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ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

AA3 EXAMINATION - JULY 2016

(AA32) MANAGEMENT ACCOUNTING AND FINANCE

17-07-2016
Morning
[8.45 – 12.00]

No. of Pages : 10
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) ***Formulae Sheets*** *are attached.*

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

  (9) *100 Marks.*

SECTION A

Four (04) compulsory questions

(Total 20 marks)

Question 01

"Personal Financial Planning" is the process of managing money to achieve personal economic satisfaction.

You are required to,

(a) **Explain** the term "Personal Budget". (03 marks)

(b) **State** two(02) advantages of Personal Financial Planning. (02 marks)

(Total 05 marks)

Question 02

Abro Ltd. is a trading company and the summarized cash forecast prepared for the first quarter of 2016 is as follows:

Description	Amount (Rs.'000)
Opening cash balance as at 01st January 2016	2,000
Total receipts	15,000
Total payments	(20,000)
Closing cash balance as at 31st March 2016	**(3,000)**

The company is planning for a cash surplus at the end of the second quarter of 2016.

You are required to,

(a) **State** two(02) possible causes for the cash deficit incurred in the first quarter of 2016. (02 marks)

(b) **Identify** three(03) strategies / methods to achieve a cash surplus in the second quarter of 2016.
(03 marks)
(Total 05 marks)

Question 03

PD Ltd. manufactures and sells two products **P** and **D**. The following information have been extracted from the books of the company for the month of August 2016:

Description		Product P	Product D
Selling Price per unit	(Rs.)	920	725
Direct Material per unit (Rs.40/- per kg)	(Rs.)	80	120
Direct Labour per unit:			
Direct Skilled Labour (Rs.200/- per hour)	(Rs.)	300	200
Direct Unskilled Labour (Rs.85/- per hour)	(Rs.)	255	170
Variable Overheads per unit	(Rs.)	90	70
Fixed production overheads per unit	(Rs.)	75	50
Monthly demand	(Units)	150,000	120,000

It is estimated that the company will be able to obtain only 330,000 hours of direct skilled labour for the month of August 2016.

You are required to,

Calculate the optimal production mix for the month of August 2016 which maximizes the profit of the company. (05 marks)

Question 04

The following balances have been extracted from the financial statements of **Alto Ltd.** for the years ended 31st March 2016 and 31st March 2015:

	31st March 2016 (Rs.)	31st March 2015 (Rs.)
Profit Before Interest and Tax	1,468,500	1,240,200
Profit Before Tax	1,015,000	980,000
Profit After Tax	835,000	884,000
Stated Capital	8,500,000	8,500,000
Retained Earnings	4,485,000	3,650,000
Other Reserves	1,250,000	1,250,000
Total Equity	14,235,000	13,400,000
Long Term Loans	3,565,000	2,200,000
Current Liabilities	650,000	725,000

You are required to,

(a) **Calculate** the Return on Capital Employed (ROCE) for the two periods using the above information. (03 marks)

(b) **State** two(02) advantages of using ROCE as a performance measure. (02 marks)

(Total 05 marks)

End of Section A

SECTION B

Three (03) compulsory questions

(Total 30 marks)

Question 05

Kennel Group (Pvt) Ltd. (KGPL) introduced a new food for dogs in 2015 and the following information relates to the new product:

Annual sales	Rs. 20 million
Selling price per unit	Rs. 400/-
Variable cost per unit	Rs. 250/-
Fixed cost per annum	Rs. 4 million

The management is planning to reduce the price per unit either to Rs.380/- or to Rs.360/- whichever is more beneficial to **KGPL**. The management has estimated the following demand levels at each of those prices with their respective probabilities as follows:

Annual Demand (units)	Probability	
	at Rs.380/- per unit	at Rs.360/- per unit
70,000	70%	60%
90,000	30%	40%

KGPL would need to incur an additional fixed production cost of Rs.2 million if they are to produce more than 77,000 units per annum.

You are required to,

(a) **Prepare** a table showing the current profit and estimated profit at each price and demand level. (08 marks)

(b) **Identify** the appropriate price level for the company. (02 marks)

(Total 10 marks)

Question 06

Budgeted and actual results of **Rose Ltd.** for the month of June 2016 are as follows. The company uses a marginal costing system:

	Budgeted (Rs.'000)	**Actual (Rs.'000)**
Sales	425	416
Costs:		
Direct Material	150	160
Direct Labour	75	80
Variable Production Overheads	25	18
Fixed Production Overheads	30	25
Administration Expenses	50	55
Distribution Expenses	45	60
Total Cost	**375**	**398**
Profit	**50**	**18**

The following additional information is also provided:

(1) The company does not maintain any inventories and the entire production for a month will be sold in the same month.

