Private & Confidential

FACULTY OF BUSINESS

FINAL EXAMINATION

Student ID (in Figures)	:	
Student ID (in Words)	:	

Course Code & Name	:	**ACC5104 MANAGEMENT CONTROL & COSTING SYSTEM**
Semester & Year	:	JANUARY – APRIL 2021
Lecturer/Examiner	:	JAMES LIOW
Duration	:	3 Hours

INSTRUCTIONS TO CANDIDATES

1. **This question paper consists of 2 parts:**
   PART A (70 marks) : Answer ONE (1) mini case study. Answers are to be written in the Answer Booklet provided.
   PART B (30 marks) : Answer THREE (3) out of FIVE (5) short answer questions. Answers are to be written in the Answer Booklet provided.
2. **Candidates are not allowed to bring any unauthorized materials except writing equipment and calculator into the Examination Hall. Electronic dictionaries are strictly prohibited.**
3. **This question paper must be submitted along with all used and/or unused rough papers and/or graph paper (if any). Candidates are NOT allowed to take any examination materials out of the examination hall.**
4. **Only ballpoint pens are allowed to be used in answering the questions, with the exception of multiple choice questions, where 2B pencils are to be used.**

WARNING: The University Examination Board (UEB) of BERJAYA University College regards cheating as a most serious offence and will not hesitate to mete out the appropriate punitive actions according to the severity of the offence committed, and in accordance with the clauses stipulated in the Students' Handbook, up to and including expulsion from BERJAYA University College.

Total Number of pages = 10 (Including the cover page)

PART A : MINI CASE STUDY (70 MARKS)

INSTRUCTION (S) : Part A consists of **ONE (1)** mini case study. You are required to answer ALL questions in the Answer Booklet provided. All workings are to be shown in the Answer Booklet.

Company History

Skywalker International Bhd (SIB) started as a family run business in the heart of Kuala Lumpur since 1980s and the Company was founded by Simon Ibrahim (Simon) specialising in supplying medical equipment mainly to government hospitals. The medical equipment was sourced from United Kingdom.

In 2009, SIB saw the prospects of manufacturing its own local medical equipment to suit the current needs. Hence, SIB was incorporated in Malaysia as a private limited company before it was converted into a public limited company in 2010. SIB was listed on the Main Market of Bursa Malaysia Securities Berhad a year later. After the incorporation, the Company has setup the plant in Pahang to manufacture and to supply the medical equipment.

The plant in Pahang is capable of manufacturing two principal machines, they are:

a) Anesthesia machine (AM). This machine is designed to provide continuous supply of medical gases to maintain a proper level of anesthesia to a patient.
b) Electrocardiogram (EKG) machine (EM) is designed to record the electrical activity of the heart over a period of time and allow health care providers to monitor the overall rhythm of the heart and identify any abnormalities.

Besides the two main products, SIB is also capable of manufacturing other medical tools and also one-off order or smaller quantities of medical parts. However, these products required the release of the current production capacity. Hence, they are not profitable and unable to meet the required profit margin.

Competition and Financial Performance

In the last three years, SIB has been facing intense competitions within the local manufacturers particularly Mediniaga Bhd who has been a fierce competitor to SIB. In the past, they manufacture the same products, i.e. AM and EM providing the same standard of quality. However, they always managed to capture the market for AM product. Whereas, SIB has secured the market for EM.

This has frustrated Simon because he is losing sizeable of the market shares and those customers who have been with SIB since its humble beginnings. Simon was very concerned about the performance and financial stability of the Company as it found itself in choppy financial waters and was not able to achieve the budgeted sales and profits. Being a Chairman of a listed company, he is required to explain to the board and shareholders on the poor performance and potentially to produce financial regularisation plan in the even the Company is classified under PN17 under the requirements of Bursa Malaysia if the current financial situations are not improved.

In the last one year, SIB has carried out a drastic decision by cost cutting measure in those non-added value activities, reduction in expenses, discontinuation of manufacturing one-off orders and smaller quantities medical parts. However, the bottom line did not seem to increase its financial performance and Simon could not comprehend why the products were unable to make a profit.

Production Process and Cost Accumulation of Factory Overheads

At the manufacturing plant in Pahang, there are four production departments: casting, machining, assembly and packaging. In addition, there are five support departments: machine maintenance, machine setup, production scheduling, production engineering and IT support. The current cost accounting system accumulates cost separately for each of these nine departments.

