

**ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA**

**LEVEL III EXAMINATION - JANUARY 2022**

**(302) MANAGEMENT ACCOUNTING AND FINANCE**

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

	20-03-2022
	Morning
	[08.45 – 12.00]
	No. of Pages : 09
	No. of Questions : 10
- (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**

- (a) Management Accounting is the process of identification, measurement, accumulation, analysis, preparation, interpretation and communication of information that assists in fulfilling organizational objectives.

**You are required to:**

**Identify** two(02) ways in which Management Accounting becomes important for an organization. (02 marks)

- (b) **A Ltd.** manufactures and sells **Product Q** and the following information is extracted from its standard cost card of **Product Q**:

	<b>Per Unit (Rs.)</b>
Selling Price	85
Direct Materials	40
Direct Labour	18
Variable Overheads	12

The annual budgeted fixed overhead is Rs.1,440,000/- and the annual budgeted sales for the year 2022 is 100,000 units.

**You are required to:**

**Calculate** the following:

- (i) Break Even Point (BEP) in units. (02 marks)
  - (ii) Margin of Safety in units. (01 mark)
- (Total 05 marks)

## Question 02

The following information has been extracted from the financial statements of **Dot Ltd.** for the financial years ended 31<sup>st</sup> December 2021 and 2020:

	2021 (Rs.)	2020 (Rs.)
Sales	28,000,000	22,000,000
Cost of Sales	24,640,000	18,150,000
Inventory	1,768,000	2,174,400
Trade Payables	9,898,000	7,350,000

- The trade receivables turnover ratio has been calculated as 2.5 times.
- All purchases and sales are on credit basis and number of days per year is 365.

**You are required to:**

**Calculate** the length of the Working Capital Cycle of **Dot Ltd.** for the year 2021. (05 marks)

## Question 03

**Tic Ltd.** manufactures and sells **Product T**. The sales for the calendar year 2021 was 180,000 units which was equivalent to market share of 16%. For the year 2022, the Sales Manager expects to increase sales to capture a market share of 18%.

The opening finished goods inventory as at 01<sup>st</sup> January 2022 was 11,000 units and the company expects to maintain the finished goods inventory at the end of the year equivalent to 10% of the market share of 2022. The selling price per unit was Rs.1,400/- in 2021 and it is expected that the price will be reduced by 5% in 2022.

**You are required to:**

**Prepare** the following for the year 2022:

(a) Sales Budget in Units and Value. (03 marks)

(b) Production Budget in Units. (02 marks)

(Total 05 marks)

### Question 04

**Zeena Ltd.** has received an order from a customer to supply 10,000 units of **Product A** at Rs.600/- per unit. You are given the following information for this order:

- (1) The company has an excess stock of 5,000kg of **material X** purchased at Rs.125/- per kg which cannot be used for company's existing orders. 2kg of **material X** are required to produce one unit of **Product A**. If the order is accepted, balance **material X** should be purchased at Rs.160/- per kg from the market.
- (2) In addition to **material X**, 1kg of **material Y** is required to produce one unit of **Product A** and available stock of **material Y** is sufficient only to meet existing orders. If the customer's order is accepted, it is required to purchase **material Y** at Rs.150/- per kg.
- (3) Skilled labour is sufficient to meet all the existing orders, including this order. However, if this order is accepted an additional labour incentive of 20% per labour hour is to be paid. The company will require 2 hours of skilled labour to produce one unit of **Product A**. The company currently pays for skilled labour at the rate of Rs.400/- per hour.
- (4) Variable overhead of Rs.20/- per unit is to be incurred for this order.

**You are required to:**

**Assess** whether this order should be accepted or not with necessary calculations. (05 marks)

————— *End of Section A* —————

### **SECTION B**

(Total 30 marks)

### Question 05

**Sweet Box Ltd.** manufactures assorted sweet boxes in 3 different sizes and delivers to customer's door step. The following information is provided for the second quarter of 2022:

	Rs. (per unit)		
	Mini	Deluxe	Supreme
Direct Material	800	1,900	2,800
Skilled Labour (at Rs.1,000/- per hour)	800	1,100	1,500
Packaging material cost (Rs.400/- per square meter)	160	240	360
Delivery Cost (Rs.200/- per kg)	200	300	500
Other Variable Overheads	150	200	250
Selling Price	2,600	4,400	6,500

  

Budgeted Sales per quarter (in units)	1,000	600	200
---------------------------------------	-------	-----	-----

Quarterly Fixed Overheads will be Rs.150,000/- for 2022.