(2) Budgeted sales and actual sales for the month were 20,000 units and 18,000 units respectively.

(3) Administration expenses and distribution expenses are considered as fixed costs of the month.

You are required to,

(a) **Prepare** an operating statement (a budgetary control statement) using marginal costing format for the month of June 2016 based on the flexible budget. (08 marks)

(b) **State** two(02) limitations of budgetary control. (02 marks)

(Total 10 marks)

Question 07

Ashok Company PLC (ACL), a listed company in the Colombo Stock Exchange is a 100% equity owned company. The management of the company is considering investing in a project which has an initial capital outflow of Rs.200 million. As **ACL** does not have sufficient funds, the management considers to finance this project by a 5 year bank loan at the fixed interest rate of 15% per annum. The shareholders' fund of **ACL** as at 30th June 2016 was as follows:

Description	**Amount (Rs. million)**
Stated capital (1,000,000 ordinary shares)	500
Retained earnings	100
Shareholders' fund	**600**

ACL has paid a dividend of Rs.25/- per share for the year just ended and dividends are expected to grow at the rate of 15% per annum. Current trading price of an ordinary share of **ACL** is Rs.900/-.

Ignore taxation.

You are required to,

(a) **Assess** the weighted average cost of capital (WACC) for **ACL** if they decided to finance the project utilizing the bank loan. (05 marks)

(b) **State** two(02) advantages of financing this project from the bank loan. (02 marks)

(c) **State** three(03) factors to be considered when choosing a long term funding source. (03 marks)

(Total 10 marks)

End of Section B

SECTION C

Two (02) compulsory questions.

(Total 50 marks)

Question 08

(A) **DG Ltd.** is a leading manufacturing company and the management of the company is evaluating a proposal to purchase a new machinery to replace an existing old machinery with the view of improving the quality of their products.

The following information is provided:

(1) The cost of the new machinery is Rs.100 million, which is to be paid immediately. The useful life time of the new machinery is estimated to be 5 years and the scrap value at the end of the 5th year would be Rs.14 million.

(2) If the new machinery is purchased, the existing old machinery could be sold immediately for Rs.6 million. The existing old machinery has been fully depreciated.

(3) With the purchase of the new machinery, it is expected that the quality of the products will be increased and as a result the demand for the products will also be increased. Projected increase in demand for the company's products for the next 5 years is as follows:

Year	**1**	**2**	**3**	**4**	**5**
Demand (Units)	30,000	20,000	25,000	35,000	40,000

(4) Other forecasted information is as follows:

Description	**Rs.**
Selling price per unit	3,000
Variable cost per unit	1,500
Annual fixed cost (including depreciation)	40,000,000

(5) The cost of capital of **DG Ltd.** is 20% per annum.

(6) Ignore taxation.

You are required to:

(a) **Recognize** all the cash flows relating to the new machinery for the 5 years. (09 marks)

(b) **Calculate** the following based on the above cash flows:

(i) Net Present Value (NPV).

(ii) Internal Rate of Return (IRR). (08 marks)

(c) **Assess** whether investing in the new machinery is financially viable for **DG Ltd.** (02 marks)

(B) **Switch Ltd.** has received a special order from a customer to supply 125 units of **C3**, a separate product being manufactured by the company, at a price of Rs.900/- per unit. Each unit of **C3** will require the following:

- **Direct Material** – 1 kg of direct material to be purchased from the market at a cost of Rs.660/- per kg.
- **Direct Labour** - 0.5 hours of direct labour to be used which is normally paid at the rate of Rs.500/- per hour. At present there are 40 idle labour hours, for which the wages have been guaranteed. Any shortfall in the direct labour supply will need to be covered by working overtime which is paid at the rate of 1.5 times the normal hourly rate.
- **Variable Overheads** - Variable overheads are calculated at the rate of Rs.60/- per direct labour hour.
- **Fixed Overheads** - Fixed overheads for this order will be absorbed at the rate of Rs.55/- per direct labour hour.

