



**CERTIFIED ACCOUNTING TECHNICIAN
STAGE 1 EXAMINATIONS**

S1.2: PRINCIPLES OF COSTING

DATE: MONDAY, 29 NOVEMBER 2021

MODEL ANSWER AND MARKING GUIDE

MARKING GUIDE

QN	ANSWER	QN	ANSWER
1	C	26	A
2	C	27	B
3	D	28	D
4	B	29	A
5	B	30	C
6	C	31	A
7	B	32	D
8	A	33	C
9	A	34	B
10	D	35	A
11	C	36	A
12	C	37	B
13	B	38	B
14	B	39	A
15	B	40	D
16	A	41	A
17	B	42	A
18	A	43	C
19	D	44	C
20	B	45	B
21	A	46	C
22	B	47	C
23	C	48	A
24	A	49	B
25	C	50	B

2 Marks for each correct answer

2

Total marks

100

Detailed answers

1 Option C

Basic objective of cost accounting is cost ascertainment. It involves the ascertainment of the cost of every job, order, product, process or service.

A. **Tax compliance:** cost accounting does not deal with tax matters it only provide data that related to the cost incurred

B. **Financial audit:** this is related to financial accounting not cost accounting

D. **Profitability analysis:** cost will provide data related to production cost and other analysis of profitability will rest with financial accountant

2 Option C

A dividend is a distribution of profits by a company to its shareholders. When a company earns a profit or surplus, it can pay a proportion of the profit as a dividend to shareholders

A. A partnership is not a separate legal entity. Partners generally have unlimited liability.

B. A drawing in accounting terms includes any money that is taken from the business account for personal use

3 Option D

Capital expenditures are long-term investments, meaning the assets purchased have a useful life of one year or more like purchase of land

Other options are incorrect

A Purchase of goods for resale this is a Revenue expenditure

B Advertising expenses this is a Revenue expenditure

C Day to day expenses incurred in conducting the business this is a Revenue expenditure

4 Option B

Financial accounting gives financial information to the external users which includes banks, government etc.

Other options are incorrect

A. Managerial accounting involves the presentation of financial information for internal purposes to be used by management in making key business decisions

C. the recording of all the costs incurred in a business in a way that can be used to improve its management for allowing management to make decision on the products

5 Option B

A direct cost is a cost that can be directly tied to the production of specific goods or services

Other options are incorrect

- A. Variable costs are costs that change as the quantity of the good or service that a business produces changes. Variable costs are the sum of marginal costs over all units produced
- C. Indirect costs are those costs not readily identified with a specific project or organizational activity but incurred for the joint benefit of both projects and other activities
- D. A semi-variable cost, also known as a semi-fixed cost or a mixed cost, is **a cost** composed of a mixture of both fixed and variable components. Costs are fixed for a set level of production or consumption and become variable after this production level is exceeded.

6 Option C

Highest activity minus lowest activity $12,000 - 5,000 = 7,000$ units

$$7,800,000 - 5,000,000 = \text{FRW } 2,800,000$$

Variable cost per unit $2,800,000 / 7,000 = \text{FRW } 400$ per unit

Other options are incorrect like,

A. $5,000,000 / 5,000 = \text{FRW } 1,000$ per unit

B. $7,800,000 / 12,000 = \text{FRW } 650$ per unit

D. $7,800,000 + 5,000,000 = \text{FRW } 12,800,000$

$12,000 + 5,000 = 17,000$ units

$12,800,000 / 17,000 = \text{FRW } 753$ per unit

7 Option B

Fixed cost is calculated as $\text{TC} - \text{VC} = 5,000,000 - (400 * 5,000) = \text{FRW } 3,000,000$

Other options are incorrect

A. $7,800,000 - (1,000 * 5,000) = \text{FRW } 2,800,000$

C. $7,800,000 - (650 * 5,000) = \text{FRW } 4,550,000$

D. $7,800,000 + 5,000,000 = \text{FRW } 12,800,000$

8 Option A

$(8,000 * 400) + 3,000,000 = \text{FRW } 6,200,000$

Other options are incorrect like,

B. $1,000 * 8,000 + 2,800,000 = \text{FRW } 10,800,000$

C. $(650 * 8,000) + 4,550,000 = \text{FRW } 9,750,000$

D. $(753 * 8,000) + 12,800,000 = \text{FRW } 18,824,000$

9 Option A

Cost behavior is an indicator of how a cost will change in total when there is a change in some activity.

