ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

LEVEL III EXAMINATION - JANUARY 2024

(302) MANAGEMENT ACCOUNTING AND FINANCE

11-02-2024
Morning
[08.45 – 12.00]

No. of Pages : 08
No. of Questions : 10

- **Instructions to candidates** (Please Read Carefully):

(1) ***Time Allowed:*** *Reading : 15 minutes*
Writing : 03 hours

(2) ***All questions should be answered.***

(3) ***Answers*** *should be in* ***one language****, in the* ***medium*** *applied for, in the* ***booklets*** *provided.*

(4) *Submit all workings and calculations. State clearly assumptions made by you, if any.*

(5) *Use of Non-programmable calculators is* ***only*** *permitted.*

(6) ***Action Verb Check List*** *with definitions is attached. Each question will begin with an* ***action verb****. Candidates should answer the questions based on the* ***definition*** *of the verb given in the Action Verb Check List.*

(7) ***Mathematical Tables*** *will be provided.*

(8) *100 Marks.*

SECTION A

(Total 20 marks)

Question 01

Hope Ltd. manufactures **Product CH** which sells at Rs.700/- per unit. The below information has been extracted from the standard cost card of the company:

	Per Unit (Rs.)
Direct Materials	240
Direct Labour	140
Variable Overheads	80

The annual budgeted fixed overhead is Rs.16,320,000/- and budgeted sales per annum is 75,000 units.

You are required to:

(a) **Calculate** the Break-Even Point (BEP) and Margin of Safety in units. (03 marks)

(b) **Calculate** the expected profit at annual budgeted sales quantity. (02 marks)

(Total 05 marks)

Question 02

PXL Ltd. is engaged in wholesale business for a range of products. The following information has been prepared by the accountant of **PXL Ltd.** for the last two financial years:

	2022/23	**2021/22**
Inventory Residence Period	86 days	74 days
Trade Receivable Collection Period	110 days	80 days
Trade Payable Turnover Ratio	2.92 times	3.65 times

You are required to:

(a) **Calculate** the working capital cycle (in days) for the years ended 31st March 2023 and 2022. (03 marks)

(b) **Identify** two(02) strategies for better working capital management. (02 marks)

(Total 05 marks)

Question 03

Ganga Ltd. manufactures and sells Products **X** and **Y**. In 2023, **Ganga Ltd.** had a market share of 10% and 24% respectively for the two products, selling 280,000 units of **X** and 375,000 units of **Y**. For 2024, the total market size is expected to remain the same, and the marketing team expects to increase the **Ganga Ltd.**'s market share of products **X** and **Y** to 12% and 25% respectively. In 2023, the market price of the products **X** and **Y** were Rs.300/- and Rs.240/- per unit respectively and for 2024, it is expected to increase by 4% and 15% for products **X** & **Y** respectively.

You are required to:

Prepare the Sales Budget of products **X** and **Y** separately in Units and Value for the year 2024.

(05 marks)

Question 04

Hola Ltd., has received an order from a customer who has requested for a special product to be manufactured. This product is different from the normal product range of **Hola**. The following information is provided with regard to the new order:

(1) **Direct Material** – this order requires 1,000 kg of **Material X** and 500 kg of **Material Y**. **Material X** is used in the normal course of business and there is 3,000 kg of **Material X** in stock purchased at Rs.450/- per kg. **Material Y** is not used in the normal course of business, but there is 800 kg of **Material Y** in stock that was purchased a few months ago at Rs.800/- per kg.

The current market price of **Material X** and **Material Y** is Rs.470/- per kg and Rs.700/- per kg respectively. If the **Material X** and **Material Y** in stock are not used those can be sold for Rs.300/- per kg and Rs.500/- per kg respectively.

(2) **Direct Labour –** 150 hours of direct labour is required to fulfil this order, which is currently in short supply and would need to be paid overtime to fulfil this order. Direct labour is paid at the rate of Rs.600/- per hour and overtime is paid at the rate of 1.5 times the normal rate.

(3) **Other Production Expenses –** other production expenses for this order are incurred at the rate of Rs.800/- per hour.

(4) The customer has quoted a price of Rs.900,000/- for this order.

You are required to:

Assess whether the company should accept this order *(Support your answer with calculations).*

(05 marks)

End of Section A

SECTION B

(Total 30 marks)

Question 05

Luxy Ltd., is a hotel with 80 rooms. The hotel has a high demand and caters to the high end tourists. The following information is available with regard to the operations:

(1) Rooms are booked in advance, with the full payment being made 2 months prior to the arrival date considering arrival month's room rate. The forecasted rooms occupancy rate of 80 rooms by guests from December 2023 to June 2024 are as given below:

	Dec - 23	Jan - 24	Feb - 24	Mar - 24	Apr - 24	May 24	Jun - 24
Rooms Occupancy Rate	100%	100%	90%	80%	100%	60%	60%

(2) The rooms are given on an all-inclusive double room occupancy basis and all-inclusive double room rates per day are given below for the different seasons of the year:

	Dec - 23	Jan - Feb 24	Mar - 24	Apr - 24	May - Aug 24	Sept - Nov 24
All-Inclusive Double Room Rate per day (Rs.)	25,000	25,000	18,000	22,000	20,000	15,000

(3) The staff cost is Rs.3,000,000/- per month, payable at the end of each month.

