CA | THE INSTITUTE OF CHARTERED ACCOUNTANTS OF SRI LANKA

Corporate Level
Advanced Management Accounting
Model Paper 2

Instructions to candidates

1) Time Allowed: Reading &Planning -15minutes -Writing - 3 Hours
2) Total: 100 marks
3) Answer all the questions
4) This paper consists of three sections.
    Section 01: 10 questions carrying 2 marks each
    Section 02: 4 questions carrying 10 marks each
    Section 03: 2 questions carrying 20 marks each
5) Answers should be in the English language, and in the answer booklet/s given to you.
6) Begin each answer on a separate page in the answer booklet. Submit all workings.

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Section 01

This section has 10 questions carrying 2 marks each.
All questions are compulsory.
Total marks for section 01 is 20 marks.

1.1 The following statements have been made about throughput accounting.

(1) Inventory has no value and should be valued at Rs.0.00.
(2) Efficiency is maximized by utilizing direct labour time and machine time to full capacity.

Which of the above statements is/are true?

A. 1 Only B. 2 Only
C. Neither 1 nor 2 D. Both 1 and 2

1.2 In the theory of constraints and throughput accounting, which of the following methods may be used to elevate the performance of a binding constraint?

(Method 1) Acquire more of the resource that is the binding constraint –

(Method 2) Improve the efficiency of usage of the resource that is the binding constraint

A Method 1 only B Method 2 only
C Method 1 and Method 2 D Neither above A B C

1.3 A decision tree is a way of representing decision choices in the form of a diagram. It is usual for decision trees to include probabilities of different outcomes.

The following statements have been made about decision trees.

1. Each possible outcome from a decision is given an expected value.

2. Each possible outcome is shown as a branch on a decision tree.

Which of the above statements is/are true?

A. 1 Only B. 2 Only
C. Neither 1 nor 2 D. Both 1 and 2

1.4 The following statements have been made about solving linear programming problems for budgeting purposes.

1. Slack occurs when less than the maximum available of a limited resource is required.
2. When the linear programming problem includes a constraint for minimum sales demand for a product, there may be a surplus for sales demand in the optimal solution.

Which of the above statements is/are true?

A. 1 Only B. 2 Only
C. Neither 1 nor 2 D. Both 1 and 2

1.5 The following statements have been made about decision making under conditions of uncertainty.

1. Expected value is a more reliable basis for decision making where the situation and outcome will occur many times than for a one-off decision.
2. A risk-averse decision maker avoids all risks in decision making.

Which of the above statements is/are true?

A. 1 Only B. 2 Only
C. Neither 1 nor 2 D. Both 1 and 2

1.6 A company has fixed costs of Rs.1.3 million. Variable costs are 55% of sales up to a sales level of Rs.1.5 million, but at higher volumes of production and sales, the variable cost for incremental production units falls to 52% of sales.

What is the breakeven point in sales revenue, to the nearest Rs.1,000?

A. Rs. 1,977,000 B. Rs. 2,027,000
C. Rs. 2,708,000 D. Rs. 2,802,000

1.7 A company produces and sells a single product. Budgeted sales are Rs.2.4 million, budgeted fixed costs are Rs.360,000 and the margin of safety is Rs.400,000.

What are budgeted variable costs?

A. Rs.1.64Mn B. Rs. 1.728 Mn
C. Rs.1.968Mn D. Rs.2.04Mn

A company sells two products X and Y. Product X sells for Rs.30 per unit and achieves a standard contribution of Rs.12 per unit, which is 40% of the selling price. Product Y, a new product, sells for Rs.80 per unit and achieves a standard contribution of just Rs.10 per unit, which is 12.5% of the selling price. Budgeted sales are 5,000 units of X and 3,000 units of Y.

However the sudden cancellation of an advertising campaign for Product Y has meant that sales for the product will be well below budget, and there has been some price discounting in an attempt to obtain sales for the product. Sales of X were in line with the budget.

