CERTIFIED ACCOUNTING TECHNICIAN
STAGE 2 EXAMINATIONS
S2.2: MANAGING COST AND CASHFLOWS
THURSDAY: 28 JULY 2022
MARKING GUIDE AND MODEL ANSWERS

Marking Guide

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16.	A	41.	A
17.	D	42.	D
18.	C	43.	C
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20.	B	45.	C
21.	D	46.	A
22.	B	47.	B
23.	D	48.	D
24.	D	49.	B
25.	D	50.	A

2 Marks for each correct answer 2

Total marks for this section 100

Model answers

1. **The correct answer is C**, the closing inventory value can be near to a valuation based on the cost replacing
the inventory.

Inventories to be issued at a price which is close to current market value, cannot be applied to FIFO method when there a high rate of inflation. Fluctuations are smoothed out while using average method not in case of FIFO.

2. **The correct answer is A**, as the volume of production increases the fixed cost per unit reduces, because fixed costs remain the same and not affected by changes in production level.

3. **The correct answer is D,** the Economic Order Quantity is the order quantity which minimizes the purchase, ordering, holding and stock out costs. The two other expressions are included in this extended definition, as all are sub sets of overall cost of inventory.

4. **The correct answer is C** ABC Ltd.'s efficiency ratio is 100%

Calculated as = Expected hours to make actual output (Actual output*Budgeted hours per unit) / Actual hours taken*100

Expected hours to make actual output = 25,000 units*5hours= 125,000 Hours

Actual hours taken = 125,000 hours

Efficiency ratio = 125,000 / 125,000*100 =100%

The answers for A, B and D were calculated by: dividing an incorrect expected hours (20,000*5 = 100,000) by actual labour hours (125,000 hours), dividing the budgeted hours (125,000 hours) by an incorrect expected hours (100,000 hours) and dividing 125,000 hours by 120,000 hours respectively

5. **The correct answer is B,** the minimum stock level is 1,050 units.

Calculated as: the re-order level (Maximum consumption*Maximum re-order period) – average usage (Maximum consumption + Minimum consumption / 2) *average re-order period (Maximum re-order period + Minimum re-order period / 2).

Re-order level = 450 units*5 weeks= 2,250 units

Average usage= (450 + 150) / 2 = 300 units

Average re-order period = (5 + 3) / 2 = 4 weeks

Minimum stock level = 2,250 - (300*4) = 2,250-1200 = 1,050 units

The business will not allow the stock to go below 1,050 units, to avoid the risk of stock outs.

A is the re-order level (2,250 units). C is the addition of reorder quantity, maximum consumption, normal consumption and minimum consumption (1800+450+300+150 = 3,600 units). D is the addition of re-order level and normal consumption (2,250 + 300 = 2,950 units)

6. **The correct answer is D,** pre-determined overhead absorption rates are based on forecasts (estimates)

If actual overheads are greater than absorbed overheads, then overheads are under absorbed. On the other hand, if actual overheads are less than absorbed overheads, the overheads are over absorbed.

This under/over absorption is an inevitable feature of absorption costing using predetermined absorption rates because the rate is predetermined from estimates of overhead cost and the expected volume of activity. It is quite likely, therefore, that one or both of the estimates will not agree with what actually occurs. When this happens, under or over absorption of overheads will arise.

7. **The correct answer is A,** the total overheads in the Making department after re-apportionment are FRW 550,400

	Production departments		Service departments	
	Making department (FRW)	Finishing department (FRW)	Maintenance (FRW)	Stores (FRW)
Cost	385,000	238,000	112,000	159,000
Apportion Maintenance service (250:150)	70,000	42,000	(112,000)	-
	455,000	280,000	-	159,000
Apportion stores service (120,000:80,000)	95,400	63,600	-	(159,000)
TOTAL	550,400	343,600	-	-

B. FRW 385,000 is the total overhead costs for making department before apportionment. C. FRW 238,000 is the total overhead costs for finishing department before apportionment. D. FRW 343,600 is the total overhead costs for finishing department after re-apportionment

8. **The correct answer is C**, the overheads absorbed by departments A&B are FRW 6,000 for A and FRW 4,000 for B respectively

Calculated as:

Factory overheads = 10,000

Total machine hours = 120 + 80 = 200 Machine hours

Overhead absorption rate (OAR) = Factory overheads / Total machine hours

OAR = 10,000 / 200 = 50 per machine hour.