Cost accumulated of the factory overheads for the four production departments include supervision, supplies and machine depreciation. Costs for the five support departments include the salaries, wages, benefits of the engineers and workers who are responsible for these activities and the costs of the tools and materials they use. Costs for the IT support include the salaries and benefits of the IT staff, heating and lighting, and depreciation of the IT equipment.

Allocation Basis of Support Departments

The allocation of costs requires the identification for each support department of a basis or cost driver that best reflects and measures the activity performed by that department. The SIB plant uses the following basis to allocate the support department costs:

Support Department	Allocation basis	Production Departments			
		Casting	Machining	Assembly	Packaging
Machine Maintenance	Value of machines	25%	50%	15%	10%
Machine setup	No. of setups	20%	40%	20%	20%
Production scheduling	Machine hours	15%	55%	20%	10%
Production engineering	Direct labour	8%	44%	24%	24%
IT support	IT support hours	20%	30%	30%	20%

Estimated Factory Overhead Costs

The normal factory overhead costs of SIB for the nine departments are depicted below:

Estimated Factory Overhead Costs	
	RM
Production Department:	
Casting	75,000
Machining	120,000
Assembly	78,000
Packaging	55,000
Support Department:	
Machine maintenance	180,000
Machine setup	450,000
Production scheduling	140,000
Production engineering	200,000
IT support	110,000
	1,408,000

The factory overhead costs estimated for the four production departments are incurred directly in the respective departments and therefore, it does not require any allocation basis.

Factory Overhead Cost Driver

Conventionally SIB has been using unit-related factory overhead cost driver to absorb the factory overheads to the products. For casting and machining departments, machine hours were used due to its high reliance on machines. As for the assembly and packaging departments, direct labour hours were used due to its labour-intensive nature.

The following information is available for the unit-related activities of production departments:

	Production Departments			
Allocation basis	**Casting**	**Machining**	**Assembly**	**Packing**
Total machine hours	9,150	24,500	-	-
Total direct labour hours	-	-	6,250	6,500

Product Costing and Input of Each Product

The following is the information of the prime costs and input required for each product:

Anesthesia machine (AM)

	Casting	Machining	Assembly	Packing
Direct material costs (RM)	2,670.00	-	1,500.00	760.00
Direct labour costs (RM)	320.00	1,850.00	640.00	580.00
Machine hours	50	150	-	-
Direct labour hours	-	-	50	60

Electrocardiogram (EKG) machine (EM)

	Casting	Machining	Assembly	Packing
Direct material costs (RM)	1,200.00	-	850.00	520.00
Direct labour costs (RM)	135.00	680.00	260.00	270.00
Machine hours	20	55	-	-
Direct labour hours	-	-	25	18

Selling Price

SIB using the cost-plus pricing by adding a 35% markup to the cost of production to arrive at a selling price for the two products.

Distortion of Factory Overhead Costs and Activity Based Costing (ABC)

Simon has been in this business since 1980s and having vast experience in this industry, he strongly believed that there is nothing wrong with the prime costs as it is direct measurable for the direct materials and direct labour. The only flaw is in the costing of the factory overhead costs and that could be the reason why the products are either under costed or over costed.

Simon has decided to implement ABC costing systems and hoping that this will accurately measure its product costs. So, he gathered all his departmental heads to categorise and trace all activities based on the relevant cost drivers. The departmental heads produced the factory overhead costs distributed over nine activities. The following is the factory overhead costs and the cost drivers:

Activity	Factory Overhead (RM)	Cost driver
Supervision: production	141,800	2,300 labour hours
Depreciation: machine & equipment	146,000	40,000 machine hours
Material handling	120,200	500 number of materials movements
Machine setup	300,000	3,000 machine setup hours
Handling charges	150,000	600 number of handling movements
Production scheduling	120,000	500 number of production run
Production engineering	180,000	200 engineering change order

Machine maintenance	160,000	40,000 maintenance hours
IT support	90,000	20,000 IT support hours
Total	**1,408,000**	

Factory Overheads for Individual Products

The following activity cost driver levels for the two products has been identified for the implementation of ABC:

Activity	**Cost Driver**	**AM**	**EM**
Supervision: production	Labour hours	30	20
Depreciation: machine & equipment	Machine hours	260	114
Material handling	No. of materials movements	5	2
Machine setup	Machine setup hours	2.2	2.2
Handling charges	No. of handling movements	8	7
Production scheduling	No. of production run	1.0	1.0
Production engineering	Engineering change order	0.4	0.3
Machine maintenance	Maintenance hours	260	114
IT support	IT support hours	120	80

Simon anticipated that with the implementation of ABC system, he hopes to achieve the following:

(i) Concentrate products that will yield a better profit margin.
(ii) Lower or increase the selling price for under or over costed.
(iii) Improve the bottom line of the company.