(4) The food and beverage cost is estimated to be 10% of the monthly room income (revenue) and is paid with one month credit period.

(5) Other variable expenses are estimated to be 4% of the monthly room income and it is settled during the same month.

(6) The monthly fixed expenses inclusive of depreciation are Rs.5,500,000/- per month and is settled in the same month. Monthly depreciation charge is Rs.3,000,000/-.

(7) The opening cash balance as at 01st January 2024 was Rs.3,000,000/-. It is the policy of the company to held Rs.3,000,000/- in cash at a given time from the month of January and excess cash will be held in a savings account earning an interest of 5% per annum. Interest for the month is paid by the bank based on the closing balance of the previous month.

You are required to:

Prepare cash budget for the months of January, February and March 2024.
(Consider 29 days for the month of February 2024.) (10 marks)

Question 06

Tilly Ltd., manufactures and sells a product in three different sizes.

The below information is extracted from the standard cost cards of the products:

	Rs. (per unit)		
	Small	**Medium**	**Large**
Selling Price	12,000	15,000	18,000
Material **X1** (at Rs.6,000/- per kg)	1,500	2,400	3,600
Material **X2** (At Rs.1,500/- per kg)	3,000	4,500	5,250
Direct Labour (at Rs.750/- per hour)	1,500	1,650	1,875
Variable Overheads	3,200	1,620	1,850
Demand (in units) for March 2024	80,000	90,000	45,000

Due to some supply issues, the resource availability for March 2024 has been forecasted as follows:

Material **X1**	85,000 kgs
Material **X2**	520,000 kgs
Direct Labour	600,000 hours

You are required to:

(a) **Identify** the limiting factor/s with supporting calculations. (05 marks)

(b) **Calculate** the optimal production mix based on the limiting factor/s identified. (05 marks)
(Total 10 marks)

Question 07

Fix PLC is a company listed on the Colombo Stock Exchange.

The following information is extracted from the company:

(1) There are 80 Million ordinary voting shares in issue, which were initially issued at Rs.20/- per share. The shares are currently trading at Rs.16/- per share. The company pay a fixed dividend of Rs.3.60 per share.

(2) The company has issued 16 million, 4 year redeemable debentures, at Rs.100/- per debenture with a coupon rate of 22% per annum. The debentures are currently trading at Rs.109/- per debenture.

(Assume the income tax rate as 30%.)

You are required to:

(a) **Calculate** the following:

(i) Cost of Ordinary Voting Shares. (02 marks)

(ii) Cost of Redeemable Debentures. (03 marks)

(iii) Weighted Average Cost of Capital (WACC) using the market value. (03 marks)

(b) **State** two(02) importances of cost of capital. (02 marks)

(Total 10 marks)

End of Section B

SECTION C

(Total 50 marks)

Question 08

Nice Ltd. manufactures and sells **Product Y.** The following information has been extracted from the standard cost card:

Standard Cost Information	Per Unit (Rs.)
Direct Material	
Material A1 (1.5 kg at Rs.1,500/- per kg)	2,250
Material A2 (2 kg at Rs.4,000/- per kg)	8,000
Direct Labour (15 minutes at Rs.900/- per hour)	225
Variable Overheads (at Rs.320/- per hour)	80
Total Variable Cost	**10,555**
Selling Price	14,000
Contribution per Unit	**3,445**

Budgeted Sales / Production per quarter (Units)	4,500

Actual production / sales quantity for the quarter was 4,150 units and the actual performance for the quarter ended 31st December 2023 is given below together with the variances that have been calculated by the management:

Actual Information for the quarter ended 31st December 2023	Rs.
Sales Revenue (4,150 units)	58,373,900
Direct Material:	
Material A1 (6,790 kg)	10,049,200
Material A2 (8,960 kg)	36,180,480
Direct Labour Cost (At Rs.875/- per hour)	1,015,000
Variable Overheads	373,520
Fixed Overheads	11,350,000

Direct Labour Rate Variance	29,000	Favourable
Direct Labour Efficiency Variance	110,250	Adverse
Variable Overhead Expenditure Variance	2,320	Adverse
Variable Overhead Efficiency Variance	39,200	Adverse
Sales Margin Volume Variance	1,205,750	Adverse

You are required to:

(a) **Calculate** the following variances:

(i) Sales Price Variance. (02 marks)

(ii) Direct Material Price Variance. (02 marks)

(iii) Direct Material Mix Variance. (03 marks)

(iv) Direct Material Yield Variance. (03 marks)

(b) **Prepare** an operating statement to reconcile the budgeted contribution with the actual contribution. (05 marks)

(Total 15 marks)

Question 09

Just Ltd., is engaged in the business of manufacturing and selling a range of different products. **Just Ltd.** is assessing the launch of a new product, **Product 1X2** using a new machinery. Before launching the new product, the company has done a market research spending Rs.2 million.