For the second quarter of 2022, the resource availability has been estimated as follows:

Skilled Labour	1,900	hours
Packaging Material	1,000	square meters
Delivery Weight	2,200	kg

**You are required to:**

- (a) **Identify** limiting factor/s with supporting calculations. (04 marks)
- (b) **Calculate** the optimal production mix based on the limiting factor/s identified. (06 marks)  
(Total 10 marks)

## Question 06

**Wonder Ltd.**, manufactures toy cars for kids and sells through online. The following information is available relating to **Wonder Ltd.**:

- (1) Selling price of a toy car is Rs.800/- and sales are made, cash on delivery basis or bank transfers prior to delivery basis where delivery will take place within a day of the bank transfer.
- (2) For the months from February to July 2022, the sales and production have been planned as follows:

	February	March	April	May	June	July
<b>Sales (Units)</b>	2,000	3,000	1,500	800	1,400	2,000
<b>Production (Units)</b>	2,500	2,200	700	1,600	1,800	1,000

- (3) Total raw material cost per unit is Rs.300/- and raw material used for toy cars are mainly fabric and other accessories, which are purchased from the local market. Fabric cost per unit is 60% of the total raw material cost per unit whereas the balance is for accessories. Fabric is bought from a supplier with a 60 days credit period, while the accessories are purchased on 30 days credit period. Raw material is purchased at the beginning of each month taking into consideration the production requirement for the month.
- (4) Labour consists of stitching and painting, where stitching is outsourced to several ladies working from home who are paid at the end of each month. The company is incurred Rs.200/- per toy car for stitching. Painting is handled by 2 staff members employed by the company who are paid a fixed salary of Rs.80,000/- each per month at the end of the month.
- (5) Other overheads including electricity, water and telephone amounts to Rs.45,000/- per month and will be paid in the following month in which it is incurred.
- (6) The company is planning to purchase a computer at a cost of Rs.230,000/- for office use in May 2022.
- (7) The opening cash balance as at 01<sup>st</sup> April 2022 will be Rs.500,000/-.

**You are required to:**

**Prepare** the cash budget for the months of April, May and June 2022. (10 marks)

## Question 07

**Hold PLC** is a company listed on the Colombo Stock Exchange. The following information is extracted from the financial statements of **Hold PLC**:

- (1) **Hold PLC** has 60 million ordinary voting shares in issue which a share is trading at a market price of Rs.16/- and the company paid a fixed dividend of Rs.2.40 per share.
- (2) The company has 10 million irredeemable preference shares in issue, initially issued at Rs.10/- per share of which the current market price is Rs.12/- per share. Annual dividend per share is Rs.1.50.
- (3) The company has issued 5 million listed redeemable debentures at Rs.100/- per debenture with a coupon rate of 12% per annum. The current market price of a debenture is Rs.112/- and the debentures will be redeemed in 5 years.
- (4) The company is liable to pay income tax at the rate of 24%.

**You are required to:**

**Calculate** the following:

- (a) Cost of Ordinary Voting Shares. (02 marks)
- (b) Cost of Irredeemable Preference Shares. (02 marks)
- (c) Cost of Redeemable Debentures. (03 marks)
- (d) Weighted Average Cost of Capital (WACC) using the market values. (03 marks)

(Total 10 marks)

End of Section B

## **SECTION C**

(Total 50 marks)

## Question 08

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

	Per Unit (Rs.)
Direct Material (1.2 kg at Rs.800/- per kg)	960
Direct Labour:	
<b>Grade 1</b> Labour (1 hour at Rs.170/- per hour)	170
<b>Grade 2</b> Labour (2 hours at Rs.75/- per hour)	150
Variable Overheads (at Rs.40/- per hour)	120
<b>Total Variable Cost</b>	<b>1,400</b>
Selling Price	1,700
<b>Contribution</b>	<b>300</b>

Budgeted annual sales is 8,000 units and actual sales / production for the year is 7,560 units. The actual performance of the company for the year ended 31<sup>st</sup> December 2021 is given below together with the variances that have been calculated by the management:

<b>Actual Information for the year ended 31<sup>st</sup> December 2021</b>	<b>(Rs.)</b>	
Sales Revenue (7,560 units)	12,700,800	
Direct Material (8,921 kg)	7,047,432	
Direct Labour Cost:		
<b>Grade 1</b> Labour (7,540 hours)	1,327,040	
<b>Grade 2</b> Labour (15,800 hours)	1,137,600	
Variable Overheads	1,003,620	
Fixed Overheads	2,763,500	
Direct Material Price Variance	89,368	Favourable
Direct Material Usage Variance	120,800	Favourable
Variable Overhead Expenditure Variance	70,020	Adverse
Variable Overhead Efficiency Variance	26,400	Adverse
Sales Margin Volume Variance	132,000	Adverse

**You are required to:**

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

- (i) Sales Price Variance. (02 marks)
- (ii) Direct Labour Rate Variance. (02 marks)
- (iii) Direct Labour Mix Variance. (03 marks)
- (iv) Direct Labour Yield (Productivity) Variance. (03 marks)

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

(Total 15 marks)

## Question 09

**Imo Ltd.** is considering investing in a new project which involves developing and selling of an innovative gadget targeting youth below 25 years. For this, the company expects to invest Rs.125 million for a special machinery and Rs.3 million for working capital requirement.

For the next 5 years, sales and advertising costs will be expected to be as follows:

Year	Production / Sales (units)	Selling Price Per Unit (Rs.)	Advertising Cost Per Annum (Rs.)
1	7,500	11,000	8,000,000
2	11,000	10,500	23,000,000
3	18,000	9,500	15,000,000
4	20,000	9,000	15,000,000
5	15,000	8,500	4,000,000

The machinery has a lifetime of 5 years and the company depreciates its' machineries under the straight-line basis at cost. The company is eligible to claim capital allowance at the rate of 25% per annum on the machinery.

The variable production cost other than advertising cost is expected to be Rs.4,000/- per unit and the fixed overhead cost including depreciation on machinery is expected to be Rs.37 million per annum. Working capital can be recovered at the end of the 5<sup>th</sup> year.

The company pays income tax at the rate of 24% per annum and it should be paid in the same year.

**Imo Ltd.'s** cost of capital is 10% per annum.

**You are required to:**

- (a) **Calculate** the Net Present Value (NPV) of the new project. (13 marks)
- (b) **Assess** the viability of the above project based on NPV. (02 marks)
- (Total 15 marks)

## Question 10

(A) **XY Ltd.** manufactures **Product Z** through several processes. The following information is provided for **product Z** for the month of December 2021:

Input transferred from <b>Process I</b> (8,000 litres)	Rs.1,520,640/-
Direct labour	Rs.1,320,760/-
Variable overheads	Rs.534,650/-
Output	6,230 litres
Normal loss	4% of input transferred from <b>Process I</b> and it can be sold at Rs.60/- per litre.

At the end of the month, there were 650 litres of closing work-in-progress with the following levels of completion:

Input transferred from <b>Process I</b>	:	100%
Direct Labour	:	60%
Variable Overheads	:	30%

**You are required to:**

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

- (B) **Win Ltd.** is considering launch of a new product for which the demand is expected to be either high, medium or low. The company is planning to consider 2 options (using internal sales team or hiring external sales team) to select the best option for selling the new product. Sales quantity and probability of each demand level of the product are as follows:

Option		Sales Units	Probability
Using Internal Sales Team	High	500,000	0.2
	Medium	380,000	0.5
	Low	290,000	0.3
Hiring External Sales Team	High	500,000	0.3
	Medium	380,000	0.55
	Low	290,000	0.15

The product life cycle is expected to last for 4 years. The selling price is expected to remain at Rs.150/- per unit throughout the life of the product. The fixed cost per annum is Rs.450,000/- and the variable production cost per unit is expected to be Rs.45/-.

The sales commission for internal sales team is 3% of the sales value. If external sales team is hired to sell the product, sales commission will be 5% on sales value.

**You are required to:**

**Assess** whether the company should hire external sales team or should use internal sales team to sell the new product with supporting calculations. (06 marks)

(Total 20 marks)

End of Section C



## **ACTION VERBS CHECK LIST**

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

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

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

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