ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

AA3 EXAMINATION - JANUARY 2020

(AA32) MANAGEMENT ACCOUNTING AND FINANCE

19-01-2020
Morning
[8.45 – 12.00]

No. of Pages : 08
No. of Questions : 09

- **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

Four (04) compulsory questions

(Total 20 marks)

Question 01

Financial independence is the state of having sufficient income to pay one's living expenses for the rest of one's life without having to be employed or dependent on others.

You are required to:

Explain three(03) ways to achieve financial independence. (05 marks)

Question 02

Budgetary control which is the practice of establishing budgets identify areas of responsibility for individual managers. Further the organizations compare regularly actual results against expected results. Though budgetary control is an effective tool for management control, it has certain limitations.

You are required to:

Explain three(03) limitations of budgetary control. (05 marks)

Question 03

The following information was extracted from the financial statements of **Oval Ltd.** for the years ended 31st March 2019 and 31st March 2018:

	2018/19	**2017/18**
Sales	1,750,000	1,400,000
Gross Profit	496,920	430,000
Opening Inventory	285,000	235,000
Purchases	1,268,080	1,020,000
Closing Inventory	300,000	285,000
Trade Receivables	221,000	168,000
Trade Payables	342,100	286,800

Assume 365 days a year. All sales and purchases are made on credit basis.

You are required to:

Calculate the length of the working capital cycle of **Oval Ltd.** for the year 2018/19. (05 marks)

Question 04

Mugs Ltd. manufactures ceramic mugs and those are sold through retailers. A customer has approached **Mugs Ltd.** to manufacture 1,000 customized mugs to be used as corporate gifts at a price of Rs.400/- per mug. The manufacturing details of this customized mug order are given below:

Direct Material (250g of special clay per mug)	-	**Note 1**
Other Materials per mug	-	Rs.125/-
Direct Labour per mug (18 minutes at Rs.600/- per hour)	-	**Note 2**
Printing Cost per mug	-	Rs.36/-
Packaging Cost per mug	-	Rs.14/-

Note 1:

The company does not use the special clay for normal manufacturing products and that is used only for manufacturing of customized mugs. There are 180 kg of special clay in the stock, which was purchased a few years ago at a price of Rs.1,400/- per kg and it has no resalable value. If the clay is bought from the market, current market price is Rs.1,800/- per kg.

Note 2:

At present, direct labour is paid at the rate of Rs.600/- per hour. It is expected to be idle for 340 labour hours of guaranteed pay time which could be used for this order.

You are required to:

Calculate the relevant cost of customized mugs order and **State** whether the special order should be accepted or not at the price of Rs.400/-. (05 marks)

End of Section A

SECTION B

Three (03) compulsory questions

(Total 30 marks)

Question 05

Click.com is an online retailer that purchases products from local and foreign suppliers and sells online for deliveries within Sri Lanka. **Click.com** is considering to introduce one of the latest electronic products used with mobile devices - Product **M** or Product **N**.

Product **M** is new to Sri Lanka and the level of demand is less predictable than Product **N**. Furthermore, purchase cost of Product **M** will vary with the order quantity. **Click.com** has estimated the following demand and the purchase cost with relevant probabilities for Product **M**:

Demand (Units)	Probability	Order Quantity (Units)	Purchase cost per Unit (Rs.)
10,000	0.26	10,000	2,800
20,000	0.30	20,000	2,600
30,000	0.28	30,000	2,300
40,000	0.16	40,000	2,050

Product **M** is expected to be sold at Rs.3,000/- per unit, while the company will also incur Rs.580/- per unit as delivery costs.

Product **N** is a commonly used item in Sri Lanka and the following demand levels have been estimated:

Demand (Units)	Probability
150,000	0.70
260,000	0.30

Product **N** will be sold at Rs.400/- per unit. Purchase cost of the product will be Rs.230/- per unit and delivering cost will be Rs.140/- per unit.

You are required to:

Assess which product should be introduced by **Clik.com** based on the expected value. (10 marks)

Question 06

MG Ltd. manufactures and sells product **R**. For year ended 31st December 2019, the company budgeted to manufacture and sell 12,000 units of product **R** while the actual sales / production were 11,800 units. The following information is provided for the year ended 31st December 2019:

	Budget (Rs.) (12,000 units)	**Actual (Rs.)** (11,800 Units)
Sales	3,960,000	3,953,000
Direct Material	(780,000)	(755,200)
Direct Labour	(1,920,000)	(1,899,800)
Variable Production Overheads	(795,000)	(817,600)
Variable Selling Expenses	(140,000)	(124,200)
Fixed Production Overheads	(114,000)	(119,000)
Fixed Selling expenses	(100,000)	(100,000)
Profit	**111,000**	**137,200**

There were no inventories at the beginning of the year and the end of the year.

