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Serial No.....

Institute of Certified Management Accountants of Sri Lanka
Managerial Level
May 2018 Examination

Examination Date : 19th May 2018 **Number of Pages :** 06
Examination Time: 9.30 a.m. – 12.30 p.m. **Number of Questions:** 05

Instructions to Candidates

1. Time allowed is **three (3) hours**.
2. Total: **100 Marks**.
3. Answer **all** questions in Part I & Part II.
4. Candidates are allowed to use non-programmable calculators.
5. The answers should be in **English Language**.

<u>Subject</u>	<u>Subject Code</u>
Advanced Management Accounting	(AMA / ML 1 - 301)

PART I

Question No. 01 (20 Marks)

For questions 1 to 10, select the most appropriate answer from the given answers under (a), (b), (c) & (d) for each question and write only the letter [i.e. (a) or (b) or (c) or (d)] relating to the most appropriate answer against the question number, in the answer booklet.

- (1) A company which sells products A and B with constant PV ratios and sales mix expects a total contribution of Rs. 560 million and provides the following information.

	Product A	Product B
PV Ratio	25%	50%
Sales Mix Value	40%	60%

What is the expected sales revenue from product A?

- (a) Rs. 350 mn
 - (b) Rs. 560 mn
 - (c) Rs. 700 mn
 - (d) Rs. 840 mn
- (2) A company generated an operating profit of Rs. 500 mn for a given year. Interest expense for the year was Rs. 10 mn and the Average Total Assets amounted to Rs. 1,500 mn. Weighted Average Cost of Capital is 30%. Dividends paid during the year was Rs. 300 mn.

Which of the following statements is true with regard to residual income (RI)?

- (a) No RI has been generated.
- (b) Earned RI is Rs. 50 mn.
- (c) If the operating profit were above Rs. 500 mn that excess is the RI.
- (d) RI is the profits retained after paying dividend of Rs. 300 mn and the interest of Rs. 10 mn.

- (3) Which of the following statements is true with regard to responsibility centers of an organization?
 Statement A: A profit center is responsible for both Revenue and Costs.
 Statement B: A production department and a maintenance department are examples of cost centers.
 Statement C: A Division of an organization is generally a profit center.
- (a) A and B only
 (b) A and C only
 (c) B and C only
 (d) All of the above
- (4) Environmental costs are not normally included in traditional cost calculation of products or services. Which of the following costs are such hidden costs?
 A- Upfront cost and Back-end cost
 B- Image and relationship building cost
 C- Regulatory Compliance cost
- (a) A and B only
 (b) A and C only
 (c) B and C only
 (d) All of the above
- (5) Which of the following statements is more appropriate with regard to Zero Base Budgeting?
 (a) It is required to spend all the money allocated during the year.
 (b) It should start with zero at the beginning and end the tasks with a Zero every year.
 (c) Budget estimates are made based on the needs and future planning without considering the past results.
 (d) It is an extension to incremental budgeting and planned to complete all the tasks within the year planned.
- (6) A company expects a total revenue of Rs. 600 mn with a total variable cost of Rs. 400 mn for the year 2018. Total fixed cost amounts to Rs. 150 mn.
 What is the degree of operating leverage of this company?
- (a) 1
 (b) 3
 (c) 4
 (d) 8
- (7) Activities and cost drivers are important elements in activity based costing (ABC). What is correct hierarchical order of activities arranged as per ABC?
- (a) Unit Level, Batch Level, Product Sustaining Level and Facility Sustaining Level
 (b) Batch Level, Unit Level, Product Sustaining Level and Facility Sustaining Level
 (a) Unit Level, Batch Level, Facility Sustaining Level and Product Sustaining Level
 (b) Facility Sustaining Level, Batch Level, Unit Level and Product Sustaining Level

- (8) Following information is provided with regard to a certain product that has a life span of 4 years.

	Year 1	Year 2
Research cost (Rs.)	190	
Product planning cost (Rs.)	40	
Variable Cost per unit (Rs.)	50	60
Total Production Units	500	600
Losses on machinery and equipment (Rs.)	90	180
Other production overheads (Rs.)	30,000	40,500

What is the Life Cycle Cost per unit of this product?

