THE INSTITUTE OF CHARTERED ACCOUNTANTS OF SRI LANKA

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SCHOOL OF ACCOUNTING AND BUSINESS
BSc. (APPLIED ACCOUNTING) GENERAL / SPECIAL DEGREE PROGRAMME

END SEMESTER EXAMINATION – JULY 2015

AFM 31130 Strategic Management Accounting

Date	:	18th July 2015
Time	:	2.00 p.m. – 5.00 p.m.
Duration	:	Three (03) hours

Instructions to Candidates:

- This paper consists of three sections (A, B and C).
- Answer **ALL** questions in **SECTION A** and **SECTION B** and **ANY FOUR (04)** questions from **SECTION C**.
- Please submit answers to **Section A** separately in the sheet given
- The total marks for the paper is 100.
- This is a closed book examination.
- Non programmable calculators are allowed.
- Answers should be written neatly and legibly.

SECTION A

Answer **ALL** Questions

Question No. 01

1. Which of the following is not one of the four dimensions of the Balance Scorecard?
   a. Financial
   b. Internal business process
   c. External business process
   d. Customer

2. Which of the following statement regarding *lean technology* is not true?
   a. Lean enterprises tend to avoid competition through strategic planning
   b. Lean technologies collide
   c. New technology means customers may become self reliant
   d. Lean enterprises tend to have temporary rather than long term advantages

3. Which of the following statement does not reflect the relationship between Strategic Management Accounting (SMA) and Management Accounting
   a. NPV can use data produced by SMA
   b. Compared to an SMA model an NPV model is limited
   c. NPV is almost incompatible with SMA
   d. SMA integrates certain strategic choice models with the strategic intelligence approach

4. Which of the following would not be considered a good feature of the balanced scorecard
   a. Immediate feedback
   b. A large number of performance measures
   c. A number of non-financial measures
   d. An employee is only held responsible for what he/she can influence

5. Araliya Enterprise makes widgets to order. Each widget is cast from 4 kg of raw material that costs Rs. 2.50 per kg. The opening stock of raw materials is 4,000 kg and the company wants 6,000 kg with which to begin the following period. Each widget takes one-half hour of direct labour at a rate of Rs. 9 per hour. The projected sales of widgets are 100,000 units, each unit selling for Rs. 15. The opening stock of finished widgets is 8,000, and the desired closing stock is 12,000 units.

   What is the sales budget for the period of Araliya Enterprise?

   a. Rs. 1,440,000
   b. Rs. 150,000
   c. Rs. 1,500,000
   d. Rs. 144,000

6. Using the information in Question 5, what would be the production budget in units for the period of Araliya Enterprise? (Units)

   a. 104,000
   b. 98,000
   c. 106,000
   d. 100,000

7. Using the information in Question 5, what would be the direct materials purchases budget in kg?

   a. 400,000
   b. 414,000
   c. 416,000
   d. 418,000

8. Using the information in Question 5, what would be the direct labour budget in Rupees?

   a. 936,000
   b. 450,000
   c. 468,000
   d. 104,000

9. Managers can use feedback from budgets to help them evaluate performance if they initially
   a. Focus on whom they should ask and not on whom they should blame.
   b. Designate the appropriate responsibility centre to be held accountable for any problems.
   c. Pinpoint fault for operating problems.
   d. Fix the blame on those who are responsible for actions that do not meet budget expectations.

10. Which of the following statements most clearly describes the master budget?
    a. The master budget is a set of budgeted financial statements that are sometimes called pro forma statements.
    b. The master budget is not in itself a strategic plan but aids managers in implementing their strategic plans.
    c. The master budget is similar to legal action and must be followed to fulfill company policy.
    d. The master budget is a strategic plan proposed by management and communicated through pro forma financial statements.

11. In order to increase a given present value, the discount rate should be adjusted
    a. Upward.
    b. Downward.
    c. Keep unchanged
    d. Changed constantly

12. You are considering borrowing Rs. 10,000 for 3 years at an annual interest rate of 6%. The loan agreement calls for 3 equal payments, to be made at the end of each of the next 3 years. (Payments include both principal and interest.) The annual payment that will fully pay off (amortize) the loan is closest to
    a. Rs. 2,674.
    b. Rs. 2,890.
    c. Rs. 3,741.
    d. Rs. 4,020.

