

## SECTION A

Answer **ALL** questions in this section. Each question carries 30 marks. Write all your answers in the **AL(C)** answer book provided.

1. The management accountant is working on the cash budget for Poly Ltd for the third quarter of the accounting year ended 31 December 2010. The following information about the sales and administrative expenses is available:

	Sales (\$)	Administrative expenses (\$)
May	2,400,000	164,500
June	2,30,000	160,000
July	2,550,000	161,000
August	3,000,000	200,000
September	2,500,000	149,500
October	2,400,000	170,000

Additional information:

- (i) Poly Ltd has a cash balance of \$500,000 as at June 2010.
- (ii) 70% of sales are on credit basis. Customers are given a 2-month credit period. It is the company's policy to adopt a uniform mark-up of 25%.
- (iii) From past experience, half of the customers would pay in the month following the sales to take a 5% cash discount. It is estimated that only 90% of the remaining customers would be able to settle their accounts.
- (iv) 10% of purchases are cash purchases. Purchases made would be equal to 110% of the expected cost of sales in next month. Credit purchases are settled within one month.
- (v) 80% of administrative expenses are paid in the month when the expenses are incurred. The outstanding amount is paid in the next month.
- (vi) Selling and distribution expenses are comprised of month fixed cost of \$10,000 and variable cost of 2% on the sales revenue. They are paid when they are incurred.
- (vii) Depreciation on fixed assets is to be provided at an annual rate of 12% by using the straight-line method. The net book value of the fixed assets at 30 June 2010 is \$1,270,000 with an accumulated depreciation of \$730,000.
- (viii) A building costing \$600,000 and with an accumulated depreciation of \$220,000 at 30 June 2010 will be sold on 1 September 2010 for \$600,000.



- (ix) A new equipment costing \$800,000 would be purchased on 1 August 2010. 55% of the cost would be paid on the date of purchase. The rest would be paid in 10 monthly instalments of \$40,000 each, commencing on 1 September 2010. Interest for the finance lease is to be apportioned on a straight line basis.
- (x) The value of inventory as at 1 July 2010 is estimated to be \$1,800,000.
- (xi) Poly Ltd requires a minimum cash balance of \$54,525 each month. If overdraft occurs, short-term loan shall be borrowed. The interest rate is 2% per month. Therefore, repayment shall be made as soon as possible whenever there is an excess of cash.

**REQUIRED:**

- (a) Prepare the cash budget (in columnar form for each month) for the three months ended 30 September 2010. (11 marks)
- (b) Prepare the budgeted income statement for the three months ended 30 September 2010. (11 marks)

In order to enhance the competitiveness of the company, the directors of Poly Ltd are presented with two plans as follows:

	Cash Flows					
	Year 0 (\$)	Year 1 (\$)	Year 2 (\$)	Year 3 (\$)	Year 4 (\$)	Total (\$)
Plan A	(2,000,000)	500,000	900,000	950,000	1,650,000	2,000,000
Plan B	(2,000,000)	3,000,000	500,000	200,000	--	1,700,000

The cost of capital to Poly Ltd was 8%.

**REQUIRED:**

- (c) Supporting with net present value calculations, under what circumstances should both plans be accepted? (Calculations, where appropriate, should be based on the discounting factors given in the Appendix on Page 11. Correct all amounts to nearest dollar.) (4 marks)
- (d) If the two plans are mutually exclusive, the directors wonder if they should take Plan A because its total cash inflows is greater than that of Plan B. Please advise and explain to the manager. (4 marks)

2. Red Ltd makes three products and is reviewing the profitability of its product line. You are given up following budgeted data about the firm for the coming year.

	Product A	Product B	Product C
	\$	\$	\$
Sales	1,500,000	1,440,000	880,000
Costs:			
Materials	500,000	480,000	240,000
Labour	400,000	320,000	160,000
Overheads	650,000	600,000	360,000
	<u>1,550,000</u>	<u>1,400,000</u>	<u>760,000</u>
Profit / (Loss)	<u>(50,000)</u>	<u>40,000</u>	<u>120,000</u>
Units sold	100,000	120,000	80,000

The company is concerned about the loss on product A. It is considering ceasing production of it and switching the spare capacity of 100,000 units to Product C.

Additional information:

- (i) All production is sold.
- (ii) 25% of the labour cost for each product is fixed in nature.
- (iii) Fixed administration overheads of \$900,000 in total have been apportioned to each product on the basis of units sold and are included in the overhead costs above. All other overhead costs are variable in nature.
- (iv) Ceasing production of product A would eliminate the fixed labour cost associated with it and one-sixth of the fixed administration overhead apportioned to product A.
- (v) Increasing the production of product C by 100,000 units would mean that the fixed labour cost associated with product C would double, the variable labour cost would rise by 20% and its selling price would have to be decreased by \$1.5 in order to achieve the increased sales.