- (a) Rs. 125.0
 (b) Rs. 125.3
 (c) Rs. 125.7
 (d) Rs. 126.0
- (9) Following information relates to Projects A and B that are mutually exclusive.

	A	B
Initial Cost (Rs.)	6,000	10,000
NPV	1,200	1,500
Duration : Years	6	5

Which of the following statements is true with regard to this capital budgeting decision?

- (a) Project B is preferred as it gives the highest NPV.
 (b) A is preferred as it gives highest NPV per Re 1 investment.
 (c) Annual Annuity Equivalent should be calculated to decide.
 (d) Both projects can be selected as each project gives positive NPV.
- (10) Finishing process of a product has been identified as a bottleneck in the production process. One unit of production requires 10 minutes of finishing time. Each unit of production earns a throughput value of Rs. 12/-.

What is the Return per factory hour with regard to the above product for throughput accounting purposes?

- (a) 17%
 (b) 67%
 (c) 80%
 (d) 120%

(10 × 2 Marks = Total 20 Marks)

End of Part I

PART II

Question No. 02 (20 Marks)

- (a) The following information relates to a company which manufactures products A and B.

	A	B
Unit Selling Price (Rs.)	800	900
Direct Material Required per unit (Kg)	1	1.5
Direct Labour Hours	2	2.5
Assembling Time per product (Hours)	0.8	1
Finishing Time Per Product (Hours)	0.5	0.4

Additional Information

Cost direct material is Rs.80/- per kg whereas the direct labour pay rate is Rs.120/- per hour. Selling staff is entitled to a sales commission of 10% on the selling price. Total material available per month is limited to 5,000 kg.

Time available in the Assembly Department and Finishing Department are limited 4,000 hours and 5,000 hours respectively per month.

The fixed operating costs for the departments have been estimated as Rs.90, 000 per month.

Estimated overhead cost per month at assembly department and finishing department are Rs.160,000/- and Rs.250,000/- respectively.

Maximum monthly demand for products A and B will be 2,500 units and 3,500 units respectively.

You are required to prepare:

- (i) Monthly production plan
 - (ii) Estimated profit per month **(14 Marks)**
- (b) If materials required for production can be bought by paying an extra amount of Rs. 20 per kg, would the production plan have given in part (a) above change? Give explanations with supportive calculations. **(06 Marks)**
- (Total 20 Marks)**

Question No. 03 (20 Marks)

- (a) Global Trades has international business operations with several fictional and divisional arrangements for local operations. Management has decided that divisions are rewarded based on performance of each division with a view to boost the company performance through motivations of divisional employees. Profit is used as a performance base.

Production department 1 (Dep 1) manufactures a singly metal product “AA” which is used as the main material to be used in product “Q” that is manufactured by the department 2 (Dep 2). Two units of AA is required to manufacture one unit of Q. There is a normal loss of 5% of all the materials introduced at the Dep 2. Table below provides some estimates for the year 2018.

Description	Dep 1	Dep 2
Total production (Units)	36,000	17,100
Maximum Production Capacity (Units)	50,000	
Variable cost per actual unit of production (Except transfer price) (Rs.)	240	180
Unit Selling Price (Rs.)		1,500
Production overheads (Rs.)	4,000,000	5,000,000
Current Transfer Price (Rs.)	360	

Dep 1 is insisting that it could easily sell its products outside at a price of Rs.400/- per unit and therefore, it needs the transfer price to be increased to Rs.380/- at least.

You are required to:

- (i) **Calculate** the expected profits of each department and the company with the current transfer price.
- (ii) **What** would be impact on departmental profits and the company profits if the transfer price is changed to Rs. 380? Would this be fair by both departments compared to the present situation in terms of performance evaluation? **(08 Marks)**

- (b) Normal loss of materials at Dep 2 of Global Trades given in the part (a) above can be reduced to 2% and the production can be increased to its maximum capacities if the production system is upgraded. This will increase the total overheads of Dep 1 and Dep 2 by Rs.800,000/- and Rs.1,000,000/- respectively. Variable cost per unit (Except transfer price) will also change to Rs.250/- and Rs.200/- for Dep 1 and Dep 2 respectively.

