CERTIFIED PUBLIC ACCOUNTANT

ADVANCED LEVEL 2 EXAMINATIONS

A2.2: STRATEGIC PERFORMANCE MANAGEMENT

DATE: THURSDAY, 31 MARCH 2022

MARKING GUIDE AND MODEL ANSWERS

SECTION A

QUESTION ONE
Marking Guide

	Mark(s)
a) i)	
Contribution per pair each 0.5 mark	1
EV profit each 1.5 marks	9
Total EV profit each 0.5 mark	1
Choice of price	1
Subtotal	**12**
a) ii)	
Identification of minimum profit for each price 1mark	2
Choice and justification	1
Subtotal	**3**
b) .	
Standard cost of materials per kilogramme of output	1
Material price variance – calculation 1mark and variance 1mark	2
Material yield variance – calculation 2mark and variance 1mark	3
Material price variance – calculation 2mark and variance 1mark	3
Subtotal	**9**
c) .	
Market share variance	2
Market size variance	2
Summary- Volume variance	1
Subtotal	**5**
d) .	
Revised rate	0.5
Revised standard hours	0.5
Labour rate planning variance	2
Labour efficiency planning variance	2
Labour rate operational variance	2
Labour efficiency operational variance	2
Subtotal	**9**
e) .	
Determination of each item !1 mark each	9
Flexible operating profit	2
Comment	1
Subtotal	**12**
Total	**50**

Model Answer

a) i) Considering the information on the launch of new sports shoes by MCL advice the CEO on the best price option to launch the sports shoes based on expected profit.

Contribution per pair	‘FRW “000”	‘FRW “000”
Price per pair	30	35
Contribution to 100,000 pairs (30/35 -12)	18	23
Contribution above 100,000 pairs (30/35 -11)	19	24

Expected Values

	‘FRW “000”	‘FRW “000”	‘FRW “000”	‘FRW “000”	‘FRW “000”	‘FRW “000”
Price	30	30	30	35	35	35
Sales volume	120000	110000	140000	108000	100000	94000
Unit contribut.	19	19	19	24	23	23
Total contrib.	2,280,000	2,090,000	2,660,000	2,592,000	2,300,000	2,162,000
Fixed cost	(450,000)	(450,000)	(450,000)	(450,000)	(450,000)	(450,000)
Advertising	(900,000)	(900,000)	(900,000)	(970,000)	(970,000)	(970,000)
Profit	930,000	740,000	1,310,000	1,172,000	880,000	742,000
Probability	0.4	0.5	0.1	0.3	0.3	0.4
EV Profit	372,000	370,000	131,000	351,600	264,000	296,800
Total EV			873,000			912,400

Using expected value the choice is based on maximizing the profit and hence choose to launch with the price of FRW 35,000

ii) Identify which price option should be chosen by management for the launch if maximin decision rule was used.

‘	FRW “000”	‘FRW “000”	‘FRW “000”	‘FRW “000”	‘FRW “000”	‘FRW “000”
Price	30	30	30	35	35	35
Profit	930,000	740,000	1,310,000	1,172,000	880,000	742,000

	Minimum Profit
FRW 30,000	FRW 740,000,000
FRW 35,000	FRW 742,000,000

Choose selling price at FRW 35,000 as it maximizes the minimum profit expected.

b) Evaluate the performance of the production manager based on production of chemical Y for last year using the material mix, yield and price variances

Standard cost of materials per kilogramme of output = (0.65 kilogrammes * 400) + (0.3kilogrammes * 600) + 0.2 kilogrammes *250) =FRW 490

Variance calculations

Materials price variance = (standard price – actual price) Actual Quantity

= SP * AQ – AC= (400 * 2840) + (600 ×* 1210) + (250 * 860) – 2,038,000= 39,000 F

Material yield variance = Actual yield – Standard yield *Standard material cost per unit of output

= (4200 – 4910/1.15) * 490 = FRW 34,090A

Material mix variance = Actual quantity in actual mix at standard price – actual quantity in standard mix at standard prices

F (4,910 ×0.65/1.15 – 2,840)400 =	FRW 25,910 A
D (4,910 × 0.30/1.15 – 1,210)600 =	FRW 42,520 F
N (4,910 × 0.20/1.15 – 860)250 =	FRW 1,520 A
	FRW 1,509 F

c) Assess the performance of MCL sales using the market share and market size variance