Overheads absorbed by department A = 120 hours*50 = FRW **6,000**

Overheads absorbed by department B = 80 hours*50 = FRW **4,000**

The other answers are not correct because the overhead absorption rate was taken to be 45 per machine hour.

9. **The correct answer is** D, the total cost for the job and the cost per unit will be FRW 295,500 and FRW 5,910 respectively

	FRW	**FRW**
Direct material-Department A	50,000	
Direct material-Department B	150,000	200,000
Direct labour cost-Department A	48,000	
Direct labour cost-Department B	40,000	88,000
PRIME COST		288,000
Factory overheads-Department A (300*15)	4,500	
Factory overheads-Department B (300*10)	3,000	7,500
TOTAL COST		295,500
Cost per unit (295,500 ÷ 50 units)		5,910

(i) was calculated by considering prime costs dividing by 50, (ii) was the total cost omitted the factory overheads for department A and the result was divided by 50

10. **The correct answer is A**, fixed production costs are treated as period costs and are written off as they are incurred.

Marginal costing as a cost accounting system is significantly different from absorption costing. It is an alternative method of accounting for costs and profit. Which rejects the principles of absorbing fixed overheads into unit's costs. The other two are arguments in favour of absorption costing.

11. **The correct answer is C**, absorption costing is a method of determining a product cost that includes a proportion of all production overheads incurred in the making of the product and possibly a proportion of other overheads such us administration and selling overheads.

The three stages involved in the accounting for overheads in absorption costing are allocation of costs to cost centres, apportionment of shared costs between cost centres, and absorption of costs into cost units.

12. **The correct answer is D**, the amount of pay that the worker will receive is FRW 412,500

Calculated as:

Pay based on piece rate = 550 units * 5 mins *FRW 150 = FRW 412,500

80% pay based on hourly rate = 80% * 45 hours * FRW 11,000 = FRW 396,000

B was obtained as follows: 11,000 * 0.8 * 150 = FRW 1,320,000.

C was calculated as 150 * 550 * 45 = FRW 3,712,500

13. **The correct answer is A**, longer inventory holding periods will result in more capital tied up in inventory and the business taking longer to convert inventory into cash.

14. **The correct answer is C**, the amount of inventory (in units) that the company should order (rounded to nearest whole number) is: FRW 1470 units.

Calculated Economic order Quantity (EOQ) as: Square Root (2CoD / CH) Co: Cost of ordering = FRW 1500

D: Annual demand = Monthly demand of 600 units *12 = 7,200 units

CH: Cost of holding one unit of inventory for one year = 1% of purchase price (FRW 1,000) = 10

EOQ = Square Root ((2 * 1500 * 7,200) / 10) = 1,469.69385 rounded to nearest whole number = 1,470 units

Other answers on A, B, and D were obtained by using the monthly demand of 600 units rather than annual, square roots the numerator before dividing by the denominator, and use the monthly demand rather than annual and square roots the numerator before dividing by the denominator.

15. **The correct answer is A**, job costing is characterized by customer driven, and the complete production is possible within a single accounting period as management therefore decide in advance how many units of each type, size, colour, quality and so on will be produced during the coming period. In job costing on the other hand, production is usually carried out in accordance with the special requirements of each customer. Homogeneous products cannot be possible as the work relating to a job usually carried out within a factory or workshop and moves through processes and operations as a continuously identifiable unit.

16. **The correct answer is A**, for service costing method, indirect costs tend to represent a higher proportion of total cost compared with product costing, and the cost of direct materials consumed will be relatively small compared to other costs.