Assess with reasons and supporting calculations whether **Switch Ltd.** should accept this special order. (06 marks)

(Total 25 marks)

Question 09

(A) **Medimat (Pvt) Ltd., (MPL)** manufactures **product X** in one of its plants and sells to local market.

MPL uses the standard absorption costing system and absorbs overheads on the basis of direct labour hours based on the budgeted production of 2,000 units per month. Budgeted sales for the month are 2,000 units at Rs.12,000/- per unit.

Standard cost card per unit of **product X** is as follows:

	Rs.
Direct material – **A** (10 kg @ Rs.400/- per kg)	4,000
Direct labour (4 hours @ Rs.150/- per hour)	600
Variable overhead (4 hours @ Rs.100/- per hour)	400
Fixed production overhead (4 hours @ Rs.200/- per hour)	800
Total Cost	**5,800**

The actual results recorded for the month of June 2016 are as follows:

Production and sales	1,800 units
Selling price per unit	Rs.13,000/-
Direct material – **A**	17,800 kg @ Rs.500/- per kg
Direct labour	7,100 hours @ Rs.200/- per hour
Variable overheads	Rs.960,000/-
Fixed production overheads absorbed	Rs.1,600,000/-

MPL does not maintain any inventory at the beginning and at the end of the month.

You are required to,

(a) **Assess** the actual profit for the month of June 2016. (03 marks)

(b) **Calculate** the following variances for the month of June 2016.

(i) Sales price variance.

(ii) Sales volume variance.

(iii) Direct material price variance.

(iv) Direct material usage variance.

(v) Direct labour rate variance.

(vi) Direct labour efficiency variance.

(vii) Variable overhead expenditure variance.

(viii) Variable overhead efficiency variance. (16 marks)

(B) **Duraplast (Pvt) Ltd. (DPL),** manufactures different products in its Factory at Galle. The following details are forecasted for the next year.

Description		Product A	Product B	Product C
Sales	(Rs. million)	25	30	10
Variable cost	(Rs. million)	(10)	(15)	(3)
Contribution	(Rs. million)	15	15	7
Allocated overhead (Note 01)	(Rs. million)	(7.5)	(9)	(9)
Net profit	(Rs. million)	7.5	6	(2)
Other information:				
Quantity to be sold	(units)	200,000	200,000	50,000
Total contribution/Total sales value	(Profit Volume ratio)	60%	50%	70%

Note 01 – Allocated overheads

(1) Allocated overheads are computed as 30% of the sales of each product, and it includes Head Office expenses allocated for the purpose of profit computation.

(2) The allocated overheads of **Product C** includes the product specific fixed manufacturing cost of Rs.6 million.

As the forecasted net profit of **product C** for the coming year is negative, the management of **DPL** is considering the following alternatives;

(i) To discontinue manufacturing of **product C**. Discontinuation of **product C** will save the product specific fixed manufacturing cost of Rs.6 million.

(ii) To discontinue manufacturing of **product C** and utilize those resources to manufacture 140,000 units of **product B**. However, those additional quantity of **product B** shall only be sold at a price which is 10% lower than the normal market price of **product B**.

You are required to:

Assess which of the above alternatives is financially viable for **DPL**. (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.

FORMULAE SHEET

Quantitative Finance:

Simple interest:
$S = X\,(1 + nr)$

Compound Interest:
$S = X\,\{1 + r\}^n$

Discounting:

Present Value = Future Value $\times \frac{1}{(1+r)^n}$

Perpetuity:

Present Value of perpetuity = $\frac{A}{r}$

Accounting Rate of Return:

$$\text{ARR} = \frac{\text{Average annual profits from the investment}}{\text{Average investment}} \text{ X } 100\%$$

$$\text{ARR} = \frac{\text{Estimated average profits}}{\text{Estimated initial investment}} \text{ X } 100\%$$

Internal Rate of Return (IRR):

$$IRR = \frac{[N_1 r_2 - N_2 r_1]}{[N_1 - N_2]} \text{ X } 100\%$$

Or

$$IRR = a\% + \frac{NPV_A}{[NPV_A - NPV_B]}\,(b - a)\%$$

Inventory Control:

Economic Order Quantity:

With instantaneous replenishment:

$$\sqrt{\frac{2C_0D}{C_n}}$$

With gradual replenishment:

$$\sqrt{\frac{2C_0D}{C_n\{1 - D/R\}}}$$