Market size variance

Ex ante (budgeted) total market size (units)	200,000
Ex post (actual) total market size (units)	260,000
Total difference (units)	60,000 (F)
Budgeted market share	25%
Market size variance (in units)	15,000 (F)
Standard contribution per unit	FRW 4,000
Market size variance in FRW contribution	FRW 60,000,000 (F)

Market share variance

Ex post (actual) total market size (units)	260,000
Budgeted market share	25%
Expected sales if budgeted market share achieved	65,000
Actual sales	61,000
Market share variance (units)	4,000 (A)
Standard contribution per unit	FRW 4,000
Market share variance in FRW contribution	FRW 16,000,000 (A)

Summary	FRW
Market size variance	60,000,000 (F)
Market share variance	16,000,000 (A)
Total sales volume variance	44,000,000 (F)

d) Analyse the total labour variances for previous quarter into component parts for planning and operational variances in as much detail as the information allows

Planning and operational variances

Labour Rate Planning variance

	FRW per hour
Original standard rate	1,400
Revised standard rate (1400*1.02)	1,428
Labour rate planning variance	28 A

Labor rate planning variance = 37,000 hours * 28 A = FRW 1,036,000 A

Labour rate Planning variance

	Hours
Original standard (12,600*3)	37,800
Revised standard (12,600*3.25)	40,950
Labour Efficiency planning variance	3,150 A

Labor efficiency planning variance = Frw 1,400 * 3,150 A = FRW 4,410,000 A

Labour Rate Operational variance

	FRW
Revised cost (37,000*1428)	52,836,000
Actual cost	53,193,000
Labour rate operational variance	357,000 A

Labour Efficiecy Operational variance

	Hours
Revised standard (12,600*3.25)	40,950
Actual hours taken	37,000
Labour Efficiency operational variance	3,950 F

Labor efficiency planning variance = Frw 1,400 * 3,950 A = FRW 5,530,000 F

e) Basing on the views of the board of directors, recalculate the budget operating profit for the month of January 2022 for Tamu Tamu Foods and comment

Tamu Tamu foods

Flexible budget for the month of January 2022

	FRW	FRW
Revenue: Food (1,560/1,200 * 5,760,000)		7,488,000
Drinks (1,560/1.200*1,440,000)		1,872,000
		9,360,000
Variable costs:		
Staff wages (1,105,920 + 8 * 0.5 *144 * 6 * 4 *3)	1,520,640	
Food costs ((1,560/1.200 *720,000)	936,000	
Drink costs ((1,560/1.200 *288,000)	376,000	
Electricity costs (8*6*6*4 + 8*6*4*0.5*3*352.8)	508,030	(3,339,070)
		6,020,930
Fixed costs:		
Managers' chefs salary	1,032,000	
Rent and depreciation	540,000	(1,572,000)
Opening profit		4,448,930

Comment/conclusion

From the flexible budget then the worry of the BOD was confirmed as the flexible budget shows that the actual performance was not better.

SECTION B

QUESTION TWO

Marking Guide	Mark(s)
a)	
Contribution for each segment 1 mark each	3
profit for each segment 1 mark each	3
Leather Division profit	1
Advice/comment	2
Subtotal	**9**
b) i).	
Add depreciation each 0.5 mark	1
Add head office costs each 0.5 mark	1
Controllable profit 0.5 each	1
Average net assets 0.5 each	1
ROI each 1 mark	2
Subtotal	**6**
ii)	
Any 3 points well explained Each 2 marks	**6**
c) .	
Controllable profit 0.5 mark each	1
Capital charge 0.5 mark each	1
RI each 0.5 mark	1
Comment	1
Subtotal	**4**
Total	**25**

Model Answer

a) Using segmental profitability analysis, assess how the key segments of the leather division performed for the first quarter of year 2022 and advice.

Details	Leather division	Garments	Shoes	Handbags
	FRW “000”	'FRW “000”	'FRW “000”	'FRW “000”
Sales Revenue	15,000	5,000	7,000	3,000
less variable costs	(7,610)	(3,250)	(2,800)	(1,560)
contribution	7,390	1,750	4,200	1,440
less traceable fixed cost				
Advertising	3,120	800	1,120	1,200
Administration	1,070	300	350	420

Depreciation	114	25	56	33
segmental profit margin	3,086	400	2,170	(510)
less common fixed costs	(1,100)			
Division profit	1,986			

Conclusion/advice

The low margin in leather division could be caused by Handbag product line as it is making losses and this is because of the high cost of advertising, hence the advertising cost should be reduced so as to make it profitable or if not possible to drop it.

b) i) Evaluate the performance of each of the two divisions of KSC using the return on investment for year 2021.