17. **The correct answer is D**, number of units produced compared to last year is a non-financial comparison while comparison made in financial terms (Costs, Revenues, and profits) are financial comparisons.

18. **The correct answer is C**, the flexed budget for direct labour to the nearest FRW'000 is 7,500 with 1,000 favourable variances

Flexed budget for direct labour to the nearest FRW'000 calculated as:

	Actual	**Budget**	**Variance**
Production and sales (units)	5,000	5,000	
	FRW'000	FRW'000	
Direct labour (Workings)	6,500	7,500	1,000 Favourable

Workings

Cost per unit = 6,000,000 / 4,000 = 1,500

Therefore 5,000 units = 5,000 * 1500 = 7,500,000

19. **The correct answer is D**, the difference between planned and actual results in the organization having more money than the forecast. A is an adverse variance and other two other expressions are related to the activity (volume) variances.

20. **The correct answer is B**, the labour activity variance is FRW 20,000,000 (Adverse)

Calculated as:

Budgeted hours	18,000
Actual hours used	20,000
	2,000 Adverse
Budgeted cost per hour (FRW)	*10,000
Labour activity variance	20,000,000 (Adverse)

21. **The correct answer is D**, all three statements are true. The break-even point is the level where all costs are covered by sales revenue but no profit is made, therefore if the activity level (sales revenue) falls below the break-even point, losses will be made, hence to calculate the breakeven point in units is found by dividing the fixed costs by variable cost per unit.

22. **The correct answer is B**, 18,750 units are required to be sold in order to achieve a target profit of FRW 250,000,000

Calculated as:

Sales required (in units) = Fixed costs + Target profit / contribution per unit

Contribution per unit = Selling price- Variable cost

= 1,600 – 1,200 = 40,000

Sales required (in units) = 500,000,000 + 250,000,000 / 40,000

= 750,000,000 / 40,000

= 18,750 units

Verified as:	**FRW**
Sales revenue (18,750 units* FRW 160,000)	3,000,000,000
Variable costs (18,750 units* FRW 120,000)	2,250,000,000
Contribution	750,000,000
Fixed costs	500,000,000
Profit	**250,000,000**

Other answers on A, C, and D were obtained by using the selling price as denominator rather than the contribution per unit, Fixed costs over variable cost, and by use of variable cost as denominator rather than the contribution per unit.

23. **The correct answer is D**, None of the above. All expressions are relating to the Profit-Volume (PV) Chart not the shown by the break-even chart.

24. **The correct answer is D**, Statement (i) is incorrect but the statement (ii) is correct

If a business has more than on product, and only one limiting factor, the technique to use in order to maximize contribution is to determine the contribution per unit of the scarce resource and concentrate upon the production of the product with the highest contribution per limiting factor unit. The other strategy cannot work in the situation of a limiting factor.

25. **The correct answer is D**, None of the above. The payback period is a method which is easily understood by management, doesn't take into account the time value of money and that doesn't consider the cash flows occurrence over the period.

26. **The correct answer is B**, if money is received now then we can spend it now rather than having to wait for year. The other two statements in (i) and (iii) relate to risk and investment preferences.

27. **The correct answer is D**, FRW 15,700,000

Calculated as:

Year ending	Cash flows (FRW)	Discounting factor@ 10%	Present value (FRW)
Year 0	(120,000,000)	1.000	(120,000,000)
1	40,000,000	0.909	36,360,000
2	50,000,000	0.826	41,300,000
3	50,000,000	0.751	37,550,000
4	30,000,000	0.683	20,490,000
		Net Present value	**15,700,000**

Workings

Present value = Cash flow * Discounting factor

Net present value as the sum of cash inflows- cash outflow (investment at year 0)

A. There was an error where the numbers were interchanged from the correct answer (FRW 13,700,000 instead of FRW 15,700,000). B. The investment was taken to be FRW 110,000. C. There was an error where the numbers were interchanged from the correct answer (FRW 17,500,000 instead of FRW 15,700,000).