You are required to:

Prepare an operating statement / budgetary control statement using the marginal costing method for the year ended 31st December 2019 based on the flexible budget. (10 marks)

Question 07

Prime Ltd. manufactures and sells Product **Q** in three different sizes. The following information was extracted from the standard cost card of Product **Q**:

	Rs. (Per Unit)		
	Small	**Medium**	**Large**
Direct Materials:			
Material **X** (at Rs.100/- per meter)	100	200	275
Material **Y** (at Rs.300/- per meter)	150	300	450
Direct Labour	450	608	675
Variable Overheads	120	142	180
	820	1,250	1,580
Selling Price	1,000	1,550	2,100

For the month of February 2020, the procurement manager anticipates a supply constraint for both Material **X** & **Y**, where he expects only 30,000 meters of Material **X** and 20,000 meters of Material **Y** to be available. The demand of Product **Q** for the three different sizes for the month of February 2020 are forecasted to be 10,000 units for Small, 8,500 units for Medium and 4,200 units for Large.

You are required to:

(a) **Identify** the limiting factor(s) for **Prime Ltd.'s** production plan for the month of February 2020. *(Support your answer with calculations.)* (04 marks)

(b) **Compute** the optimal production mix based on the resource availability. (06 marks)

(Total 10 marks)

End of Section B

SECTION C

Two (02) compulsory questions.

(Total 50 marks)

Question 08

(A) **Rex PLC** is a listed company with the following capital structure:

	No. of Shares / Debentures	Issue Price per share / Debenture (Rs.)	Market Price per share / Debenture (Rs.)
Ordinary Shares	15,000,000	10	14
Irredeemable Preference Shares	1,000,000	10	12
12% Redeemable Debentures	800,000	100	90

The following additional information is provided:

(1) A dividend of Rs.2.52 per ordinary share is paid and is expected to continue paying this amount in future as well.

(2) A fixed dividend of Rs.1.50 per preference share is paid.

(3) 12% debentures are redeemable in 5 years at Rs.100/- per debenture.

(4) The company pays income tax at the rate of 28% per annum.

You are required to:

Calculate the following:

(a) Cost of Ordinary Shares. (02 marks)

(b) Cost of Irredeemable Preference Shares. (02 marks)

(c) Cost of Debentures. (03 marks)

(d) Weighted Average Cost of Capital (WACC) using market values. (03 marks)

(B) **Doni Ltd.** specializes in manufacturing bakery products which are sold through the supermarkets.

Doni Ltd. is expecting to introduce a new range of products using a new mixer machine.

(1) The following information is available for the new mixer machine:

	New Mixer Machine
Investment	Rs.34,000,000/-
Useful Lifetime of the machine	5 Years
Disposal Value at the end of Useful Lifetime	Rs.14,400,000
Variable Mixing Cost per kilogram	Rs.16/-
Fixed Maintenance Cost per annum	Rs.1,900,000/-
Capital Allowance per annum for tax purpose	25%

(2) Sales and overhead costs for that purpose for the next 5 years on new mixer machine were estimated as follows:

Year	Production & Sales (Kg)	Sales Value (Rs.)	Overhead Costs (excluding Variable Mixing Cost, Fixed Maintenance Cost and Depreciation on Machinery) (Rs.)
1	9,500	12,113,000	3,634,000
2	12,000	16,218,000	4,866,000
3	14,000	19,278,000	5,784,000
4	14,000	19,635,000	5,891,000
5	14,000	20,171,000	6,052,000

(3) The company pays income tax at the rate of 30% per annum.

(4) The company depreciates its machinery on the straight-line basis at cost over the useful lifetime.

(5) The cost of capital of the company is 14%.