Which one of the following sales variances, if calculated, would you expect to show a favorable variance for the period?

A. Sales mix variance B. Sales price variance
C. Sales quantity variance D. Sales volume variance

Factoring

1.9 Which of the following is a disadvantage to a company of using a factor for its accounts receivable?

1. It is easier to finance growth through sales A
2. Managers spend less time on slow paying accounts receivable A
3. Credit customers pay direct to the factor
4. It is easier to pay suppliers promptly to obtain discounts

ASK

A. 1 Only B. 3 Only
C. 2 Only D. None of above

1.10 Big data demands cost-effective, innovative forms of information processing for enhanced insight and decision making'. What are the key features of big data?

1. Volume
2. Verity
3. Velocity
4. Variability

A. 1, 2 and 3 Only B. 1 Only
C. All the above D. 1, 2 and 4 Only

Section 02

All questions are compulsory.
Total marks for Section 2 is 40 marks.
Recommended time for the section is 72 minutes.

Question 2

Calton Pvt. Ltd **(CPL)** is a wholesale distributor of a variety of imported goods to a range of retail outlets. The company specializes in supplying ornaments, small works of art, high value furnishing (rugs, etc) and other items that the chief buyer for the company feels would have a market. In seeking to improve working capital management, the financial controller has gathered the following information.

	Months
Average period for which items are held in inventory	3.5
Average receivables collection period	2.5
Average payables payment period	2.0

Required

Calculate CPLs' funding requirement for working capital measured in terms of months. (**2 marks)**

In looking to reduce the working capital funding requirement, the financial controller of CPL is considering factoring credit sales. The company's annual turnover is Rs. 2,500m of which 90% are credit sales. Bad debts are typically 3% of credit sales. The offer from the factor is conditional on the following.

1. The factor will take over the sales ledger of CPL completely.

2. 80% of the value of credit sales will be advanced immediately (as soon as sales are made to the customer) to CPL, the remaining 20% will be paid to the company one month later. The factor charges 15% per annum on credit sales for advancing funds in the manner suggested. The

factor is normally able to reduce the receivables' collection period to one month.

3. The factor offers a 'no recourse' facility whereby they take on the responsibility for dealing with bad debts. The factor is normally able to reduce bad debts to 2% of credit sales.
4. A charge for factoring services of 4% of credit sales will be made.
5. A refundable security of Rs. 25,000,000 is payable to the factor to initiate.

The salary of the Sales Ledger Administrator (Rs. 12,500,000) would be saved under the proposals and overhead costs of the credit control department, amounting to Rs. 2,000,000 per annum, would have to be reallocated. CPLs' cost of overdraft finance is 12% per annum. CPL pays its sales force on a commission only basis. The cost of this is 5% of credit sales and is payable immediately the sales are made. There is no intention to alter this arrangement under the factoring proposals.

Required

Assess the proposal to factor the sales ledger by comparing CPLs' existing receivable collection costs with those that would result from using the factor (assuming that the factor can reduce the receivables collection period to one month). **(8 marks)**

Question 3

Atlas (Pvt) Ltd (APL) is a well-established stationery manufacturing company enjoying a major market share for a number of its stationery products. However, the synergy pen (SP) that they had developed one year ago is not performing as expected in the market, despite its high quality, due to many existing suppliers with similar products. The following is a summary of last month's results from the production and sale of 1 million pens.

Description	**Rs.000**
Sales (Rs.25 each)	**25,000.00**
Cost of sales	
Plastic material	(10,000.00)
Imported barrel	(2,000.00)
Oil gel	(500.00)
Labour	(1,500.00)
Other variable cost	(2,500.00)
Fixed overhead	(6,000.00)
Gross Profit	**2,500.00**

APL currently determines the selling price by adding a profit mark-up to the full cost.

KPL is planning to expand its market share and is looking for avenues that will improve the profitability of SP at the same time. One of the strategies the management is considering is the adoption of the market skimming pricing method.

