

Answer any **FOUR (4)** out of 5 questions.

Each question carries 25 marks.

QUESTION 1

(a) Olympic Camera Company has received a special order for photographic equipment it does not normally produce. The company has excess capacity and the order could be manufactured without reducing production of the firm's regular products.

Discuss the *relevance* of each of the following items in computation of the costs of the special order.

(i). Equipment to be used in producing the order has a book value of \$2,000. The equipment has no other use for Lansing Company. If the order is not accepted, the equipment will be sold for \$1,500. If the equipment is used in producing the order, it can be sold in three months for \$800.

(5 Marks)

(ii). If the special order is accepted, the operations will require some of the storage space in the company's plant. If the space is used for this purpose, the company will rent storage space temporarily in a nearby warehouse at a cost of \$18,000. The building depreciation allocated to the storage space to be used in producing the special order is \$12,000.

(5 Marks)

(iii). If the special order is accepted, it will require a subassembly. Lansing Camera can purchase the subassembly for \$24.00 per unit from an outside supplier or make it for \$30.00 per unit. The \$30.00 per unit was determined as follows:

Direct material	\$10.00
Direct labor.....	6.00
Variable overhead.....	6.00
Allocated fixed overhead.....	<u>8.00</u>
Total unit of subassembly.....	30.00
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(8 Marks)

(b) Explain the meaning of opportunity cost and give two examples of such cost.

(7 Marks)

QUESTION 2

Redhill Valve Company manufactured 15,600 units during March of a control valve used by milk processors in its Denver plant. Records indicated the following:

Direct labour.....80,200 hr at \$10.95
 Direct material purchased.....50,000 kg at \$5.20
 Direct material used.....46,200 Kg

The control valve has the following standard prime costs.

Direct material....3 kg at \$5.00 per kg.....	\$15.00
Direct labour.....5 hr at \$11.25 per hr.....	<u>56.25</u>
Standard prime cost per unit.....	<u>71.25</u>
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Required:

(a) Prepare a schedule of standard production costs for March, based on actual production of 15,600.

(4 Marks)

(b) For the month of March, compute the following variances, indicating whether each is favourable or unfavourable.

- (i) Direct-material price variance
- (ii) Direct-material quantity variance
- (iii) Direct-labour rate variance
- (iv) Direct-labour efficiency variance

(16 Marks)

(c) Briefly discuss **Five (5)** purposes of standard costing.

(5 Marks)

QUESTION 3

(a) What are the behavioural aspects that should be kept in mind by those who are designing and operating standard costing and budgetary control systems?

(5 Marks)

(b) Wellington Traders wishes to calculate an operating budget for the forthcoming period. Information regarding products, costs and sales levels is as follows:

Product	Alpha	Beta
Materials required:		
A (kg)	2	3
B (litres)	1	4
Labour hours required:		
Skilled (hours)	4	2
Semi-skilled (hours)	2	5
Sales level (units)	2000	1500
Opening stock (units)	100	200

Closing stock of materials and finished goods will be sufficient to meet 10% of the demand. Opening stock of material A was 300 kg and for material B was 1000 litres. Material prices are \$10 per kg of material A and \$7 per litre of material B. Labour costs are \$12 per hour for skilled workers and \$8 per hour for the semi-skilled workers.

Required: Produce the following budgets:

(i) Production budget

(ii) Materials usage (kg and litres)

(iii) Materials purchases (kg, litres and \$); and

(iv) Labour (hours and \$)

(20 Marks)

QUESTION 4

(a) Carter Company manufactures two products, Deluxe and Regular, and uses a traditional two-stage cost allocation system. The first stage assigns all factory overhead costs to two production departments A and B, based on machine hours. The second stage uses labour-hours to allocate overhead to individual products.

For 2017, the firm budgeted \$1,000,000 total factory overhead cost for these operations.

	Production Department A	Production Department B
Machine-hours	4,000	16,000
Direct labour hours	20,000	10,000

The following information relates to the firm's operations for the month of January:

	Deluxe	Regular
Units produced and sold	200	800
Unit cost of direct materials	\$100	\$ 50
Hourly direct labour wage rate	\$ 25	\$ 20
Hourly direct-labour in Department A per unit	2	2
Hourly direct-labour in Department B per unit	1	1

Carter Company is considering implementing an activity-based costing system. Its management accountant has collected the following information for activity cost analysis for 2017.

Activity	Budgeted Overhead	Budgeted Cost Driver	Quantity	<u>Driver Consumption</u>	
				Deluxe	Regular
Material movement	\$ 7,000	Number of production runs	350	15	20
Machine setups	400,000	Number of setups	500	25	50
Inspections	588,000	Number of units	19,600	200	800
Shipment	5,000	Number of shipments	250	50	100
	\$1,000,000				

Required:

(a) Calculate the unit cost for each of the two products under the existing volume-based costing system.

(8 Marks)

(b) Calculate the unit cost for each of the cost driver under the proposed ABC system.

(4 Marks)

(c) Calculate the unit cost for each of the two products if the proposed ABC system is adopted.

(8 Marks)

(d) Discuss the problems associated with conventional costing systems, resulting from a failure to adapt to the changing business environment.

(5 Marks)

QUESTION 5

The following data refers to a single product, the TECHWIZ, made by the Markdata Computer Company:

	\$
Sales price	5,595
Materials cost (including purchased component)	899
Direct labour cost	233
Facilities cost (for a highly automated plant mainly includes rent, insurance, taxes and depreciation)	2,352,000

Required:

(a) What is the unit contribution margin?

(4 Marks)

(b) What is the breakeven point in units and dollars?

(6 Marks)

(c) What is the desired level of sales if the company plans to increase fixed costs by 5 percent (to improve product quality and appearance) and achieve a desired before-tax profit of \$200,000?

(5 Marks)

(d) If the company's income tax rate is 22 per cent, what unit sales are necessary to achieve an after-tax profit of \$150,000?

(5 Marks)

(e) Why do companies use breakeven analysis?

(5 Marks)

End of Exam Paper