28. **The correct answer is B**, wood is a direct cost for a furniture maker

The other costs on A, C, and D, are indirect costs to the cost of production.

29. **The correct answer is C**, (i) A cheque made out for FRW 2,500,000 for the payment of rent, (ii) Credit card sales of FRW 1,000,000 are only cash transactions. The remaining two (iii) and (iv) are credit transactions.

30. **The correct answer is D**, Items which relate to the day-to-day running of the business, and Items which are part of the business' working capital, are non-capital items. Items which relate to the long-term running of the business are capital items.

31. **The correct answer is B**, an amount of FRW 285,000,000 has been received from customers during the year.

Calculated as:

Workings

Receipts from customers during the year = 300,000,000 - 15,000,000 = 285,000,000

32. **The correct answer is C**, depreciation should not be included in the cash flow report as it is a non-cash items compared to interest payments, Receipts, and dividend payments which can appear in a cash flow reports as they are cash items.

33. **The correct answer is B**, the multiplicative model would be preferred to an additive model in time series analysis, when the trend is increasing or decreasing over time.

34. **The correct answer is B**, forecasts are made on the assumption that everything continues as in the past, and there must be no unforeseen events.

35. **The correct answer is D**, the total amount of cash receipts from sales end October is FRW 1,108,000

Computed as:

August cash receipts = 420,000*40% = 168,000

SALES' LEDGER			
Debit		**Credit**	
Balance c/d	25,000,000		
Sales per statement of comprehensive income	275,000,000	Receipts from customers during the year (Workings)	285,000,000
		Balance c/f	15,000,000
TOTAL	**300,000,000**	TOTAL	**300,000,000**

September cash receipts = (420,000 * 40%) + (560,000 * 40%)= 168,000 + 224,000 = 392,000

October cash receipts = (420,000 * 20%) + (560,000 * 40%) + (600,000 * 40%)= 84,000 + 224,000 + 240,000 = 548,000

Total receipts = 168,000 + 392,000 + 548,000 = **1,108,000**

The answers in A, B, and C were obtained by not considering sales receipts of the last month of October only, by not following the typical payment pattern and consider the whole amount as received.

36. **The correct answer is B**, the total payments after three months will be FRW 120,000,000

Computed as:

January 2021 = 45,000,000 / 2 = 22,500,000

February 2021 = (45,000,000 / 2) + (48,000,000 / 2) = 22,500,000 + 24,000,000 = 46,500,000

March 2021 = (48,000,000 / 2) + (54,000,000 / 2) = 24,000,000 + 27,000,000 = 51,000,000

Total payments = 22,500,000 + 46,500,000 + 51,000,000 = **120,000,000**

The answers in A, B, and C were obtained by not considering payments of the last month of March 2021 only, by not following the typical payment pattern and consider the whole amount as paid.

37. **The correct answer is C,** 20,540 units of a product Y should be produced next year to meet the plan to sell 20,000 units and agree with the increase in inventory expected of 30%.

Increase in inventory = 1,800 units * 30% = 540 units

Units to be produced = Units to sell + expected increase in inventory= 20,000 units + 540 units = **20,540 units**

A. 1,000 units was used instead of 1,800 units. B. 1,500 units were used instead of 1,800 units. D. There was no change in the inventory (The planned units of 20,000 were taken)

38. **The correct answer is D**, None of the above.

The cost of non-current assets may be possible cause. Inventory levels, overtime working, discounts are causes of variance on the cost of materials and labour not the causes for the variance in the capital expenditure.

39. **The correct answer is A**, the non-current asset actually cost FRW 500,000,000 as payments greater than those budgeted are known as adverse variances.

From the mount budgeted of FRW 450,000,000, that is the payment has been greater than budgeted to the extent of FRW 50,000,000.

New cost = budgeted cost + adverse variance = 450,000,000 + 50,000,000 = 500,000,000

The answers in B, C, and D were obtained by not considering the impact of adverse variance on the budgeted cost.

