



ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

AA3 EXAMINATION - JULY 2019

**(AA32) MANAGEMENT ACCOUNTING AND FINANCE**

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

21-07-2019  
Morning  
[8.45 – 12.00]

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

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

- (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) **Graph Paper and Mathematical Tables will be provided.**
- (8) **100 Marks.**

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**SECTION A**

Four (04) compulsory questions

(Total 20 marks)

**Question 01**

In personal finance, saving and investing are very important yet two different concepts.

**You are required to:**

**Explain** the difference between saving and investing with an example for each. (05 marks)

**Question 02**

Budgetary control is the practice of establishing budgets to identify areas of responsibility for individual managers. It compares actual results against expected results.

**You are required to:**

(a) **Differentiate** feedback control from feedforward control. (03 marks)

(b) **State** two(02) advantages of feedback control. (02 marks)

(Total 05 marks)

### Question 03

The following information relating to **RCV Ltd.** is provided for the last three financial years:

Item	2016/17	2017/18	2018/19
Trade Receivables (Rs.)	1,459,000	1,897,500	2,453,600
Cost of Sales (Rs.)	9,600,000	10,800,000	11,500,000
Gross Profit Ratio	6%	10%	8%

Assume 365 days a year and all sales are on credit basis.

**You are required to:**

- (a) **Calculate** the trade receivables collection period for 2017/18 and 2018/19. (03 marks)
- (b) **State** two(02) strategies that **RCV Ltd.** can use to improve its receivables collection period. (02 marks)
- (Total 05 marks)

### Question 04

**X Ltd.** is evaluating a tax exempted capital project with an initial investment on machinery of Rs.5 million. The machinery is expected to have a useful life of 06 years and no scrap value at the end of 6<sup>th</sup> year. The following net cash inflows are expected from the project during the period of 6 years:

Year	Net Cash Inflow (Rs.)
1	464,000
2	581,000
3	620,000
4	1,680,000
5	2,465,000
6	2,640,000

**You are required to:**

**Calculate** the payback period of the above project. (05 marks)

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*End of Section A*

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## SECTION B

Three (03) compulsory questions

(Total 30 marks)

### Question 05

**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.

**You are required to:**

- (a) **Calculate** the expected value of each strategy without perfect information to recommend which strategy should be adopted. (06 marks)
- (b) **Identify** with supporting calculations whether the company should obtain the service of the economic research firm. (04 marks)  
(Total 10 marks)

### Question 06

**Alta Ltd.** operates a vehicle hiring business where small motor cars are hired out to customers for a minimum period of 1 week including fuel and a driver. The revenue is generated from the kilometers travelled and customers are invoiced accordingly. The drivers' remunerations are paid monthly by the company which comprised of a fixed salary plus a 3% commission on sales income.

The following information is provided for the financial year ending 31<sup>st</sup> March 2019:

Rate per kilometer	Rs.40/-
Number of kilometers invoiced for sales	1,300,000 km
Fuel cost per kilometer	Rs.14/-
Drivers' Salaries per annum (Fixed)	Rs.15,000,000/-
Drivers' Commission	3% on sales income
Other Fixed Costs	Rs.8,500,000/-

For the year ending 31<sup>st</sup> March 2020, the sales in terms of kilometers invoiced is expected to increase by 5% in the most likely scenario, with the best possible increase of 7% and worst possible increase of 2%. The increase in fuel costs are expected to range from 9% to 18%, with the most likely to be 15%. Other fixed costs which include maintenance and insurance are expected to increase directly in line with inflation. Inflation is expected to be between 5% and 12%, mostly likely to be 8%. The drivers' commission will remain at 3% while the fixed salary will be increased by 10% for the year ending 31<sup>st</sup> March 2020. However, the management of the company has decided to not to increase the rate per kilometer.

**You are required to:**

**Prepare** a three tier budget for **Alta Ltd.** for the year ending 31<sup>st</sup> March 2020. (10 marks)

### Question 07

**H PLC** is a listed company with the following capital structure as at 31<sup>st</sup> March 2019:

Item	Book Value (Rs.)	Market Value (Rs.)	No. of Shares / Debentures
Ordinary Shares	200,000,000	500,000,000	20,000,000
12% Irredeemable Debentures	800,000,000	800,000,000	8,000,000
Irredeemable Preference Shares	100,000,000	200,000,000	10,000,000

The following additional information is also provided:

- (1) A dividend of Rs.3/- per ordinary share was paid for the year just ended and dividends are expected to grow at the rate of 4% per annum.
- (2) Annual dividend for preference shares is Rs.1.20 per share.
- (3) The company pays income tax at the rate of 28% per annum.

**You are required to:**

(a) **Calculate** the following:

- (i) Cost of Ordinary Shares. (02 marks)
- (ii) Cost of Irredeemable Debentures. (02 marks)
- (iii) Cost of Irredeemable Preference Shares. (02 marks)
- (iv) Weighted Average Cost of Capital using market values. (02 marks)

(b) **State** two(02) advantages of issuing debt capital rather than equity capital. (02 marks)  
(Total 10 marks)

*End of Section B*

## SECTION C

Two (02) compulsory questions.