**REQUIRED:**

- (a) Prepare a marginal cost statement to show the contribution for a unit of each product on the basis of:
  - (i) the original budget, and
  - (ii) if product A is deleted. (8 marks)



- (b) Prepare a statement showing the total contribution and profit for the company as a whole on the basis of:
- (i) the original budget, and
  - (ii) if product A is deleted. (5 marks)
- (c) Advise whether product A should be deleted from the product range, giving reasons for your decision. (2 marks)
- (d) Suggest two other factors that Red Ltd has to consider in deciding whether it should delete the product. (3 marks)

Finally, Red Ltd deletes product A from the product range and uses the capacity to operate several production processes involving the mixing of ingredients to produce special milk. One such product is mixed two separate process operations. The information below covers the costs incurred in, and output from, Process 2 during the period just completed:

Costs incurred:	\$
Transfers from Process 1	187,704
Raw materials costs	47,972
Conversion costs	63,176
Opening work in process	3,009

Production:

Opening work in process 1,200 units  
(100% complete, apart from Process 2; conversion costs which were 50% complete)

Transfers from Process 1 112,000 units  
Completed output 105,400 units  
Closing work in process 1,600 units  
(100% complete, apart from Process 2, conversion costs which were 75% complete)

Loss of materials of the input transferred from Process 1, which occurs in the early stages of Process 2 (after all materials have been added), is expected to be 5% of input. It is assumed that Process 2 conversion costs are all apportioned to units of good output. Wastage materials from the losses have no saleable value.

**REQUIRED:**

- (e) Define normal loss and abnormal loss and contrast briefly their cost accounting treatment. (4 marks)
- (f) Using FIFO, prepare the Process 2 account for the period. (8 marks)



## SECTION B

Answer any **TWO** questions from this section. Each question carries 20 marks. Write all your answers in the **AL(E)** answer book provided.

3. Ocean Ltd has a year end-date on 30 September. On 30 September 2008, it proved impossible to perform the year-end stocktaking due to staff illness. The count was eventually carried out on 21 October 2008 at the company's premises when the stock was valued at a cost of \$105,270.

The following information relating to stock movements was then made available:

- (i) Included in stock on 21 October 2008 were goods that had been valued at their full cost price of \$1,700 but which were subsequently found to have suffered flood damage. It was felt that they could be sold for \$2,000 instead of the normal \$3,000, but only after carrying out repair work costing \$400. The flood took place in August 2008.
- (ii) During the period 1- 21 October 2008, sales invoices totaling \$36,250 were sent to customers although \$2,600 related to goods not despatched until 8 November 2008. The company applied a standard mark-up of 25% on cost in order to calculate selling price.
- (iii) All customers received full credit for goods returned as unwanted. The value of credit notes issued during the period 1-21 October 2008 amounted to \$1,800 and the relevant goods had been returned to stock between those two dates.
- (iv) The value of purchases between 1 and 21 October 2008 amounted to \$41,000 at list price. Half of these goods were subject to a trade discount of 10% but no cash settlement discount; the other half to a cash settlement discount of 2% for payment within 30 days but no trade discount. Goods with a list price of \$5,000, received on 5 October 2008 and subject to a cash settlement discount of 2%, were returned to the suppliers on 8 October 2008.
- (v) Stock with a cost price of \$300 was sent to a customer on a sale of return basis on 29 September 2008. The customer had yet to confirm that goods had been sold.
- (vi) Free samples received from suppliers on 15 October 2008 were included in the stock figure as at 21 October 2008 at a selling price of \$7,000. The cost of these goods would be \$5,200 if purchased from the suppliers.
- (vii) As the result of a misunderstanding, stock on 21 October 2008 was valued using the last-in first-out principle instead of the usual first-in first-out method. The difference in value between the two methods amounted to \$1,900. The replacement price of stock has been increasing steadily for over two years.



**REQUIRED:**

- (a) Prepare a statement calculating the value of stock in hand as at 30 September 2008. (12 marks)
- (b) Explain the importance of stock valuation in the preparation of financial statements. (4 marks)
- (c) Suppose that the company really wants to change its stock valuation method from FIFO to LIFO, explain how the change should be accounted for in the financial statements. (4 marks)



4. Magic Ltd is a furniture manufacturer. The production process includes Cutting, Assembly and Finishing department. Besides, two service centres, A and B provide supporting services to three production departments. Service centre A provides training to all manufacturing workers while service centre B is responsible for the quality control of the furniture. The inspection workers will spend half of their time working for Cutting department and their remaining time is allocated to the Assembly and Finishing department in a ratio of 2:3.