Return on investment (ROI) = (controllable profit /average divisional net assets)*100

Controllable profit

	Clothing Division 'FRW "000"	Leather Division 'FRW "000"
Net profit	72,750	197,500
Add back depreciation on non-controllable assets (30%)	2,475	6,900
Add back head office costs	31,000	35,000
Controllable Profit	***106,225***	***239,400***

*Depn for non-controllable assets = 30%*8250 =2475 30%*23000 = 6900*

Average divisional Net Assets

	Clothing Division 'FRW "000"	Leather Division 'FRW "000"
Opening divisional controllable net assets	650,000	1,200,000
Closing divisional controllable net assets	450,000	1,500,000
Average Net Assets	***550,000***	***1,350,000***

ROI = (106255/550000)* 100 = 19.3% (239400/1350000)* 100 = 17.7%

ii) **Discuss the performance of the two divisions for the year, including the reasons for difference in the ROI and impact on the behavior of the division manager with the worst performance**

Clothing division has achieved the target ROI of 18% while Leather division has not achieved target ROI.

If the controllable profit in relation to revenue is considered, clothing division margin is (106255/190000*100) = 55.9% compared to leather division's margin of (239400/420000*100) = 57% so actually Leather division is performing better. However, leather division has a larger asset base than the clothing division, hence the fact that clothing division has a higher ROI.

Leather Division seems to be much larger than clothing division and therefore it could be expected to have more assets. Leather division assets have increased because it made substantial additions of noncurrent assets. The additional assets have been depreciated this year hence reducing the profit, given that leather division depreciate their assts using reducing balance method which has higher depreciation in the first period hence more impact on profit.

The implication of the difference between the two divisions ROI results is that the manager of clothing division will get a bonus and the manager of leather division will not receive bonus as he has not met the target. This has a negative motivation to the manager of leather division which may discourage from making future investments unless a change in the performance measure used.

c) Analyse the performance of each of the two divisions of KSC for the year 2021 using residual income

Residual Income = controllable profit – imputed charge on net assets

	Clothing Division FRW "000"	Leather Division FRW "000"
Controllable profit	106,225	239,400
Less imputed charge on assets (12%)	(66,000)	(162,000)
Residual Income (RI)	***40,255***	***77,400***

The results of RI shows that both division have performed well with clothing division having FRW 40.255M and leather Division FRW 77.4M. The cost of capital is less than target ROI significantly making the residual income figure show a more positive position.

QUESTION THREE

Marking Guide	**Mark(s)**
a)	
Financial perspective- gross profit each 1 mark	2
Innovation and learning	2
Customer perspective	2
Internal business	2
Subtotal	**8**
b)	
Sales growth	2
Net profit	1
Gross profit margin	2
Net profit margin	2
Admin salaries	1
Electricity	1
Advertising	2
Subtotal	**11**
c) .	
Quality – Any 2 points each 1.5 mark	3
Resource allocation – Any 2 points each 1.5 mark	3
Subtotal	**6**
Total	**25**

Model Answer

a) Suggest and calculate performance indicators that could be used for each of the four perspectives on the balanced scorecard for JP's production company for the first quarter of 2022.

Financial perspective

Gross profit - Existing product = (110m-75m)/110m *100 = 32%

- New product = (25m-14m)/25m *100 = 44%

Innovation and learning

Development costs as a percentage of sales = 9.5m/135m *100 = 7%

Customer perspective

Percentage of sales represented by new products = (25m/110m+25m)* 100 = 18.5%

Internal business perspective

Productivity
- existing product = 500000units/100000hours = 5 units/hour
- New product = 100000units/25000hours = 4 units / hour

Unit cost
- existing product = 75m/500,000 units = FRW 150/unit
- New product = 14m/100,000 units = FRW 140/unit

b) Assess the financial performance of Gafaranga beauty parlor salon from the data provided.

Sales growth

Sales have grown by 19.25% [(23.85m-20m)/20m*100] from 2020 to 2021

This is impressive growth given that there is stiff competition in the salon industry

Gross profit margin

The gross profit margin declined from 53% (10.6m/20m *100) in 2020 to 47.17% (11.25/23.85 *100) in 2021 this could be predominantly due to 40% increase (9.1m-6.5m/6.5 *100) in hairdressing staff costs as a result of the recruitment of two new staff

In 2021, the drop could be attributed by the drop in gross profit margin of female clients

Gross profit margin 2021
- Female clients = 6.9m/17m*100 = 40.59%
- Male clients = 4.35m/6.85m*100 = 63.50%

Net profit

The net profit only increased by 2.6% (8m-7.8m/7.8 *100) which is disappointing compared to 19.25% increase in sales.