13. In 3 years you are to receive Rs.5,000. If the interest rate were to suddenly increase, the present value of that future amount would
    a. Fall.
    b. Rise.
    c. Remain unchanged.
    d. Cannot be determined without more information.

14. You want to buy an ordinary annuity that will pay you Rs. 4,000 a year for the next 20 years. You expect the annual interest rate to be 8 percent over that period. The maximum price you would be willing to pay for the annuity is closest to
    a. Rs. 32,000.
    b. Rs. 39,272.
    c. Rs. 40,000.
    d. Rs. 80,000.

15. Which of the following is a reason why a firm would want to implement ABC?
    a. The precision of ABC may be too small to justify its implementation
    b. Costs of implementation are too high
    c. The firm only produces a single product
    d. It may help make decision making more accurate

(Total 30 Marks)

SECTION B

Answer **ALL** Questions

Question No. 02

i. Kalyana Enterprise is an entity engaged in the supply of calculators and it accepts orders through the internet. The entity has regional warehousing and delivery centres for the purpose of efficient distribution of calculators and reduction of costs. The centre which covers South Asia is situated in Sri Lanka. The following information is made available for this centre.

The calculators handled by Kalyana Enterprises have been categorized in to four categories based on the average volume handled.

Category	**Average volume per year**
FX 100	100,000
FX 101	60,000
FX 102	40,000
FX 103	50,000

The budgeted cost of the regional centre for the next financial year is as follows;

Cost centre	**Rs.**
Rent	5,000,000
Staff costs	8,000,000
Packing materials	9,000,000
Management charges	6,000,000

- Staff costs can be segmented for four sub divisions namely receipting, packing, invoicing and delivery.

The costs are allocated to above staff segments as given below.

Segment	**%**
Receipting	20
Packing	40
Invoicing	10
Delivery	30

- Packing materials are usually used evenly over the units handled.

Traditionally costs have been allocated on the proportion of following documents, raised in each segment.

	FX 100	**FX 101**	**FX 102**	**FX 103**
Packing notes	1500	400	600	500
GRNs	2000	2500	1500	1000
Invoices	400,000	300,000	200,000	100,000

- Delivery has been based on invoice proportion. However, the Management Accountant of Kalyana Enterprises has estimated the following utilization levels for operations of Kalyana Enterprises.

	FX 100	**FX 101**	**FX 102**	**FX 103**
Time spent for each receipting (Minutes)	2	3	5	2
Time spent for each packing (Minutes)	3	5	2	4
Time spent for each invoicing (Minutes)	2	2	4	3
No of deliveries	400	200	300	100

- Traditionally rent has been allocated on volume basis. However, space utilized by a unit of four categories is estimated as 0.01 c.m , 0.04 c.m, 0.02 c.m, and 0.03 c.m (c.m. – Cubic meters)
- Management time spent on the operations is not directed to any category.
- Kalyana Enterprises does not keep any stock at the end of the year.

Required:

a. Identify the cost centres and cost drivers for the allocation of costs of the regional centre.

(03 Marks)

b. Identify cost per unit in each category based on

  i. Traditional costing principles

(07 Marks)

  ii. Activity based costing

(08 Marks)

  iii. List the steps of the decision making process.

(03 Marks)

  iv. Differentiate Financial Accounting and Management Accounting on following areas:

    a. Principle objective

    b. Time horizon

(01 Marks)

(Total 22 Marks)

SECTION C

Answer any **FOUR (04)** Questions

Question No. 03

i. "Discounting methods are more appropriate than non-discounting methods when appraising a project". Discuss .

(02 Marks)

ii. ABC Company owns and runs 350 taxis and had sales of Rs. 10 million in the last year. This entity is considering introducing a new computerised taxi tracking system. The expected costs and benefits of the new computerised tracking system are as follows:

- The system would cost Rs. 2,100,000 to implement.
- Depreciation would be provided at Rs. 420,000 per annum.
- Rs. 75,000 has already been spent on staff training in order to evaluate the potential of the new system. Further, training costs of Rs. 425,000 would be required in the first year if the new system is implemented.
- Sales revenue is expected to rise to Rs.11 million in Year 1 if the new system is implemented, thereafter increasing by 5% per annum. If the new system is not implemented, sales would be expected to increase by Rs. 200,000 per annum.
- Despite increased sales, savings in vehicle running costs are expected as a result of the new system. These are estimated at 1% of total sales.
- Six new members of staff would be recruited to manage the new system at a total cost of Rs. 120,000 per annum.
- ABX Company would have to take out a maintenance contract for the new system at a cost of Rs. 75,000 per annum for five years.
- Interest on money borrowed to finance the project would cost Rs. 150,000 per annum.