40. **The correct answer is D**, both statements are correct. A cash deficit may arise if the business has become loss making and is unable to cover its costs, and delaying payments for non-current assets can be an action taken to improve the budget position

41. **The correct answer is A**, the cash operating cycle of the business is 55 days

Computed as:

		Days
Inventory holding period	X	68
Receivables' collection period	X	61
Payables' payment period	(X)	(74)
Cash operating cycle	X	55

Workings

Inventory holding period = Inventory / Cost of sales*365days = 156,300 / 837,200 * 365days = **68 days**

Receivables' collection period = Receivables / Credit sales *365days= 225,000 / 1,350,400 * 365 days = **61 days**

Payables' payment period = Payables / Cost of sales * 365 days= 169,800 / 837,200 * 365 days = **74 days**

B was taken to be inventory holding period. C was taken to be receivable's collection period. D was taken to be payables' payment period

42. **The correct answer is D**, the trade receivables' collection period is 72 days

Computed as:

		Days
Inventory holding period	X	38
Receivables' collection period	X	?
Payables' payment period	(X)	(45)
Cash operating cycle	X	65

Per the formula: Cash operation cycle = Inventory holding period + Receivables' collection period - Payables' payment period. Hence, Receivables' collection period= Cash operation cycle - Inventory holding period + Payables' payment period;

Receivables' collection period = 65 – 38 + 45 = **72 days**

A. Inventory period was considered. B. Trader payables' payment period was considered here. C. 27 days was mistaken to be 72 days.

43.**The correct answer is C**, a Company's current ratio is 2.3 and quick/acid test ratio is 0.98

Computed as:

Current ratio = Current assets / Current liabilities = (156,300 + 225,000 + 10,200) / 169,800 = = 391,500 / 169,800 = 2.30565 rounded to two decimals = 2.31

Quick/acid test ratio = (Current Assets - Inventory) ÷ Current liabilities= (391,500-225,000) / 169,800= 166,500 / 169,800 = 0.98057 rounded to two decimals = 0.98

A. Trade receivables were mistaken to be FRW 222,000. B. 2.13 and 0.89 were mistaken to be 2.31 and 0.98 respectively. D. Cash and cash equivalents was omitted

44. **The correct answer is D**, the most common symptom of overtrading is: Rapid increase in sales. When a company is growing, if it expands its operations too quickly, over trading may occur. The expansion may be profitable but is likely to necessitate increased levels of inventory and trade receivables. If a business expands faster than its existing levels of working capital can sustain, it will place a strain on cash flow and increase the risk of insolvency.

45. **The correct answer is C**, leasing non-current assets rather than outright purchase saves money and may help to reduce the risk of overtrading. The other actions of increasing sales, and giving more credit to customers increase the risk of overtrading rather than to reduce it.

46. **The correct answer is A**, short-term form of finance

One the disadvantage of overdraft is that it is a short-term form of finance, and cannot be used to finance the company in the long run. Its availability as repayment on demand are looked as advantages of this short-term source of finance.

47. **The correct answer is B,** simple interest, the overdraft interest is 0.06575% per day (24%/365= 0.06575%)

For A, 20% was used to calculate interest instead of 24%. In the case of C, 20% was used to calculate interest instead of 24%. 52 weeks was used instead of 365 days for D

48. **The correct answer is D,** certificate of deposit, and Treasury bill. Money markets focus on short term financial instruments. A corporate bond is a long-term source of finance, hence is a capital market instrument. Certificate of deposit is a short-term private sector lending/borrowing. A treasury bill is a short-term government borrowing.

49. **The correct answer is B**, a cost that can be directly traced to a cost unit. Direct costs include direct materials that are incorporated into the finished product, direct labour that includes wages paid to those workers who make products in a manufacturing business or perform the service in a service business, and direct expenses that are identifiable with each unit of production.

50. **The correct answer is A**, variable costs are conventionally deemed to increase or decrease in direct proportion to changes in output.

Descriptions B and D imply a changing in unit rate, which does not comply with convention. Description C relates to a fixed cost.

END OF MARKING GUIDE AND MODEL ANSWER