ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

AA3 EXAMINATION - JANUARY 2018

(AA32) MANAGEMENT ACCOUNTING AND FINANCE

21-01-2018
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

"There are 3 types of income namely earned income, portfolio income and passive income. Each of these income categories has its own set of advantages and disadvantages."

You are required to:

(a) **Explain** the term "earned income" with two(02) examples.   (03 marks)

(b) **State** an advantage and a disadvantage of earned income.   (02 marks)

(Total 05 marks)

Question 02

"The Balance Scorecard (BSC) approach to performance measurement focuses on four different perspectives namely customer perspective, internal process perspective, innovation and learning perspective and financial perspective."

You are required to:

State three(03) examples for methods of performance measurement for financial perspective and two(02) examples for methods of performance measurement for customer perspective in balance scorecard.

(05 marks)

Question 03

The following information has been extracted from the financial information of **Teena Ltd.** for the year ended 31st March 2017:

	For the year ended 31st March 2017
Inventory turnover	5 times
Trade receivables turnover	8 times
Trade payables settlement period	20 days

(Assume 365 days a year.)

You are required to:

Calculate the length of the Working Capital Cycle for the year ended 31st March 2017.   (05 marks)

Question 04

The following profit estimates are provided for the latest capital investment project of **Top Holdings PLC**:

Year	Profit (Rs. million)
1	90
2	180
3	170
4	20

The initial capital investment on machinery of the project is Rs.850 million. The useful life time of the machinery is estimated to be 4 years and the residual value at the end of the 4th year would be Rs.250 million. The company uses the straight-line method to depreciate the machinery over its useful life time of 4 years.

(The above profits were calculated after charging the depreciation on machinery.)

You are required to:

(a)   **Identify** the cash flows from year 0 to year 4.   (03 marks)

(b)   **Calculate** the Payback Period of the project.   (02 marks)
                                                                                                      (Total 05 marks)

——————————— *End of Section A* ———————————

SECTION B

Three (03) compulsory questions

(Total 30 marks)

Question 05

NH Ltd. is producing and selling a particular poultry product which is subject to the pricing guidelines imposed by the government. The management is in the process of preparing the budgets for the next year. The following information has been given for this year:

Selling price	Rs.500/- per kg
Annual sales	120,000 kg
Variable cost	Rs.220/- per kg
Total fixed cost per annum	Rs.15,000,000/-

The government's price revision for the next year is to be announced shortly and the sales manager believes that the price increment will range from 8% to 15%, with a probable increase of 10%. The annual sales growth for the next year is expected to be 2% with a potential upside growth of 4% and a decline of 3% in the worst case.

The variable and fixed costs are subject to inflation of the country. The Central Bank estimates that the annual inflation is to be 6% for the next year. However, certain government policy decisions are likely to affect the inflation, which could cause it to vary between 5% and 8%.

(Assume that there is no stock at the beginning of year and at the end of year).

You are required to:

Prepare a three tier budget for **NH Ltd.** for the next year. (10 marks)

Question 06

Super Juice Ltd., manufactures and sells three different types of healthy fruit juices in large cartons namely **Juice A**, **Juice B** and **Juice C** using the same machinery. The following information is available for the next month:

	Juice A	Juice B	Juice C
Selling Price per unit (Rs.)	8,500	12,500	6,300
Direct materials per unit (Rs.)	3,800	6,900	3,200
Direct Labour per unit (Rs.) (Rs.400/- per hour)	400	480	320
Variable Overheads per unit (Rs.)	400	400	400
Machine Hours Required per Unit (Hours)	0.40	0.60	0.30
Monthly Demand (in units)	4,000	3,800	4,500

The available labour hours and machine hours for the next month have been estimated as 11,000 hours and 7,000 hours respectively.

You are required to:

(a) **Identify** the limiting factor(s) for **Super Juice Ltd.'s** Production plan for the next month.
(04 marks)

(b) **Compute** the optimal production mix based on resource availability. (06 marks)
(Total 10 marks)

Question 07

Tingo Ltd. a leading soft drink manufacturer is considering investing in a new machinery to produce a new range of soft drinks. The machinery is expected to cost Rs.9,000,000/- while the accounting profit (before taxes) are expected to be as follows:

Year	Accounting Profit (before taxes) (Rs.)
1	2,100,000
2	2,500,000
3	2,800,000
4	3,100,000
5	2,600,000

The useful life of the machinery is estimated to be 5 years and the machinery is not expected to have a scrap value at the end of the 5th year.

The applicable capital allowance rate for tax purpose is 25% per annum and the company depreciates the machinery for accounting purpose on the straight-line basis over useful lifetime of 5 years. The above profits of the company were computed after charging the depreciation on machinery. **Tingo Ltd.'s** income tax rate is 28% and income tax liability of the company for the year is paid in same year.

Cost of capital of the company is 10%.

You are required to:

Assess the viability of investing new machinery by supporting your answer with Net Present Value (NPV) computation.   (10 marks)

———————————————— *End of Section B* ————————————————

SECTION C

Two (02) compulsory questions.