- ABC Company's cost of capital is 10% per annum.

You are required to:

a. State whether each of the following items are relevant or irrelevant cashflows for a net present value (NPV) evaluation of whether to introduce the computerised tracking system.

   - Computerised tracking system investment of Rs. 2,100,000;
   - Depreciation of Rs. 420,000 in each of the five years;
   - Staff training costs of Rs. 500,000 (75,000+425,000)
   - New staff total salary of Rs. 120,000 per annum;
   - Interest cost of Rs. 150,000 per annum.

(05 Marks)

b. Calculate the following values if the computerised tracking system is implemented.

   - Incremental sales in Year 1;
   - Savings in vehicle running costs in Year 1;
   - Present value of the maintenance costs over the life of the contract.

(03 Marks)

c. ABC Company wishes to maximise the wealth of its shareholders. It has correctly calculated the following measures for the proposed computerised tracking system project:

   - The internal rate of return (IRR) is 14%,
   - The return on average capital employed (ROCE) is 20% and
   - The payback period is four years.

   Which of the following is true?

   (A) The project is worthwhile because the IRR is a positive value

   (B) The project is worthwhile because the IRR is greater than the cost of capital

   (C) The project is not worthwhile because the IRR is less than the ROCE

   (D) The project is not worthwhile because the payback is less than five years

(02 Marks)

(Total 12 Marks)

Question No. 04

i. A company sells three products: D, E and F. The market for the products dictates that the numbers of products sold (D, E and F) are in the ratio of 3:4:5. Budgeted sales volumes and prices for the previous period are as follows:

	D	**E**	**F**
Sales (units)	300	400	500
Selling price per unit (Rs.)	80	55	70
Contribution to sales ratio	70%	65%	50%

The budgeted total fixed costs for that period were Rs.31,200.

Required:

a. The break - even sales revenue

b. The volume of each product required to be sold if the company wishes to earn a profit of Rs.29,520.

(05 Marks)

ii. List two assumptions of the Cost Volume Profit (CVP) model.

(01 Mark)

iii. Anuradha PLC produces toy cars and sells them for Rs. 500 per unit. There were no stocks at the end of December 2014 and other relevant information is given below:

	Rs.
Direct cost per unit:	
Direct material	125
Direct wages	100
Variable production overhead	50

Budgeted and actual fixed overhead for the month of January 2015 are Rs. 500,000 and Rs. 450,000 respectively.

Variable selling expenses is 10% of the sales value.

The company has produced 5,000 units and sold 4,500 units during the month of January.

Required:

a. Prepare a profit statement on absorption costing for the month ended 31st January 2015.

(03 Marks)

b. Prepare a profit statement on marginal costing for the month ended 31st January 2015.

(02 Marks)

c. Reconcile the difference in profits above.

(01 Mark)

(Total 12 Marks)

<u>Question No. 05</u>

i. Harshana Silva & Co (HS) is a family-owned company that has dedicated itself to make fashionable clothes and leather goods for men for over 100 years. The company has been successful in building a strong reputation for quality by sourcing from local textile and leather producers. It sells its goods across the world through a chain of owned shops and also franchised stalls inside large, well-known stores. The company is still owned and run by the family with no other shareholders.

The main goal of the firm is to organically grow for the next generation of the Silva family. Customers are attracted to HS products owing to the history and the family story that goes behind the products. They are willing to pay high prices demanded as they identify with the values of the firm, especially the high quality of manufacturing.

The competition for HS has been increasing for more than ten years. It is made up of other global luxury brands and also the rising national champions in some of the rapidly expanding developing countries. The competitors often try to leverage their brands into many different product types. However, the Silva family have stated their desire to focus on the menswear market after an unsuccessful purchase of a handbag manufacturer five years ago.

The company is divided into a number of strategic business units (SBU). Each production site is an SBU, while the whole retail operation is one SBU. The Head Office previously functioned as a centre for procurement, finance and other support activities. The company has recently invested in a new management information system (MIS) that has increased the data available to all managers in the business. This has led to much of the procurement shifting to the production SBUs and the SBU managers taking more responsibility for budgeting. The SBU managers are delighted with their increased responsibilities and with the results from the new information system but feel there is still room for improvement in its use. The system has assisted in a project of flattening the organisation hierarchy by cutting out several layers of Head Office management.

