

MODULE 1

COSTING PRINCIPLES

1. Zamore Ltd manufactures an electronic device which passes through three departments before completion as follows.

Operation	Time per Unit (minutes)	Employee Grade	Wage Rate per Hour (\$)
Forming	45	A	15.50
Assembling	30	B	17.20
Finishing	20	C	20.30

Additional information

- The company had set a target for the completion of 1680 units for the previous week. The standard work week for each employee is 35 hours per week.
- Employees in the Forming and Assembling Departments are paid a premium bonus, where the employee receives a quarter of the time saved in additional pay.
- Employees in the Finishing Department do not qualify for a premium bonus but instead get $1\frac{1}{2}$ the hourly rate for any overtime worked.
- Scott and Celia work in the Forming and Finishing Departments respectively. The following information relates to their work hours and output for the previous week.

	Scott	Celia
Actual hours worked	38	40
Output (units)	56	114

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(A) Calculate the following:

- (i) The number of employees in the Assembling Department who will be required to meet the production target of 1680 units **[2 marks]**
 - (ii) The weekly pay for Scott and Celia for that week **[8 marks]**
- (b) Assume that Zamore Ltd has prepared the following cost estimates for the manufacture of a subassembly component, based on an annual production of 8000 units.

	Per Unit	Total
	\$	\$
Direct materials	5	40 000
Direct labour	4	32 000
Variable factory overhead applied	4	32 000
Fixed factory overhead applied (150% of direct labor cost)	6	48 000
Total cost	19	<u>152 000</u>

A supplier has offered to provide the subassembly at a price of \$16 each. Two-thirds of fixed factory overheads, which represents executive salaries, rent, depreciation and taxes, continue regardless of the decision.

- (i) Prepare a cost comparison for the manufacture and purchase of the subassembly component. **[8 marks]**
- (ii) State the decision that Zamore Ltd should make on the subassembly component, based on the cost comparison in (b) (i). **[1 mark]**



(c) Zamore Ltd has expanded its business, entered the financial services market and is manufacturing its own credit cards for its Credit Card Division. The company plans to manufacture 27 000 credit cards to meet its annual demand. Zamore Ltd expects that the cards will be distributed evenly throughout the year and has estimated the carrying cost for each credit card at \$3. The production cost for each set-up is \$500. In addition, the company also uses the economic order quantity (EOQ) inventory model to manage its inventory.

(i) Define the term 'EOQ inventory model'. **[1 mark]**

(ii) State TWO assumptions of the EOQ model. **[2 marks]**

(iii) Determine the number of production runs for Zamore Ltd, using the EOQ inventory model.

[Note: To determine optimal production, ordering cost must be replaced by set-up costs.] **[6 marks]**

(iv) Assume that Zamore Ltd is now incurring total annual set-up and carrying costs of \$10 000. Calculate the firm's savings when the EOQ inventory model is applied. **[3 marks]**

(d) During the production of the electronic devices, solid chemical waste is produced.

(i) Outline ONE importance of chemical waste disposal. **[2 marks]**

(ii) State TWO guidelines which must be followed when disposing of solid chemical waste. **[2 marks]**

Total 35 marks

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MODULE 2

COSTING SYSTEMS

2. Lasmoy Ltd manufactures a product using resources from two departments, X and Y. Overhead is applied in each department to reflect the characteristics of the department. Department X has a large contingent of employees who are responsible for the first stage of production which is labour intensive. Department Y is predominantly automated and is heavily dependent on machines to complete the production process.

The following additional information is available.

Budgeted Amounts	Department X	Department Y
Direct labour costs	\$600 000	\$150 000
Machine hours	51 000	80 000
Factory overheads	\$900 000	\$660 000

The accounting records of the company show the following data for Job 748.

	Department X	Department Y
Direct materials	\$130 000	\$21 000
Direct labour costs	\$14 000	\$6 000
Machine hours	2 000	6 000

- (a) Compute the predetermined factory overhead rate for EACH department. [4 marks]
- (b) (i) Calculate the total overhead cost of Job 748. [5 marks]
- (ii) Determine the unit cost of Job 748, which consists of 200 units of product. [7 marks]



- (c) Lasmoy Ltd's actual costs for manufacturing the product and the the selling price of the product are as follows.

Selling price	\$90 per unit
Direct materials	\$30 per unit
Indirect materials (all variable)	\$420 000
Direct labour	\$25 per unit
Indirect labour (all variable)	\$364 000
Factory overheads (60% variable)	\$560 000
Administrative and selling (80% fixed)	\$1 050 000

In 2016, all units produced were sold. In 2017, the planned level of production was 80 000 units; however, actual production was 70 000 units of which 65 000 units were sold.

- (i) Calculate the **per unit** value of closing inventory using marginal costing.
[9 marks]
- (ii) Prepare the Income Statement for Lasmoy Ltd using absorption costing.
[10 marks]

Total 35 marks

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MODULE 3

PLANNING AND DECISION-MAKING

3. (a) Outline THREE objectives of budgeting. [6 marks]
- (b) The Lambeth Company manufactures wooden office desks. The production manager needs to determine how much lumber should be ordered for the months of August, September and October 2018. Budgeted sales for the last five months of 2017 are as follows.

Budgeted Sales (units)

August	620
September	530
October	580
November	600
December	680

- Each desk requires 40 square feet of lumber, at a cost of \$85 per square foot.
- The company wants to maintain an inventory of desks equal to 20 per cent of the following month's sales. At the beginning of August 124 completed desks are on hand.
- The company maintains an inventory of lumber equal to 15 per cent of the next month's needs.
- At the beginning of August 3612 square feet of lumber are on hand.
- Inventory of lumber at 31 October is estimated to be 3696 square feet.

Prepare, for EACH of the months of August, September and October 2018, the

- (i) production budget [8 marks]
- (ii) schedule of direct materials required. [13 marks]
- (c) (i) Explain the concept of 'standard costing'. [4 marks]
- (ii) State TWO types of standard costing and explain ONE type. [4 marks]

Total 35 marks

END OF TEST

IF YOU FINISH BEFORE TIME IS CALLED, CHECK YOUR WORK ON THIS TEST.

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