Other options are incorrect like,

B. The cost trend analysis is used to anticipate the total costs of a project at several points of time during the project

C. cost Centre a part of an organization to which costs may be charged for accounting purposes.
D. Cost accumulation involves the use of a formal cost accounting system to collect cost information. By collecting and analyzing cost information, management can make more informed decisions about the operations of a business

10. Option D

Variable Costs that vary with the level of output or production level
other options are incorrect like,

- A. fixed cost is a cost that does not change with an increase or decrease in the amount of goods or services produced.
- B. A mixed cost is an expense that has attributes of both fixed and variable costs
- C. Conversion costs are the costs of direct labor and manufacturing overhead used to convert raw materials into a finished product

11. Option C

Total cost $20,000 + (4 \times 15,000) = 80,000$

Other options are incorrect like,

- A. Only has considered fixed cost of FRW 20,000
- B. Only considered variable costs $15,000 \times 4 = 60,000$
- C. Has considered fixed cost but on variable cost forgotten to multiply with variable cost per units $20,000 + 15,000 = 35,000$

12. Option C

The cost of shipping finished products to customers is the only cost which will not be part of the product cost.

Other options are incorrect like,

- A. Depreciation on the plant installed in the factory this form the part of product cost
- B. The electricity cost of the office of factory foreman it forms the part of product cost
- D. The cost of fuel used in the factory it forms the part of product cost

13. Option B

Direct materials cost + Direct labor cost

Prime costs are a firm's expenses directly related to the materials and labor used in production.

Other options are not correct like,

- A. Manufacturing overhead cost + Direct labor cost would not have included Manufacturing overhead cost
- C. Direct materials cost + Manufacturing overhead cost would not have included Manufacturing overhead cost

D. Direct materials cost + Direct labor cost + Manufacturing overhead cost would not have included Manufacturing overhead cost

14. Option B

opportunity cost is the benefit forgone when one alternative is selected rather than another
Other options are not correct like,

A. sunk cost refers to costs that have already happened and cannot be recovered.

C. Differential cost refers to the difference between the cost of two alternative decisions. The cost occurs when a business faces several similar options, and a choice must be made by picking one option and dropping the other

D. indirect cost is any cost not directly identified with a single, final cost of product

15. Option B

Profit center is A business segment whose manager has control over both cost and revenue but not investment funds

Other options are not correct because they do not provide the true meaning of Profit center like,

A. A business segment whose manager has control over costs but not over revenue or investment funds, has stated that no control over revenue yet it is

C. A business segment whose manager has control over cost, revenue and investments, profit center does not have control over investments

D. All the above this is incorrect because we have seen that point B is the only correct

16. Option A

Cost Unit is defined as Unit of quantity of product, service, or time in relation to which costs may be ascertained or expressed. A cost unit refers to the unit of quantity of product, service, or time (or combination of these) in relation to which costs may be ascertained or expressed.

B. this was wrongly given and included cost control

C. Cost unit is not a cost center not a profit center

D. Cost unit is not related with the return on investment

17. Option B

Production cost per unit, **unit** product cost is the total cost of a production run, divided by the number of units produced

A. prime cost only considers direct cost which are not only the cost of production it excludes other variable overheads which forms the part of production cost.

C. Production margin per unit excludes fixed cost of production

D. Total cost per unit includes non-manufacturing overheads

18. Option A

in an inflationary environment, the current Cost of good sold would be higher under **LIFO** because the new inventory would be more expensive. As a result, the company would record lower profits or net income for the period.

Other options are incorrect like,

- B. FIFO First in First out will give the high profit compared to LIFO since it uses the earliest price before inflation
- C. Replacement cost Replacement **costs** are the cash outlay that the business has to pay to replace an old asset at the existing market price this uses the existing price so it cannot be affected by inflation
- D. Simple Average as the name suggest this will use average prices so this instead would give highest profit since it will use lower price that was not affected by inflation

19. Option D

cost driver is the unit of an activity that causes the change in activity's cost.