You are the management accountant at HS and your boss has asked you for an example of how your role as an ‘internal consultant’ would be valuable at HS by looking at the ideas of brand loyalty and awareness. You should consider their impact on performance management at HS, both from the customer and the internal business process perspectives and how to measure them.

Using HS as an example,

Discuss the impact of brand loyalty and awareness on the business both from the customer and the internal business process perspectives and evaluate suitable measures for brand loyalty and awareness.

(9 Marks)

ii. Identify the most suitable pricing method for the following scenarios.

a. Fashionable Footwear (Pvt.) Ltd is a shoe manufacturing company and the shoes produced by the company is normally priced as Rs. 899, Rs. 1499, Rs. 1799 etc. This company thinks that a minor distinction in pricing can make a big difference in sales by reducing the effect of the actual pricing in the consumers’ mind.

(1 Mark)

b. Alpha Automobile (Pvt) Ltd is an automobile manufacturing company which is more concerned about achieving its pre-determined ROI ratio of 45% as its capital investment is high. The company sets the prices for its products in order to achieve this ROI ratio.

(1 Mark)

c. Buzz Solutions Software (Pvt) Ltd is concerned about pricing their software as per the customers' perceived value of it and not on its costs of production or any other factor. The company is pricing software on this method owing to the fact that the value to the customer is many times more than the cost of the product.

(1 Mark)

(Total 12 Marks)

<u>Question No. 06</u>

i. Sumudu Enterprise is a wood manufacturing entity. It manufactures two types of products namely chairs and tables. It has 500 kgs of iron, 1000 square feet of wood and 300 iron nuts in the stocks to produce chairs and tables.

In order to produce a chair, 5 kgs of iron, 8 square feet of wood and 5 iron nuts would be used.

In order to produce a table, 25 kgs of iron, 66.67 square feet of wood and 12 iron nuts would be used.

Sumudu Enterprise expects to sell a chair at Rs. 5,000 and the cost of a chair is Rs. 3,000. A table would be sold at Rs. 22,000 and the cost of a table is Rs. 19,500.

Required:

a. Formulate the Linear problem (LP) with the view of maximise the profit
b. Construct a graph and plot constraint lines.
c. Identify the feasible region.
d. Compute the maximum profit subject to constrains.

(5 Marks)

ii. Define the term shadow price as applied in Linear Programming

(2 Marks)

iii. What are the linear programming assumptions?

(2 Marks)

iv. Nirmala PLC manufactured 10,000 buckets of paints during the month of June 2015. Following details on raw materials purchased and consumed during the period given below:

Material	**Quantity Used**	**Standard usage per bag**	**Actual Price**	**Standard Price**
Chemicals	100 tons	11 KG	Rs. 75/ton	Rs.70/ton
Binder	250 tons	26 KG	Rs. 10/ton	Rs.14/ton

You are required to calculate;

a. Material price variance
b. Material usage Variance

(3 Marks)

(Total 12 Marks)

<u>Question No. 07</u>

i. Sumathipala PLC is reviewing its marketing policy for the next budget period. It has developed two new products X and Y. But it only has sufficient recourses to launch one of them.

Required:

Illustrate the application of the **Decision Making Model (DMM)** concept to solve the above problem.

(3 Marks)

ii. Madu PLC is considering whether to make product Q or S. The estimated sales demand for the product Q and S are uncertain. A detailed investigation of possible sales demand for each product gives the following probability distribution of the profit for each product.

Product Q- Probability Distribution		Product S- Probability Distribution	
Outcome Profit (in Mn)	**Estimated Probability**	**Outcome Profit (in Mn)**	**Estimated Probability**
750	0.10	600	0.05
850	0.25	750	0.15
900	0.40	1000	0.5
1000	0.15	1200	0.2
1200	0.10	1300	0.1

Required:

a. Expected values of product Q and product S
b. Variance of product Q and product S
c. Standard deviation of product Q and product S
d. Coefficient of variance of product Q and product S
e. Which product would be recommended based on the received answers.

(6 Marks)

iii. Explain what you understand by the following terms

a. Risk averse
b. Risk lovers

(3 Marks)

(Total 12 Marks)