The new machinery is expected to cost Rs. 80 million with a 5-year useful life time. The capital allowances can be claimed at 25% per annum for the tax purpose and depreciation is calculated on the straight-line basis at cost for accounting purpose. The working capital investment is expected to be Rs. 8 million.

The following number of units have been forecasted to be produced using the new machinery and sold during the 5 year period:

Year	No. of Units
1	24,000
2	27,000
3	32,000
4	32,000
5	28,000

The product is expected to be introduced at an introductory price of Rs.3,600/- per unit for the first year. For Year 2, the price per unit is expected to be increased to Rs.4,000/- per unit. Thereafter the price is to be adjusted based on the estimated inflation of 10% per annum.

The variable production cost per unit in Year 1 is Rs.1,000/- and is expected to increase at 10% per annum thereafter. Fixed overheads including depreciation is estimated to be Rs. 45 million per annum.

During Year 1, Rs. 10 million is expected to be spent on the initial marketing phase and selling and distribution expenses are expected to be 8% of the sales revenue per annum from year 2 onwards.

The company pays income tax at the rate of 30% per annum and it should be paid in the same year. The cost of capital of the company is 20% per annum.

You are required to:

(a) **Calculate** the Net Present Value (NPV) of the investment. (13 marks)

(b) **Assess** whether the company should launch the new product using the new machinery. (02 marks)

(Total 15 marks)

Question 10

(A) **Nitro Ltd.** manufactures **Product RX9** through several processes. The inputs to **Process 1** during the month of December 2023 were as follows:

Raw Material (17,500 kg)	:	Rs.24,500,000/-
Direct Labour	:	Rs.14,700,000/-
Variable Production Overheads	:	Rs.11,025,000/-

At the beginning of December 2023, there were 4,130 kilograms of opening work in progress in stock with the following levels of completion:

Raw Material	:	100% complete, valued at Rs.4,761,715/-
Direct Labour	:	70% complete, valued at Rs.2,189,745/-
Variable Production Overheads	:	40% complete, valued at Rs.2,116,800/-

Opening work in progress is treated on an Average Cost basis.

At the end of December 2023, there were 7,300 kilograms of closing work in progress, which has the following levels of completion:

Raw Material	:	100%
Direct Labour	:	60%
Variable Production Overheads	:	30%

At the end of the month, 14,600 kilograms were transferred to **Process 2**.

The normal loss is 5% from input raw material and the scrap value of the normal loss is Rs.400/- per kg.

You are required to:

Prepare the Statement of Equivalent Units and Cost and the **Process 1** account. (14 marks)

(B) **Zeena Ltd.** is evaluating the method of launching their fashion line. This can be done either via a website or by having a small physical shop.

Both options are expected to have either low, average or high demand and the following information is available for both options:

Level of Sales	Website		Physical Store	
	Probability	Sales (units)	Probability	Sales (units)
Low	0.6	12,000	0.25	9,000
Average	0.2	17,000	0.5	18,000
High	0.2	24,000	0.25	26,000

Selling price per unit and variable cost per unit are expected to be Rs.1,000/- and Rs.400/- respectively.

Annual fixed cost for website and physical shop are Rs.3,000,000/- and Rs.8,000,000/- respectively.

You are required to:

Assess which option is to be used by **Zeena Ltd.** with the supporting calculations. (06 marks)

(Total 20 marks)

End of Section C

ACTION VERBS CHECK LIST

Level of Competency	Description	Action Verbs	Verb Definitions
Knowledge (1)	Recall Facts and Basic Concepts.	**Draw**	Produce a picture or diagram.
		Relate	Establish logical or causal connections.
		State	Express details definitely or clearly.
		Identify	Recognize, establish or select after consideration.
		List	Write the connected items.

Level of Competency	Description	Action Verbs	Verb Definitions
Comprehension (2)	Explain & Elucidates Ideas and Information.	**Recognize**	Show validity or otherwise, using knowledge or contextual experience.
		Interpret	Translate into understandable or familiar terms.
		Describe	Write and communicate the key features.
		Explain	Make a clear description in detail using relevant facts.
		Define	Give the exact nature, scope or meaning.

Level of Competency	Description	Action Verbs	Verb Definitions
Application (3)	Use and Adapt Knowledge in New Situations.	**Reconcile**	Make consistent / compatible with another.
		Graph	Represent by graphs.
		Assess	Determine the value, nature, ability or quality.
		Solve	Find solutions through calculations and/or explanation.
		Prepare	Make or get ready for a particular purpose.
		Demonstrate	Prove or exhibit with examples.
		Calculate	Ascertain or reckon with mathematical computation.
		Apply	Put to practical use.

Level of Competency	Description	Action Verbs	Verb Definitions
Analysis (4)	Draw Connections Among Ideas and Solve Problems.	**Communicate**	Share or exchange information.
		Outline	Make a summary of significant features.
		Contrast	Examine to show differences.
		Compare	Examine to discover similarities.
		Discuss	Examine in detail by arguments.
		Differentiate	Constitute a difference that distinguishes something.
		Analyze	Examine in details to find the solution or outcome.