Other options are incorrect like,

- A. Driver rate is not related to cost and accounting of cost incurred
- B. Cost pools is an accounting term that refers to groups of accounts serving to express the cost of goods and service allocable within a business or manufacturing organization
- C. and all of the above is of course wrong because only one point was correct

20. Option B

Sales - (Opening stock +purchase –closing stock) =Gross profit

FRW 148,000-(FRW34,000+ FRW 100,000-X) = FRW 40,000

The value of closing stock FRW26,000

Other options are incorrect like,

- A. Has considered $148,000 - 34,000 - 40,000 = \text{FRW } 74,000$
- C. has taken into account $148,000 - 100,000 = \text{FRW } 48,000$
- D. has considered $148,000 - 34,000 = \text{FRW } 114,000$

21. Option A

Reorder level= Maximum consumption \times Maximum reorder period = $750 \times 6 = 4500$ Liters

Other options are incorrect like,

- B $750 \times 4 = 3000$ liters which is incorrect because it has used Minimum reorder period
- C $250 \times 6 = 1500$ liters it has used Minimum consumption which is wrong
- D $250 \times 4 = 1000$ liters it has used minimum consumption and Minimum reorder period which is wrong

22. Option B

Minimum level = Reorder level – (Normal consumption × Normal reorder period) = 4500 – (500 × 5) = 2000 liters

Other options are incorrect like,

A. $4500 - (500 \times 6) = 1500$ liters it has used maximum reorder period

C. $4500 - (500 \times 4) = 2500$ liters it has used minimum reorder period

D. $4500 - (300 \times 5) = 3000$ liters it has used reorder quantity instead of normal usage

23. Option C

Maximum level = Reorder level + Reorder quantity – (Minimum consumption × Minimum reorder period) = 4500 + 3000 – (250 × 4) = 6500 liters

Other options are incorrect like,

A. $3000 + 3000 - (250 \times 4) = 5000$ liters has used wrong calculated reorder level

B. $1500 + 3000 - (250 \times 4) = 3500$ liters has used wrong calculated reorder level

D. $4500 + 3000 - (250 \times 6) = 6000$ liters has used wrongly maximum reorder period

24. Answer: Option A

Descriptions	Computation	FRW
Material costs	3250×600	1,950,000
Labour costs	4000×500	2,000,000
Overheads		700,000
Total Costs		4,650,000
Total Production		2500
Unit cost		1,860

Other options are incorrect like,

B. Has considered material cost and labor cost $(1,950,000 + 2,000,000) / 2500 = \text{FRW}1580$ per unit

C. Has only considered material cost as full cost $1,950,000 / 2500 = \text{FRW} 780$ per unit

D. Has only considered labour cost $2,000,000 / 2500 = \text{FRW}800$

25. Option C

Date	Receipts			Issues			Balance		
1-Jun	2,000	450	900,000				2,000	450	900,000
25-Jun	1,500	400	600,000				2,000	450	900,000
							1,500	400	600,000
							3,500		1,500,000
5-Jul				1,500	400	600,000			
				300	450	135,000	1,700	450	765,000
1-Aug	700	380	266,000			-	1,700	450	765,000
							700	380	266,000
							2,400		1,031,000
25-Sep				700	380	266,000			
				500	450	225,000	1,200	450	540,000
20-Nov	500	370	185,000			-	1,200	450	540,000
							500	370	185,000
							1,700		725,000
25-Dec				500	370	185,000			
				100	450	45,000	1,100	450	495,000

The value of closing stock is $1100\text{kgs} \times 450 = \text{FRW} 495,000$

Other options are wrong like,

A. Has considered 1100kgs but valued at wrong price of 500 = FRW 550,000

B. Has considered correct price per unit but wrong quantity $2000 \times 450 = \text{FRW} 900,000$

D. has not considered the LIFO method

$(600 \times 380) + (500 \times 370) = \text{FRW} 413,000$

26. Option A

The value of cost of goods sold = Opening stock + purchase - closing stock or summation of issues at purchase cost

$$900,000 + 600,000 + 266,000 + 185,000 - 495,000 = \text{FRW} 1,456,000$$

$$\text{or } 600,000 + 135,000 + 266,000 + 185,000 = \text{FRW} 1,456,000$$

Other options are incorrect like,

$$\text{B. } 900,000 + 1,051,000 - 550,000 = \text{FRW} 1,401,000 \text{ used wrong figure of closing stock}$$

$$\text{C. } 900,000 + 1,051,000 - 900,000 = \text{FRW} 1,051,000 \text{ used wrong figure of closing stock}$$

$$\text{D. } 900,000 + 1,051,000 - 413,000 = \text{FRW} 1,538,000 \text{ used wrong figure of closing stock}$$