(Total 50 marks)

Question 08

(A) **Cap Ltd.** manufactures caps for sporting and other promotional events. The caps are manufactured based on the specifications given by the customers. A school has recently approached **Cap Ltd.** with an order to manufacture 9,000 caps within next 6 days for the school's sports meet at a price of Rs.200/- per cap. The resource requirement for this order has been identified as given below:

  ➢ Material - 0.4 meters of **material X** is required per cap. This material is not normally used by the company but there are 1,400 meters of **material X** in the inventory which were purchased a few years ago at a cost of Rs.180/- per meter. If not used for this order, this quantity can be sold as scrap at Rs.45/- per meter. The current market price of this **material X** is Rs.250/- per meter.

- Labour - 15 minutes of labour time has been estimated for the completion of a cap. Since the order is urgent, **Cap Ltd.** needs to get the factory staff to work overtime for 500 hours, for which they will be paid overtime at the rate of 1.5 times of the normal pay. The factory staff is currently paid a wage of Rs.160/- per hour. If this order is accepted, **Cap Ltd.** would need to postpone a regular order to the next week. In addition, the company needs to get the factory staff to work 300 overtime hours to complete the regular order on time.

- Supervisor - The factory staff is supervised by the Factory Supervisor of the company who is paid a fixed monthly salary of Rs.90,000/- per month.

- Overheads - The variable overheads are incurred at the rate of Rs.80/- per labour hour for this order. In addition as the design is different from regular orders, a special machine needs to be hired to complete the order at the rate of Rs.8,500/- per day for 6 days.

- Design cost - The design selected for this order was drawn few years ago incurring a cost of Rs.120,000/-.

You are required to:

Assess with reasons whether **Cap Ltd.** should accept this order or not with supporting calculations.

(Indicate clearly the relevant cost element and amount used in the computation.)   (12 marks)

(B) **Tex Ltd.** is considering about launching of a new product in 2018. It is estimated that with a probability of 40%, the product will be ready to launch in May 2018, if not the product will be launched in July 2018.

The marketing department is suggesting an advertising campaign costing Rs.295,000/- and the following levels of contribution are expected with and without advertising depending on the time of launch:

Scenario		Probability	Contribution (Rs.) if launched in,	
			May 2018	**July 2018**
With advertising	High	70%	1,450,000	1,200,000
	Low	30%	860,000	700,000
Without advertising	High	50%	1,300,000	1,000,000
	Low	50%	650,000	550,000

You are required to:

(a) **Draw** a Decision Tree to reflect the decisions that **Tex Ltd.** needs to take. Assume that the decision whether to carry out an advertising campaign will be decided once the launch date is confirmed.   (09 marks)

(b) **Assess** the following decision:

In the case it is decided to launch the product in May 2018, should the advertising campaign be carried out?   (04 marks)
(Total 25 marks)

Question 09

(A) The following information for the year 2017 has been extracted from the standard cost card and the budgeted information of **Prodex Ltd.** which manufactures and sells **Product X**:

Selling Price per unit (Rs.)	800
Direct Materials per unit (4 kg at Rs.75/- per kg) (Rs.)	(300)
Direct Labour per unit (1 hour at Rs.250/- per hour) (Rs.)	(250)
Variable Overheads per unit (Rs.120/- per hour) (Rs.)	(120)
Contribution per unit (Rs.)	130
Fixed Overheads per annum (Rs.)	750,000
Budgeted Annual Sales (units)	11,000

The management accountant of **Prodex Ltd.** has provided you with the following information which has been extracted from the management accounts prepared for the 12 months ended 31st December 2017:

	Rs.
Sales (10,850 units)	9,135,700
Direct Materials (41,360 kg)	3,308,800
Direct Labour (Rs.220/- per hour)	2,681,800
Variable Overheads	1,278,900
Contribution	1,866,200
Fixed Overheads	778,630

You are required to:

(a) **Calculate** the following Variances.

    (i)   Sales Price Variance.   (02 marks)

    (ii)   Sales Volume Margin Variance.   (02 marks)

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

    (iv)   Direct Material Usage Variance.   (02 marks)

    (v)   Direct Labour Rate Variance.   (02 marks)

    (vi)   Direct Labour Efficiency Variance.   (02 marks)

(b) **Prepare** an operating statement to reconcile the budgeted contribution with the actual contribution using the above computed variances and the following additional information:

Item	Rs.
Variable Overhead Expenditure Variance	75,950 (Adverse)
Variable Overhead Efficiency Variance	99,050 (Favourable)
Fixed Overhead Expenditure Variance	28,630 (Adverse)

(05 marks)

(B) **Regent PLC** is a quoted public company and the following information has been extracted from the statement of finance position of **Regent PLC** as at 31st March 2017:

	Rs.
Ordinary Voting Shares (225 million ordinary shares)	3,375,000,000
Irredeemable Preference Shares (65.5 million preference shares)	524,000,000
Listed Debentures (40 million debentures with a coupon rate of 12% per annum)	4,000,000,000

The following additional information is provided:

(1) For the financial year 2016/17, **Regent PLC** declared and paid a dividend of Rs.2.80 per ordinary share. The dividend on ordinary shares is expected to grow at the rate of 5% per annum.

(2) The ordinary shares and the preference shares are currently trading at Rs.21/- and Rs.12/- per share respectively.

(3) Annual dividend is Rs.1.20 per preference share.

(4) The debentures are currently trading at Rs.98/- per debenture and redeemable at Rs.100/- in 2 years (2018/19).

(Ignore Taxation.)

You are required to:

Calculate the following:

(a) Cost of Ordinary Voting Shares. (03 marks)

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

(c) Cost of Listed Debentures. (03 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.