The budgeted production level in December 2010 is 250,000 units, related information is as follows:

	Cutting	Assembly	Finishing	Service A	Service B
Machine hours	60,000	25,000	10,000	--	--
Direct labour hours (\$40 per hour)	5,000	44,000	40,000	--	--
Training hours	600	5,000	8,000	--	6,400
Direct materials	\$26,500	\$8,500	--	--	--
Fixed overheads (excluding depreciation)	\$568,500	\$57,800	\$633,600	\$850,000	\$340,000
Depreciation on fixed assets	\$420,000	\$420,000	\$360,000		

The allocation bases of the fixed overheads (excluding depreciation) are as follows:

	Allocation base
Cutting	Machine hours
Assembly	Direct materials
Finishing	Direct labour hours
Service A	Training hours
Service B	Inspection hours

**REQUIRED:**

- (a) Allocate the costs of each service centre to the production departments. (3 marks)

Recently, Job 123 has been placed from a new customer. The information about the job is as follows:

	Cutting	Assembly	Finishing
Direct materials	\$12,000	\$8,000	--
Machine hours	2,000	600	400
Labour hours	900	3,400	5,000

**REQUIRED:**

- (b) Calculate the total cost of Job 123. (5 marks)
- (c) Suggest whether Magic Ltd should accept the order if this new customer is willing to pay \$600,000 only, assuming there is idle capacity in Magic Ltd. (2 marks)
- (d) If 182,495 units is the break-even point, calculate the selling price for each unit of output and the budgeted profit for December 2010. (4 marks)



In order to widen the market share, the company is considering the launch of a new product and various output levels are under consideration.

The total variable costs per annum associated with each output level are shown below:

<u>Output level</u>	<u>Costs</u>
1	\$40,000
2	\$60,000
3	\$90,000
4	\$140,000

The fixed costs of \$72,000 per annum and the contribution to sales ratio is expected to be 60%.

**REQUIRED:**

- (e) Assuming all the output at each level would be sold, calculate the profit or loss at each of the four output levels. (4 marks)
- (f) Calculate the breakeven point in sales value and the level of sales required to make an annual profit of \$30,000. (2 marks)

5. God Ltd is a multinational corporation, which produces and sells a single component for the motor industry in China and USA. For the China market, it has budgeted to make 40,000 units in the year. The components sell for \$100 each. The standard unit variable production costs are as follows:

Direct Material A	2 kg at \$11.50 per kg
Direct Material B	4 kg at \$1.90 per kg
Direct Labour	1.5 hrs at \$10 per hour

Variable overheads absorbed at \$6 per direct labour hour.

Fixed factory overheads, absorbed at a predetermined rate based on machine hours, are expected to be \$800,000 for the year and are expected to occur evenly. Budgeted machine time required to produce one unit of the component is 5 hours.

The following actual information is available for the first three months of the year:

Opening stock of component	2,000 units
Sales of component	9,500 units
Closing stock of component	1,900 units

Actual fixed overheads for the three months were equal to the budget. Actual variable costs per unit were as per standard cost.

**REQUIRED:**

- (a) Calculate for the first three months of the year:
- (i) the total cost of production
  - (ii) the over/under absorption of fixed production overheads (6 marks)
- (b) Prepare a trading account for the first three months of the year in absorption costing format, clearly showing any over/under absorption of overheads written off to cost of goods sold. (6 marks)

For the USA market, the standard production costs per unit of the single component are:

		\$
Direct material	8 kg @ \$4 per kg	32.00
Direct labour	2 hrs @ \$8 per hour	16.00
Variable overheads	\$2.50 per direct labour hour	5.00
Fixed overheads	\$12.00 per direct labour hour	24.00

Budgeted production and sales for the month ended April year 4 were 400 units. The budgeted selling price was \$100 per unit.



Actual sales and costs relating to this period were as follows:

Sales	420 units
Revenue from sales	\$39,000
Direct material	3,400 kg used at a total cost of \$14,880
Direct labour	850 hrs worked at a total cost of \$6,600
Variable production overheads incurred	\$2,200
Fixed production overheads incurred	\$10,200

All production was sold during the period and there was no opening stock at 1 April.

**REQUIRED:**

- (c) For the USA market, calculate the following variances:
- (i) Material price and usage
  - (ii) Labour rate and efficiency (4 marks)
- (d) Give two possible reasons for each of the four variances calculated above. (4 marks)