Net profit margin 2020 7.8/20*100 = 39%

2021 8/23.85*100 = 33.54%

There was a decline in Net profit margin from 39% to 33.54%

Administration salaries

The administration salaries increased by only 5.6% (9.5m-9m/9m *100), which was impressive given expansion in the business.

Electricity

The electricity costs increased by 14.3% (8m-7m/7m *100), which could be attributed to more clients in 2021 as compared to 2020

Advertising

Advertising costs increased by 150% (5m-2m/2m *100) which could be expected as a result of launching a new service for male clients. May not be of much concern provided it has generated new clients.

c) Analyse and comment on the non-financial performance of JP's saloon business under the headings of quality and resource allocation

Quality

Number of complains has increased significantly by 283% (46-12/12 *100). This is alarming and it could not just because of increase in client numbers

Complain per customer visit have increased from 0.15% (12/8000*100) to 0.45% (46/10225*100). This is a cause of concern in service business because usually customers complain, they may not come back.

Resource Allocation

The resources of the salon are the salon itself and the staff. There is more utilization of the salon as a result of the increase in the clients from 8,000 in 2020 to 10, 225 (6,800+3,425) in 2021. This is an increase of 27.8%. However, this increase in utilization has not resulted in proportionate increase in profits.

The female specialist hairdresser served 2,000 (8,000/4) clients per specialist in 2020 and this fell to 1,360 (6,800/5) clients in 2021. This contrasts with the higher figure of 3,425 clients per male hairdresser specialist in 2021. Although this could be expected as the time taken per male client is much less than female client.

QUESTION FOUR

Marking Guide	**Mark(s)**
a)	
Any 7 points each 1 mark	**7**
b) i)	
Direct cost each 0.5 mark	1
Supervision 0.5 mark each	1
Planners 0.5 mark each	1
Property 0.5 mark each	1
Total cost 0.5 mark each	1
Quoted price 0.5 mark each	**6**
Subtotal	
ii)	
Any 5 points each 1 mark	**5**
c) .	
Any 7 points each 1 mark	**7**
Total	**25**

Model Answer

a) Assess the progress of the benchmarking exercise to date in BP, explaining the actions that have been undertaken, and those that are still required.

Benchmarking exercise can be described using seven stages, and we will use these stages to assess the progress of BP's current benchmarking exercise.

Actions that have been undertaken

(i) Set objectives and determine the area to benchmark.

The underlying objective of the exercise is to improve efficiency, and the area being benchmarked has been identified as the administrative costs incurred in relation to teaching and research.

(ii) Identify key performance drivers and indicators.

It is important that the benchmarking exercise focuses on performance areas which are crucial to BP's success.

Three key drivers of costs have revenues have been identified (research contract values supported; student numbers; and staff numbers). Key performance indicators can be derived from these; for example, costs per student.

However, although the drivers have already been set, the driver 'staff numbers' could be improved by distinguishing between teaching staff and administrative staff.

(iii) Select organisations to study and benchmark against.
The chancellor has asked the administrator to benchmark BP's performance against the other two large Polytechnics in Rwanda (MP and UP), and the government has endorsed this proposal.
However, the exercise as it stands will not compare BP's performance against any of the other smaller polytechnics in Rwanda.
This could be a weakness in the proposed exercise, because the universities which are excluded could provide examples of best practice which BP could lead from if they had been included.

Measure performance for own organisation and the other organisations involved in the exercise
Information about BP, MP and UP's administrative costs for the most recent academic year has been collected.
The step has been made easier by the government insisting that all three universities co-operate and supply information to each other.

Actions still required
(v) Compare performance.
This is the stage that the exercise has currently reached. The information is available to compare performance but has not yet been done.
(vi) Design and implement improvement programme.
The results of the performance comparison should help identify which areas BP needs to improve.
For those aspects of performance where BP is lagging behind one (or both) of the other polytechnics
it should send a member of staff to the university which is performing best to identify what that university is doing differently to BP which is leading to the difference in performance levels.
In turn, that staff member should devise a programme to introduce improvements at BP and implementing the best practices which have been identified at the other polytechnics.
(vii) Monitor improvement.
Whilst implementing the improvement programme should help BP improve its performance, there is no guarantee how successful it will be and how much improvement it will actually deliver.
Therefore, management should monitor BP's performance once the programme has been implemented to see if it achieves its goals or if further improvements will still be necessary.

b) i) Calculate the cost and advice on the quoted price of building conversion and of an extension of property using ABC to absorb the overheads.