The following information was derived from market research conducted in determining the selling price of SP.

For every 50 cents' increase in the selling price of a pen, demand would reduce by 100,000 pens. For every 50 cents' decrease in the selling price of a pen, demand would increase by 100,000 pens.

You are the assistant accountant of APL.

Required

(a) If APL decides to set the unit price so as to maximize profit, **assess** the:

1. Optimal price per pen
2. Profit for the next month **(7 marks)**

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(b) **Discuss** the appropriateness of the market skimming pricing strategy as an alternative pricing strategy for SP. **(3 marks) (Total: 10 marks)**

Question 4

Italiano (ITL) is a well-established food manufacturing and Distribution Company, specializing in Italian food products, currently has an annual turnover in excess of Rs. 15,000 million. At present, the company has three production and distribution divisions, each responsible for specific product groups.

The summary information of the pasta division relating to divisional assets and profitability is as follows.

Pasta division

This division produces a wide range of both dried and fresh pasta products which it sells to both the supermarket sector and the restaurant trade.

Last year the divisional figures were as follows.

	Rs. Mn
Investment in non-current assets	1,500
Investment in working capital	1,000
Operating profit	500

The company is currently considering expansion into a new but allied product range. This range consists of sauces and canned foods. Projected figures for the expansion into sauces and canned foods are as follows.

	Rs. Mn
Additional non-current assets required	750
Additional investment in working capital	350
Budgeted additional profit	198

The company has a cost of capital of 15%.

Required

(1) **Calculate** the return on investment for the division both before and after the proposed divisional expansion. **(5 marks)**

(2) **Calculate** the residual income for the division both before and after the proposed divisional expansion. **(5 marks)** **(Total = 10 marks)**

Question 5

WB Ltd. is evaluating three different pricing strategies to be used for re-pricing of its Product Y for the year 2020. The three different pricing strategies are expected to yield different payoffs based on the inflation levels expected for 2020. The expected profit under different inflation levels with their probabilities are given below:

Inflation level	Probability	Net Profit Rs.		
		Strategy 1	Strategy 2	Strategy 3
Low	0.25	13,800,000	9,100,000	7,800,000
Average	0.40	10,000,000	15,800,000	10,480,000
High	0.35	8,600,000	10,500,000	15,560,000

WB Ltd. has been approached by an economic research firm which can provide accurate prediction with regard to the inflation levels for 2020. The economic research firm has quoted a fee of Rs. 2 million for the research service.

Required

1. Calculate the expected value of each strategy without perfect information to recommend which strategy should be adopted. **(06 marks)**

2. Identify with supporting calculations whether the company should obtain the service of the economic research firm. **(04 marks) (Total 10 marks)**

Section 03

Both questions are compulsory.
Total marks for Section 3 is 40 marks.
Recommended time for the section is 72 minutes.

Question 6

Woodside is a local charity dedicated to helping homeless people in a large city. The charity owns and manages a shelter that provides free overnight accommodation for up to 30 people, offers free meals each and every night of the year to homeless people who are unable to buy food, and runs a free advice centre to help homeless people find suitable housing and gain financial aid. Woodside depends entirely on public donations to finance its activities and had a fundraising target for the last year of Rs.700,000. The budget for the last year was based on the following forecast activity levels and expected costs:

- Free meals provision: 18,250 meals at Rs.5 per meal
- Overnight shelter: 10,000 bed-nights at Rs.30 per night
- Advice centre: 3,000 sessions at Rs.20 per session
- Campaigning and advertising: Rs.150,000

The budgeted surplus (budgeted fundraising target less budgeted costs) was expected to be used to meet any unexpected costs. Included in the above figures are fixed costs of Rs.5 per night for providing shelter and Rs.5 per advice session representing fixed costs expected to be incurred by administration and maintaining the shelter. The number of free meals provided and the number of beds occupied each night depends on both the weather and the season of the year. The Woodside charity has three full-time staff and a large number of voluntary helpers.