27. Option B

Gross profit = Total sales - cost of goods sold

$$\text{Total Sales } (1800 \times 460) + (1200 \times 440) + (600 \times 430) = 828,000 + 528,000 + 258,000 = \text{FRW } 1,614,000$$

$$\text{cost of goods sold} \quad \text{FRW} 1,456,000$$

$$\text{Gross profit} \quad \text{FRW } 158,000$$

Other options are incorrect

$$\text{A. } 1,614,000 - 1,401,000 = \text{FRW} 213,000 \text{ used wrong figure of cost of goods as above answer 26}$$

$$\text{C. } 1,614,000 - 1,051,000 = \text{FRW} 563,000 \text{ used wrong figure of cost of goods sold as see 26}$$

$$\text{D. } 1,614,000 - 1,538,000 = \text{FRW } 76,000 \text{ used wrong figure of cost of goods sold as see 26}$$

28. Option D

Prioritizing employee happiness. This shows what can be done to reduce labour turnover

Other options are wrong because they are the one to promote labour turnover

A. Low wages, low bonus, and absence of monetary incentives

B. Hard nature of job, inadequate safeguards against accidents

C. ill-treatment and harassment by supervisors.

29. Option A

The net salary of Mukiza

No overtime worked

$$\text{Gross salary} = 180 \times 1000 = \text{FRW} 180,000$$

$$\text{PAYE: FRW} 18,000$$

$$\text{Net salary} = 180,000 - 18,000 - 50,000 = \text{FRW } 112,000$$

Other Options are incorrect like,

$$\text{B. Gross salary} = 180 \times 1000 = \text{FRW} 180,000 \text{ has forgotten to deduct PAYE and advances paid}$$

$$\text{C. } 180,000 - 50,000 = \text{FRW} 130,000 \text{ has forgotten to deduct PAYE}$$

$$\text{D. } 180,000 - 18,000 = \text{FRW} 162,000 \text{ has forgotten to deduct advances}$$

30. Option C

The net salary of MUKAMANA

Basic pay: $180 \times 1400 = \text{FRW } 252,000$

Overtime premium: $20 \times 2100 = \text{FRW } 42,000$

Gross salary = $\text{FRW } 294,000$

PAYE = $29,400$

Net salary: $294,000 - 29,400 - 70,000 = \text{FRW } 194,600$

Other options are incorrect like,

A. Gross salary $200 \times 1400 = 280,000$

Net salary $280,000 - 28,000 - 70,000 = \text{FRW } 182,000$

B. Gross salary

Basic pay: $180 \times 1400 = \text{FRW } 252,000$

Overtime premium: $20 \times 2100 = \text{FRW } 42,000$

Gross salary = $\text{FRW } 294,000$

Net salary: $294,000 - 29,400 = \text{FRW } 264,600$ has forgotten to deduct money paid as advance

D. The net salary of MUKAMANA

Basic pay: $180 \times 1400 = \text{FRW } 252,000$

Overtime premium: $20 \times 2100 = \text{FRW } 42,000$

Gross salary = $\text{FRW } 294,000$

Net salary is $\text{FRW } 294,000$ has forgotten to deduct PAYE and Advance received by the employee