Cost using ABC

	Building Conversion	Extension of property
	FRW"000"	FRW"000"

Materials	3,500	8,000
Labour (300/500*15000)	4,500	7,500
Direct cost	8,000	15,500
Overheads –supervision	180	1,080
-planners	280	1,400
-property	1,800	3,000
Total cost	10,260	20,980
Quoted price (total cost +50%)	15,390	31,470

Cost per driver

Supervisor (90m/500) = 180,000

Planners (70m/250) = 280,000

Property (240m/40,000) = 6

	Supervisor	planner	propery
Building extension	180*1 =180	280*1 = 280	6*300 =1800
Extension of property	180*6 = 1080	280*5 = 1,400	6*500 = 3,000

ii) Assuming that the cost of a building conversion falls by nearly 7% and the price of an extension to properties rises by about 2% as a result of the change to ABC, suggest possible pricing strategies for the two products that BBC sells and suggest two reasons other than high prices for the current poor sales of the building conversions.

- The pricing policy is a matter for BBC to decide. They could elect to maintain the current 50% mark-up on cost and if they did the price of the building conversion would fall by around 7% in line with the costs. This should make them more competitive in the market.
- They could also reduce the prices by a little less than 7% (say 5%) in order to increase internal margins a little.
- It is possible that the issue lies elsewhere. If the quality of the work or the reputation and reliability of the builder is questionable then reducing prices is unlikely to improve sales.

It is conceivable that BBC has a good reputation for extension of properties but not for building conversion, but more likely that a poor reputation would affect all products. Equally poor service levels or lack of flexibility in meeting customer needs may be causing the poor sales performance.

These too will not be 'corrected' by merely reducing prices.

- It is also possible that the way salesmen discuss or sell their products for the building conversion is not adequate so that in some way customers are being put off placing the work with BBC.
- BBC is in competition and it perhaps needs to reflect this in its pricing more (by 'going rate pricing') and not seek to merely add a mark-up to its costs.
- BBC could try to penetrate the market by pricing some jobs cheaply to gain a foothold. Once this has been done the completed extension of properties or building conversion could be used to market the business to new customers.
- The price of the extension of properties would also need consideration. There is no indication of problems in the selling of the extension of properties and so BBC could consider pushing up their prices by around 2% in line with the cost increase. This does not seem that significant and so might not lose a significant number of sales.
- The reliability and reputation of a builder is probably more important than the price that they charge for a job and so it is possible that the success rate on job quotes may not be that price sensitive.

c) Analyse the current board operations at BBC and Chris's suggestions for an independent Chair.

As Chris is stepping down from the combined Chair/CEO role, this leaves a significant gap in the responsibilities for the business. There are a few risks and issues here:

- It appears that there has been inadequate succession planning in the past: No nominated CEO to succeed Chris. It appears no independent directors are to be part of succession planning to succeed Chris as Chair.
- The Finance Director is relatively new (unlikely to have built support as he is looking for radical change of behaviour from managing directors) so an unlikely caretaker CEO.
- There are no independent directors to represent the objective view of what is good for the business and provide a balance to family (collective and individual) interests

- Each managing director (family members) has been running an independent division and so it is unlikely these businesses have been operating together for the whole organisation.

- The independent Chair suggestion has merit as there is no clear succession. Any appointee will want to understand their duties, who is CEO and the other independent directors. They will also wish to understand the role Chris intends to play after retirement (assuming he is still a majority shareholder) and how this might impact their scope of control.

- Chris has had apparent control of the business for many years and this may have reduced the possibility of independent (but supportive) challenge from other shareholders and directors (members of the family).

- A Senior Independent Director would normally be a useful channel of communication for shareholders (other family members) who are not directors, but this may cause some difficulties with that person's independence (because of the family relationships of which they will not be part). The status of those family shareholders should be established (that they participate in significant business decisions at family gatherings may indicate a de facto two-tier board as an unintended consequence).

- Balancing "family business" expectations against need for diversity , independent views at board level and the risk of nepotism will require a significant transformation of the management team to bring in other diversity characteristics. A public listing at this stage would be difficult: there are too many gaps between expected practice and the current state of the business, not least informal board meetings and lack of independent directors.

END OF MARKING GUIDE AND MODEL ANSWERS