You are required to:

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

(b) **State** with reasons whether the new mixer machine should be purchased. (02 marks)

(Total 25 marks)

Question 09

(A) **TOGO Ltd.** manufactures and sells Product **X**, which is sold for Rs.800/- per unit. The following information has been extracted from the standard cost card for Product **X**:

	Rs. (per Unit)
Direct Materials	240
Direct Labour (Rs.350/- per hour)	280
Variable Production Overheads (Rs.60/- per direct labour hour)	48
Variable Packaging Cost	30
Variable Selling & Distribution Cost	15
	613

Annual demand for Product **X** is 16,000 units. Annual fixed production cost is Rs.750,000/- and annual fixed selling & distribution cost is Rs.460,000/-.

TOGO has received an offer from a supplier to obtain Product **X** at a purchase price of Rs.680/- per unit. If production is outsourced from that supplier **TOGO** needs to additionally incur only the variable and fixed selling & distribution cost.

You are required to:

Assess with reasons whether production of **X** should be outsourced.
(Support your answer with calculations) (08 marks)

(B) **Lead Ltd.** manufactures and sells Product **L1** using two different direct materials, **A** & **B**. The following information has been extracted from the standard cost card of Product **L1**:

	Rs. (Per unit)
Direct Material:	
Material **A** (3kg at Rs.250/- per kg)	750
Material **B** (0.25kg at Rs.700/- per kg)	175
Direct Labour (15 minutes at Rs.480/- per hour)	120
Variable Production Overheads (at Rs.160/- per hour)	40
Total Variable Cost	1,085
Selling Price	1,500
Contribution	**415**

Lead Ltd. budgeted to sell 17,500 units of **L1** for the year 2019 while the actual sales / production were 16,700 units for the year. The budgeted fixed overheads for the year 2019 was Rs.4,625,000/-

The actual information for the year 2019 was as follows:

	Rs.
Sales	25,718,000
Direct Material:	
Material **A** (52,600 kg)	12,361,000
Material **B** (4,080kg)	2,917,200
Direct Labour Cost (4,200 hours)	2,024,400
Variable Overheads	66,900
Fixed Overheads	4,786,500

You are required to:

(a) **Calculate** the following:

(i) Direct Material Mix Variance. (04 marks)

(ii) Direct Material Yield Variance. (04 marks)

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

(b) **Prepare** an operating statement to reconcile the budgeted contributions with actual contribution, using the variances calculated above and the variances given below:

Direct Labour Rate Variance	8,400	Adverse
Direct Labour Efficiency Variance	12,000	Adverse
Variable Overhead Expenditure Variance	605,100	Favourable
Variable Overhead Efficiency Variance	4,000	Adverse
Sales Price Variance	668,000	Favourable
Sales Margin Volume Variance	332,000	Adverse

(06 marks)

(Total 25 marks)

End of Section C

ACTION VERB CHECK LIST

Knowledge Process	Verb List	Verb Definitions
Level 01 **Comprehension** Recall & explain important information	**Define**	Describe exactly the nature, scope, or meaning.
	Draw	Produce (a picture or diagram).
	Identify	Recognize, establish or select after consideration.
	List	Write the connected items one below the other.
	Relate	To establish logical or causal connections.
	State	Express something definitely or clearly.
	Calculate/Compute	Make a mathematical computation
	Discuss	Examine in detail by argument showing different aspects, for the purpose of arriving at a conclusion.
	Explain	Make a clear description in detail revealing relevant facts.
	Interpret	Present in an understandable terms.
	Recognize	To show validity or otherwise, using knowledge or contextual experience.
	Record	Enter relevant entries in detail.
	Summarize	Give a brief statement of the main points (in facts or figures).

Knowledge Process	Verb List	Verb Definitions
Level 02 **Application** Use knowledge in a setting other than the one in which it was learned / Solve closed-ended problems	**Apply**	Put to practical use.
	Assess	Determine the value, nature, ability, or quality.
	Demonstrate	Prove, especially with examples.
	Graph	Represent by means of a graph.
	Prepare	Make ready for a particular purpose.
	Prioritize	Arrange or do in order of importance.
	Reconcile	Make consistent with another.
	Solve	To find a solution through calculations and/or explanation.

Knowledge Process	Verb List	Verb Definitions
Level 03 **Analysis** Draw relations among ideas and compare and contrast / Solve open-ended problems.	**Analyze**	Examine in detail in order to determine the solution or outcome.
	Compare	Examine for the purpose of discovering similarities.
	Contrast	Examine in order to show unlikeness or differences.
	Differentiate	Constitute a difference that distinguishes something.
	Outline	Make a summary of significant features.