(Total 50 marks)

### Question 08

- (A) **Dino Ltd.**, manufactures and sells motors which are used in different industries. The motors consist of multiple components. Some are made in-house and some are purchased from subcontractors. The following information related to 3 such components (**A**, **B** and **C**) that are currently made internally by **Dino Ltd.**:

	<b>A</b>	<b>B</b>	<b>C</b>
Direct Material per unit (Rs.)	1,450	2,450	3,380
Direct Labour per unit (Rs.)	700	1,330	1,610
Variable Overheads per unit (Rs.)	200	380	460
	<b>2,350</b>	<b>4,160</b>	<b>5,450</b>
Fixed Production Overheads per annum (Rs.)	1,800,000	1,500,000	2,090,000
Production / Sales per annum (Units)	36,000	20,000	22,000

Other Fixed Overheads per annum will be Rs.2,110,000/-.

A subcontractor has quoted for a unit of component of **A**, **B** and **C**, Rs.2,380/-, Rs.4,300/- and Rs.5,600/-, respectively. If those components are purchased from the subcontractor, the relevant fixed production overhead of components can be saved.

**You are required to:**

- (a) **Calculate** the annual financial impact of buying the components from the subcontractor. (06 marks)
- (b) **Identify** with reasons, whether each of the component should be bought or made internally. (02 marks)
- (B) **Seena Ltd.** produces and sells **Product A** and **B** and the following information has been extracted from the respective products:

	<b>Product A</b>	<b>Product B</b>
	<b>Per Unit (Rs.)</b>	<b>Per Unit (Rs.)</b>
Selling Price	1,200	900
Direct Materials:		
<b>X1</b> (Rs.120/- per kg)	360	240
<b>X2</b> (Rs.60/- per kg)	240	240
Direct Labour (Rs.250/- per hour)	375	250
Variable Overheads (Rs.80/- per direct labour hour)	120	80

Monthly demands for **Products A** and **B** are 25,000 units and 32,000 units respectively.

Material **X2** and direct labour for the next month are expected to be available 220,000 kg and 60,000 hours respectively.

**You are required to:**

- (a) **Compute** the contribution of **product A** and **product B**. (03 marks)
- (b) **Identify** the variables, objective function and the constraints. (05 marks)
- (c) **Draw** the constraints on a graph paper to identify the feasible region. (06 marks)
- (d) **Identify** the optimal product mix using the graphical method. (03 marks)

(Total 25 marks)

### Question 09

- (A) **Masterwide Ltd.** specializes in printing text books for the use of school students. **Masterwide Ltd.** is considering setting up a new printing facility with the investment of a machinery with a cost of Rs.50 million. The sales and variable cost for next 5 years from this new facility are estimated as below:

Year	Sales (Rs.)	Variable Cost (Rs.)
1	40,000,000	20,600,000
2	48,000,000	28,800,000
3	49,000,000	29,400,000
4	51,000,000	30,345,000
5	52,000,000	30,940,000

The fixed cost excluding depreciation is estimated to be Rs.5 million per annum. Machinery will be depreciated at 20% per annum on the straight-line basis. The company pays income tax at the rate of 28% per annum and income tax liability of the company is paid in the same year. Capital allowances on machinery for tax purposes can be claimed at 25% per annum.

Cost of capital of the company is 12%.

**You are required to:**

**Assess** the viability of the above investment using the Net Present Value (NPV) computation.

(10 marks)

- (B) **Rana Ltd.** manufactures and sells **Product P**. The following information has been extracted from the standard cost card of **Product P**:

	Per Unit (Rs.)
Selling Price	6,000
Direct Material (4 litres at Rs.650/- per litre)	2,600
Direct Labour:	
Skilled Labour (1.5 hours at Rs.400/- per hour)	600
Unskilled Labour (6 hours at Rs.180/- per hour)	1,080
Variable Overheads (7.5 hours at Rs.110/- per hour)	825
<b>Contribution</b>	<b>895</b>

The budgeted sales / production for the year 2018/19 was 4,300 units and actual production for the year 2018/19 was 4,380 units. The actual information for the year 2018/19 is as given below:

	Rs.
Sales (4,380 units)	26,061,000
Direct Material (17,800 litres at Rs.630/- per litre)	11,214,000
Direct Labour Cost:	
Skilled Labour (6,150 hours at Rs.425/- per hour)	2,613,750
Unskilled Labour (27,400 hours at Rs.170/- per hour)	4,658,000
Variable Overheads	3,761,000

**You are required to:**

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

- (i) Direct Labour Rate Variance. (02 marks)
- (ii) Direct Labour Mix Variance. (04 marks)
- (iii) Direct Labour Yield Variance. (04 marks)

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

	Amount (Rs.)	Status
Direct Material Price Variance	356,000	Favourable
Direct Material Usage Variance	182,000	Adverse
Variable Overhead Expenditure Variance	70,500	Adverse
Variable Overhead Efficiency Variance	77,000	Adverse
Sales Margine Volume Variance	71,600	Favourable
Sales Price Variance	219,000	Adverse

(05 marks)  
(Total 25 marks)

End of Section C

## ACTION VERB CHECK LIST

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

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

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