31. Answer: Option A

The amount paid to RUKUNDO

$50 \times 900 = \text{FRW } 45,000$

B. $50 \times 1000 = \text{FRW } 50,000$ has not considered that RUKUNDO only produced 900 bricks

C. $60 \times 900 = \text{FRW } 54,000$ has used wrong pay rate

D. $70 \times 900 = \text{FRW } 63,000$ has used wrong pay rate

32. Answer: Option D

The amount paid to MUTIMA

$1000 \times 50 = \text{FRW } 50,000$

$200 \times 60 = \text{FRW } 12,000$

TOTAL: $\text{FRW } 62,000$

Other options are wrong like,

A. $1200 \times 50 = \text{FRW } 60,000$ has not considered pay rate range

B. $1200 \times 60 = \text{FRW } 72,000$ has not considered pay rate range

C. $1000 \times 50 = \text{FRW } 50,000$ has not considered additional 200 bricks

33. Option C

The amount paid to MANZI

$$1000 \times 50 = \text{FRW } 50,000$$

$$500 \times 60 = \text{FRW } 30,000$$

$$200 \times 70 = \text{FRW } 14,000$$

$$\text{TOTAL} = \text{FRW } 94,000$$

Other options are wrong like,

- A. $1700 \times 50 = \text{FRW } 85,000$ has not considered pay rate range
- B. $1700 \times 60 = \text{FRW } 102,000$ has not considered pay rate range
- C. Correct answer
- D. $1700 \times 70 = \text{FRW } 119,000$ has not considered pay rate range

34. Option B

Total number of hours worked by MULINDWA

$$200 \text{ units} \times 3 = 600 / 60 = 10 \text{ hours}$$

Other options are incorrect like,

- A. 8 hours has considered that he worked only hours allowed per day
- C. 24 hours has considered that the employee worked the whole day
- D. 2 hours has considered difference between hours worked and allowed $10 - 8 = 2 \text{ hours}$

35. Option A

Basic pay = standard time x pay rate

$$8 \text{ hours} \times 5000 = \text{FRW } 40,000$$

Other options are wrong like,

- B. $10 \text{ hours} \times 5000 = \text{FRW } 50,000$ has taken all time that would be used to produce 200 units
- C. $24 \text{ hours} \times 5000 = \text{FRW } 120,000$ has considered all day
- D. $18 \text{ hours} \times 5000 = \text{FRW } 90,000$ has considered total hours of taken and allowed

36. Option A

Gross pay = basic pay + bonus

Bonus = $\frac{1}{2}$ (Time saved x Wage rate)

$$(2 \times 5000) / 2 = \text{FRW } 5000$$

Gross pay = $\text{FRW } 40,000 + 5000 = \text{FRW } 45,000$ see basic pay calculated above

Other options are incorrect like,

- B. $\text{FRW } 40,000$ has considered that no bonus allowed to him
- C. $50,000 + 5000 = \text{FRW } 55,000$ has used wrongly calculated basic pay see answer 35
- D. $90,000 + 5000 = \text{FRW } 95,000$ has used wrongly calculated basic pay see answer 35

37. Option B

The relevant range refers to a specific activity level that is bounded by a minimum and maximum amount

Other options are incorrect like,

A. Margin of Safety is the difference between your breakeven point and actual sales that have been made.

C. is the selling price per unit minus the variable cost per unit. "Contribution" represents the portion of sales revenue that is not consumed by variable costs

D. target net income is the profit goal you set

38. Option B

Cost allocation is the process of identifying, aggregating, and assigning costs to cost objects

Other options are incorrect like

A. Apportionment of cost refers to the distribution of various overhead items, in proportion, to the department

C. Absorption costing is a managerial accounting method for capturing all costs associated in the manufacture of a particular product.

D. Machine hour rate is obtained by dividing the total running expenses of a machine during a particular period by the number of hours the machine is estimated and is a cost driver rate

39 Option A.

All Indirect costs, Overhead is those costs required to run a business, but which cannot be directly attributed to any specific business activity, product

A. direct costs are expenses that directly go into producing goods or providing services

B. only Factory indirect costs this is not correct because all indirect cost are not only meant to be for factory

C. Only indirect expenses are not only meant to be overheads

40. Option D a worker's wage of FRW1500 per hour

A. monthly rent of FRW10,000,000 contractually specified in a one-year lease this is a fixed cost

B. an insurance premium of FRW5,000,000 per year, paid last month this is fixed cost

C. an attorney's retainer of FRW5,000,000 per year

41. Option A

Current asset is cash and other assets that are expected to be converted to cash within a year according to this and IAS2 Inventory of goods will always fall under current asset

- B. inventory is not a liability
- C. is convertible into cash within one year so it cannot be a long term asset
- D. inventory is not a liability at All

42. Option A

Total sales value = $1,000 \times 200 = \text{FRW} 200,000$

B. $200 \times 400 = \text{FRW} 80,000$ this has erroneously taken opening stock as the quantity to be sold

C. $600 \times 200 = \text{FRW} 120,000$ this has erroneously taken closing stock as the quantity to be sold

D. $1000 \times 200 \times 0.5 = \text{FRW} 100,000$ Has erroneously included 0.5 which is the number of Mango to produce 1 bottle