(All prices and rates are to be rounded up to 2 decimal places. For others are to be rounded up to the nearest whole number)

Required

1. Using the traditional approach to assigning factory overhead costs to product:
   a) Allocate the support department costs to production department. Calculate the factory overhead rate for each production department using the appropriate basis of absorption. (6 marks)
   b) Assign the factory overhead costs using the factory overhead rate for product AM and EM (4 marks)
   c) Calculate the unit product costs for the two products. (15 marks)

2. SIB has identified and combined major activities of a facility's production process into a single activity. Describe **FOUR** (4) categories of production activities introduced by Robert Kaplan. (8 marks)

3. Using the activity-based costing, complete the following requirements:
   a) Calculate the cost driver rates for each of the activity cost pools. (9 marks)
   b) Using the cost driver rates calculated in (3a), assign the factory overhead costs for the two products. (9 marks)

c) Based on the results of (3b), calculate the unit product costs for the two products.

(8 marks)

4. Prepare the total product costs for the two products under the traditional costing system and ABC system highlighting the difference. Indicate which product is over costed or under costed.

(3 marks)

5. Discuss **TWO** (2) reasons why the two methods reported in Question (4) above produced different product costs. (6 marks)

6. Given the company's markup policy, calculate the selling price under the traditional costing system and activity-based costing system. (2 marks)

[Total 70 marks]

END OF PART A

PART B : SHORT ANSWER QUESTIONS (30 MARKS)

INSTRUCTION (S) : There are **FIVE (5)** questions in this section, answer only **THREE (3)** questions. Write your answers in the Answer Booklet(s) provided. The total marks allocated for each of the questions are shown within brackets.

QUESTION 1

The difference between financial accounting and management accounting is very important to understand as both of them serve different purposes and audiences.

Required

Outline the differences in the following points of difference:

a) Aim/objective
b) Regulatory requirements
c) Governing principles
d) Time horizon
e) Reporting beneficiaries

[Total 10 marks]

QUESTION 2

The Balanced Scorecard is a management system that enables an organisation to identify and clarify its vision and strategy, and translate them into action. It provides feedback around both the internal business processes and external outcomes to improve continuously strategic performance and results.

Required

a) Describe any **ONE** (1) perspectives of the Balanced Scorecard and provide an example of the measure for the perspective. (6 marks)

b) Describe how the cause and effect of Balanced Scorecard on financial perspective and provide an example on the effects. (4 marks)

[Total 10 marks]

QUESTION 3

Costs may be classified in a number of different ways depending upon their nature and their use.

Required

Define **TWO** (2) of the following commonly used cost terms in management accounting and illustrate your answer with **ONE** (1) example each:

a) Direct and indirect costs
b) Variable and fixed costs
c) Product and period costs

[Total 10 marks]

QUESTION 4

In a highly competitive environment, strategic management accounting emphasises the importance of managing costs at different phases of a product from pre-production phase, production phase and right to the post-production phase.

Required

a) Briefly describe **ONE** (1) of the following management accounting tools and techniques:
   (i) Target costing
   (ii) Kaizen costing
   (iii) Life cycle costing

(7 marks)

b) Identify which management accounting tools in part (a) that could be applied in different phases of a product. (3 marks)

[Total 10 marks]

QUESTION 5

VB Bhd manufactures and sells a single item of farm machinery which is distributed through a network at a selling price of RM1,250.00 per unit. The budgeted sales for the 2020 year are 36,000 units. The following production information has been provided:

	RM'000
Direct materials	17,820
Direct labour	1,980
Production overhead:	
- Fixed	12,740
- Variable	1,226
Sales & distribution overhead:	
- Fixed	2,110
- Variable	240

Required

a) Calculate the breakeven cost in units, breakeven in sales revenue and profitability. (3 marks)

b) Calculate the margin of safety, expressed in % terms. (2 marks)

c) The Sales Director proposes reducing the sales price by 10% and spending an additional RM3,000,000 on fixed sales and distribution overheads will generate sales to 40,000 units. Calculate the impact of this proposal on breakeven in units, breakeven in sales revenue and profitability. Advise management whether this proposal should be adopted. (3 marks)

d) List **TWO** (2) the limitations of using the analysis outlined in part (c) above in a decision-making context. (2 marks)

[Total 10 marks]

END OF QUESTION PAPER