Dep 2 decided to reduce the current selling price by 10% in order to assure extra products would be sold. Maximum loading capacity of material AA at the production Dep 2 is 30,000 units. Dep 2 is ready to buy all the products from Dep 1 at a transfer price of Rs. 400 per unit and the excess requirements of product AA will be bought from outside at a price of Rs. 420 Per unit.

You are required to:

- (i) **Prepare** a statement to show the profits of Dep 1 and Dep 2 and advice management whether it would be a good to go for the strategy of maximizing production capacities.
- (ii) **Discuss** other qualitative factors to be considered if this strategy would be implemented.

(12 Marks)

(Total 20 Marks)

Question No. 04 (20 Marks)

Technocraft is in a process of evaluating its new product development. Research and development cost of Rs. 1 million had been already incurred with regard to this product and it has proven that the new product can be commercial manufactured and sold.

Company requires to invest of Rs. 10 million now to install the machinery and software required and a system maintenance cost of Rs 2 million to be incurred at the end of year two. It is expected to sell the new product for four years. Annual depreciation of the investment is Rs. 2.5 million.

In order to launch the new product, fully depreciated old machines at the premises are sold for Rs. 1.5 million. Table below gives some information about the production and costs.

	Year 1	Year 2	Year 3	Year 4
Expected Production (units)	50,000	60,000	60,000	40,000
Selling Price (Rs.)	300	320	320	350
Variable cost of Production per Unit (Rs.)	130	150	150	150
Production Overheads and Administrative cost (Rs.)	6,000,000	7,000,000	8,000,000	8,000,000
Increase in Debtors by (Rs.)	500,000			
Increase in trade Creditors by (Rs.)	300,000			
Increase in inventories by (Rs.)	1,400,000			
Increase in running cash balance by (Rs.)	100,000			

Other Information

- Machines are expected to be sold after at the end of year 4 for Rs. 2 million.
- Depreciation is allowed for tax purposes.
- Corporate tax rate is 30%.
- Company would borrow the initial capital requirement at an annual interest rate of 12 %. As a result of new borrowing the weighted average cost of capital of the company would change to 15% per annum.

You are required to:

- (a) **Evaluate** the investment project and advice whether it is financially feasible (15 Marks)
- (b) **What** would be the maximum level of WACC that can be levered by the company to run this project, if the IRR of this project is 28%? **Explain.** (03 Marks)
- (c) **Describe** two qualitative aspects to be considered before taking the final decision. (02 Marks)
- (Total 20 Marks)**

Question No. 05 (20 Marks)

- (a) **Explain** the difference between activities based costing (ABC) and Activity Based Cost Management (ABCM). (04 Marks)
- (b) A company manufactures garments and the following information is available with regard to production overheads for a period.

Activity	Driver Volume	Cost (Rs.)
Material Handling	100 requisitions	8,000,000
Sawing	20 batches	3,000,000
Quality Inspection	15 Inspection	6,000,000
Packing	50,000 packs	2,500,000
Dispatching goods to stores	40 dispatches	1,200,000
Cutting	800,000 meters	2,400,000

Additional Information

- During the period, 10,000 shirts were manufactured and the table below gives information about cost driver volumes for **shirts**.

Name of the cost Driver	Volume
No. of Requisitions	8
No. of Production Batches	3
No. of Inspections	2
No. of Packs Used	18,000
No. of Dispatches	15
No. of Meters	200,000

- Direct material cost and direct labour cost per shirt are Rs. 300 and Rs. 125 respectively.
- Total number of shirts manufactured 10,000
- If the cost of production is calculated under the Absorption method, operations are identified for divisions and overhead absorption rates are used. Table below provides information about the production of **shirts** during the period.

Division	No. of Hours used for Shirts	OAR Per hour (Rs.)
Cutting	4,000	200
Sawing	2,200	600
Finishing	3,100	300

You are required to:

- (i) **Calculate** the cost of a shirt under ABC method. (08 Marks)
- (ii) **Calculate** the cost of a shirt under traditional absorption method. (05 Marks)
- (iii) **Explain** which method is appropriate for determining the cost of a shirt. (03 Marks)

(Total 20 Marks)

End of Part II

End of Question Paper