The actual costs for the last year were as follows:

- Free meals provision: 20,000 meals at a variable cost of Rs.104,000
- Overnight shelter: 8,760 bed-nights at a variable cost of Rs.223,380
- Advice centre: 3,500 sessions at a variable cost of Rs.61,600
- Campaigning and advertising: Rs.165,000

The actual costs of the overnight shelter and the advice centre exclude the fixed costs of administration and maintenance, which were Rs.83,000.

The actual amount of funds raised in the last year was Rs.620,000.

Required CR

Variance

1. **Prepare** an operating statement, reconciling budgeted surplus and actual shortfall and **discuss** the charity's performance over the last year. **(12 marks)**
2. **Discuss** problems that may arise in the financial management and control of a not-for-profit organization such as the Woodside charity. **(8 marks)**

Question 7

Park and Relax (P&R) is a company managing car parking facilities in key locations in Katunayake Air Port and other major cities in the country. For this purpose P&R secures land either by purchase or by entering into long term lease agreements. A special feature of the facility provided by P&R is that it also operates a shuttle service from the car park to nearby locations.

P&R finds that there is a significant scarcity of car parking space in Kandy city area and is considering whether to purchase a piece of land available for sale. The land could be used to provide 600 car parking spaces. The cost of the land is Rs. 300,000,000 but further expenditure of Rs. 100,000,000 will be required immediately to develop the land to provide access roads and suitable surfacing for car parking. P&R is planning to operate the car park for five years. At the end of Year 5 the land will be sold for Rs. 500,000,000 at Year 5 prices.

Revenues

It is estimated that the car park will operate at 75% capacity during each year of the project.

Car parking charges will depend on the prices being charged by competitors. There is a 40% chance that the price will be Rs. 3,000 per vehicle per week, a 25% chance the price will be Rs. 2,500 per vehicle per week and a 35% chance the price will be Rs. 3,500 per vehicle per week.

P&R expects that it will earn a contribution to sales ratio of 80%. Assume 52 weeks per annum.

Fixed operating costs

P&R will hire a number of vehicles to be used, to provide the shuttle service. It is expected that the vehicle hiring costs will be Rs. 2,500,000 per annum.

Staff costs are estimated to be Rs. 17,500,000 per annum.

The company will hire a security system at a cost of Rs. 5,000,000 per annum.

Inflation

The vehicle hiring costs of Rs. 2,500,000 per annum will apply throughout the five years and is not subject to inflation.

Car parking charges and variable costs are expected to increase at a rate of 5% per annum for the next five years.

All fixed operating costs, excluding the vehicle hiring costs, are expected to increase at a rate of 4% per annum for the next five years.

Taxation

Tax depreciation is not available on the initial cost of the land, but is available at 25% on development costs. Any gain arising on disposal of the land, is exempt from tax.

Taxation rate: 28% of taxable profits. Half of the tax is payable in the year in which it arises, the balance is payable in the following year.

Other information

P&R's real cost of capital is 5.3% per annum. The average rate of inflation is 4.5% per annum. All discounted rates may be rounded off to the nearest whole number of percentage.

All cash flows apart from the initial investment of Rs. 400,000,000 should be assumed to occur at the end of the year.

Required

a) (i) **Evaluate** the project from a financial perspective using net present value (NPV) and internal rate of return (IRR) as the basis of your evaluation. **(12 marks)**

(ii) Based on the outcome of (a)(i) above, **recommend** whether the project should be accepted or rejected with reasons. **(2 marks)**

(b) **Explain** the meaning in substance of NPV and IRR to non-financial managers of the management team of P&R. **(4 marks)**

(c) Discounted cash flow method of investment appraisal is preferred because it takes account of the time value of money.

Explain the three (03) underlying elements of 'time value of money' and **discuss** the importance of taking it into consideration, when appraising investment projects. **(7 marks)**