000	2 500
Labour hours	10 000	15 000	10 000

Required:

(a) To compute the overhead absorption rates for each production department for 2021 using the stepwise method (15 marks)

(b) Prepare a quotation for Job number CON/01/2021 which is to be done early in 2021 and is expected to use the following resources:

Direct materials costing	\$1200	
Direct labour costing	\$ 750	
And requires:	Machine hours	Labour hours
Machine department	45	10
Assembly department	5	15
Finishing department	4	12

Additional information:

Profit is 20% of selling price (6 marks)

(c) If the actual fixed overhead costs of the Assembly department for the year ended 31 December 2021 was \$150 000 and the actual machine hours were 2100 and the actual labour hours were 15 350.

Required:

Calculate the over/under absorbed overheads for the assembly department.

(4 marks)

[Total: 25 marks]

Question 2

Innovation Ltd makes liquid fertilizer and uses process costing based on weighted average method to value production and inventory. The two main production processes that the liquid fertiliser undergoes are mixing and Blending. All raw materials are introduced in the mixing department and then the output goes to the blending department. No additional materials are added in the blending department. Labour and production overheads (conversion costs) are incurred

evenly throughout both mixing and blending processes. As cost accountant, you are supplied with the following information for the most recent accounting period:

	Mixing	Blending
Opening work in progress	nil	20 000 litres
Input during the period	150 000 litres	
Completed and transferred	103 000 litres	106 700 litres
Closing work in progress	44 000 litres	15 000 litres

Additional information:

1. Normal loss is expected to be 2% of materials input in the mixing process. No loss is expected in the blending process. Any losses arising can be sold at a scrap value of \$0,10 per litre

2. Costs relating to the process are as follows:

	Mixing	Blending
	\$	\$
Opening work in progress:		
-Prior process costs(from mixing process)		12 476
-Conversion costs	nil	1 920

Input into the process:

- Materials	34 845	nil
- Conversion costs	40 761	40 815

3. Opening work in progress in the blending department was fully complete in terms of prior process and 40% complete in terms of conversion costs.
4. Closing work in progress in the mixing department was fully complete in terms of materials and 60% complete in terms of conversion costs. Closing work in

process in the blending department was fully complete in terms of prior process costs and 50% complete in terms of conversion costs,

Required:

(a) Prepare the following accounts for the most recent financial period. Show all workings clearly.

(i) Mixing process account (8 marks)

(ii) Blending process account (8 marks)

(iii) Normal loss account (2 marks)

(iv) Abnormal loss/Abnormal gain account (4 marks)

(v) Explain the difference between normal loss and abnormal loss (3 marks)

[Total: 25 marks]

Question 3

Question 1

(a) Sketch the two dimensional graphs for the following cost descriptions:

Description of Cost	Details of Cost behaviour	
(i) Service cost	\$100 for first 100 units and thereafter \$2 Per unit.	(2 marks)
(ii) Depreciation of vehicles	Straight line depreciation	(2 marks)
(iii) Transport cost	For litres of petrol: \$50 for up to 500 litres ;\$60 for 501-1000 litres and \$70 for 1001-1500 litres.	(2 marks)
(iv) Royalty	\$0,50 for each book published	(2 marks)
(v) Depreciation on machinery	Charge on a machine hour basis	(2 marks)

(b) Mukanya Ltd manufactures and sells hardware to the general public. The following types of expenses have been identified by the Cost and Management accountant :

- (i) Salaries and wages of personnel involved in the transportation of direct materials in the factory
- (ii) Computer supplies for the general administration office

- (iii) Freight insurance on raw materials
 - (iv) Payment made to Special Ltd for company logos on delivery vehicles
 - (v) Royalties payable to Exclusive Patents Ltd for special processes in the manufacture of the company's products
 - (vi) New product development costs
 - (vii) Petrol and oil for manufacturing machinery
 - (viii) Fees payable to Ninja Security for security personnel who patrol the manufacturing area.
 - (ix) Cost of pilot study pending the release of the new product for the millennium
- (x) Royalty to Mapfumo Music Ltd for the exclusive rights to the soundtrack of "Vashandi" by Thomas Mapfumo which is played in the factory during working hours. This song has proved to have motivational effect on factory workers.

Required:

Classify each of the above mentioned expenses into the following categories:

- (a) Prime cost
- (b) Production overheads
- (c) Administration overheads
- (d) Sales and distribution overheads
- (e) Research and Development expenditure

[Total : 20 marks]

Total marks 100

END OF EXAMINATION PAPER