43. Option C

The production required is estimated sales + closing stock - opening stock

$1000 + 600 - 400 = 1200$ bottles

Other options are incorrect like

A. $1000 + 400 - 600 = 800$ bottles added opening instead of deducting it

B. 1000 bottles has imagined that only quantity to be sold will be produced

D. $1000 + 400 = 1400$ bottles has forgotten to include quantity of opening stock

44. Option C

Total mangoes needed to produce 1200 bottles

$1200 \times 0.5 = 600$ kgs

A. $800 \times 0.5 = 400$ kgs has considered wrong quantity of production see 43

B. $1000 \times 0.5 = 500$ kgs has considered wrong quantity of production see 43

D. $1400 \times 0.5 = 700$ kgs has considered wrong quantity of production see 43

45. Option B

A fixed budget will be set for a specified level of activity, and it will not be changed as the actual activity level changes to reflect the actual level of activity that is achieved.

Other options are incorrect like,

A. A budget that ignores inflation it is not the matter that varies a budget

C. A budget that itemizes the fixed costs of a department, not only itemizing fixed cost will give it power to be fixed budget other factors has to be taken into account

D. A budget that never changes to be fixed does not mean that it will never change

It is set for a specified level of activity

46. Option C

The production require is estimated sales +closing stock-opening stock

$$2600+1800-1400=3000 \text{ Cakes}$$

Other options are incorrect,

A. $2600+1400-1800=2200$ cakes has wrongly added opening and deducted closing

B. 2600 cakes has considered that they will only produce quantity required to sell

D. $2600-1400=1200$ cakes has only considered that production will equal sales less stock available

47. Option C Expected Standard Standards that helps in controlling I what was planned was achieved

A. **Attainable standard:** these are practical standards, which are tight but attainable. They can be attained through reasonable, though highly efficient, efforts by an average worker at a task.

B. Basic standard: These are long-term standards that would remain unchanged over the years

D. These are standards, which can be achieved under the best circumstances. They represent perfect performance

48. Option A

Material price variance = $AQ (S.P - AP)$ or $(AP \times AQ) - (SP \times AQ)$

$$165,000(225-160) = \text{FRW}1,072,500 \text{ (F)} \text{ or } 2\,640\,000 - (225 \times 16\,500) = \text{FRW}1\,072\,500 \text{ (F)}$$

Other options are incorrect,

$$\text{B. } (A.P \times A.Q) - (S.P \times A.Q)$$

$2\,640\,000 - (225 \times 9000) = \text{FRW}615,000$ they have wrongly used quantity of product instead of material

$$\text{C. } 2\,640\,000 - (225 \times 27,000) = \text{FRW}3,435,000 \text{ F}$$

$$\text{D. } 2\,640\,000 - (225 \times 16\,500) = \text{FRW}1\,072\,500 \text{ Adverse interpretation is wrong}$$

49 Option B

Material usage variance = $S.P \times (A.Q - S.Q)$ or $(SP \times SQ) - (SP \times AQ)$

$$= 225 \times (16\,500 - 27\,000) = \text{FRW}2\,362\,500 \text{ (F)} \text{ or } 6,075,000 - 3,712,500 = \text{Frw } 2,362,500$$

A. $225 \times (16\,500 - 9000) = \text{FRW}1,687,500 \text{ (F)}$ has used wrong Actual quantity

C. $225 \times (16\,500 - 27\,000) = \text{FRW}2\,362\,500 \text{ (A)}$ interpretation is wrong

D. $\text{FRW } 2\,640\,000 \text{ F}$ has imagined that this is the price variance

50. Option B

Material price variance + Material usage variance

$$\text{FRW}1\,072\,500 \text{ (F)} + \text{FRW}2\,362\,500 \text{ (F)} = \text{FRW}3,435,000 \text{ (F)}$$

Other options are wrong like,

A. $\text{FRW}615,000 + \text{FRW}1,687,500(\text{F}) = \text{FRW}2,302,500$ used wrongly calculated figures on 48 and 49

C. $\text{FRW}2\,362\,500(\text{A}) + \text{FRW}2\,362\,500(\text{A}) = \text{FRW}4,665,000$ used wrongly calculated figures on 48 and 49