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Question 4

(i) Features of Contract Costing

- There may be a sub-contract in the contract.
- The work is usually for a long duration of more than one accounting period.
- The contract work is often based on size.
- The work is frequently constructional in nature.
- The method of costing is similar to jobs costing.

Terminologies used in Contract Costing

- Contract Price - This is the agreed price.
- Cost to date - This is the addition of all cost incurred to date on the contract.
- Work certified - This is the work done upon which a certificate is issued by the architect.
- Cost of work certified - This is the total cost incurred on the portion certified.
- Notional profit or loss - Profit earned on the contract to date.

(ii) Objectives of Service Costing

- A cost per unit of service should be computed.
- The cost per unit of service should be used as part of control function.
- Prices should be computed for services being sold to third parties.
- Planned cost to be compared with actual cost and the differences be investigated for corrective actions as necessary.

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(iii) Methods of Cost Estimation

• Account Analysis Method: This approach requires that an experienced employee or group of employees review the appropriate accounts and determine whether the costs in each account are fixed ~~round~~ or variable. Totaling all costs identified as fixed provides the estimate of total fixed costs. To determine the variable cost per unit, all costs identified as variable are totaled and divided by the measure of activity.

• Engineering Method: is used when there is engineering analysis of technological relationship between input and output. Costs are estimated based on observations of the underlying physical quantities needed for an activity. This method is commonly used for estimating of repetitive processes with clearly defined input - output relationship, costs that often associate with direct materials, labour and machine time which can be observed and measured directly.

• High Low Method: This is object method of segregation mixed cost onto fixed and variable costs through the following processes:

(a) Pick the highest and least activity level among the observed ~~data~~.
(b) Calculate the difference between the two activity levels.
(c) Pick the corresponding cost of the highest and lowest activity levels.
(d) Calculate the difference between the costs of highest and lowest activity levels.
(e) Divide the cost difference by the difference in activity levels.
(f) Determine the ~~total~~ cost or fixed cost using cost formula.

• Least Square Method: The application of linear equation formula: $y = a + bx$ is used to derive the regression equations
y stands for total or mixed cost, a stands for constant factor or total fixed cost, b stands for variable cost and x stands for activity level or independent variable.

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Question 1

Dr. Contract Account as at February 28, 2011 — Cr.

	₦		₦
Direct materials issued	75,000	Materials c/f	25,000
Materials bought on site	195,000	Cost to date c/f	486,650
Direct expenses	55,000		
Wages paid	150,000		
Head office expenses	10,500		
Plant depreciation	20,000		
Accrued Expenses: Wages 5,000			
Direct Expenses 1,150	6,150		
	511,650		511,650
Cost to date b/f	486,650	Value of work certified	545,000
Notional Profit			
Profit taken 35,010			
" not taken 23,340	58,350		
	545,000		545,000
Material b/f	25,000	Profit b/f	23,340

Calculation of Work-in-Progress

	₦
Cost to date	486,650
Profit taken	35,010
	521,660
Cash received	(490,500)
	31,160

Workings

Cash received = 490,500

Value certified = $\frac{490,500}{0.9}$

= 545,000

Notional Profit = 58,350

Profit taken = $\frac{2}{3}$ x notional profit x $\frac{\text{cash received}}{\text{Value certified}}$

= $\frac{2}{3}$ x 58,350 x $\frac{490\,500}{545\,000}$

= ₦35,010

Profit not taken = ₦58,350 - ₦35,010

= ₦23,340

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Question 3

Kekemeke Ltd

Process I Account

Narration	Qty	Rate	Amount (₦)	Narration	Qty	Rate	Amount (₦)
Input material	6000	2	12,000	Normal loss	600	3	1,800
Add: material			7,060	Output	5,000	6.3	31,500
labour			8,000	Abnormal loss	400		2,500
Expenses			3,000				
Other exp.			800				
Production overhead			5,000				
	6000		35,800		6,000		35,800

$$\text{Cost per Unit} = \frac{\text{Cost} - \text{Scrap}}{\text{Input material unit} - \text{Normal loss unit}}$$

$$= \frac{35,800 - 1800}{6,000 - 600}$$

$$= \frac{34,000}{5,400}$$

$$= ₦6.3$$

Process II Account

Narration	Qty	Rate	Amount (₦)	Narration	Qty	Rate	Amount (₦)
Process I Transfer	5,000	6.3	31,500	Normal Loss	500	3	1,500
Add: Material			8,000	Output	6,000	13.9	83,400
Labour			10,000				
Expenses			4,500				
Other exp.			1,200				
Production overhead			9,000				
Abnormal profit	1,500		20,700				
	6,500		84,900		6,500		84,900

$$CPU = \frac{\text{Cost} - \text{Scrap}}{\text{Input Material} - \text{Normal loss}}$$

$$= \frac{64,200 - 1,500}{5,000 - 500}$$

$$= \frac{62,700}{4,500}$$

$$= ₦13.9$$

Process III Account

Narration	Qty	Rate	Amount (₦)	Narration	Qty	Rate	Amount (₦)
Process II transfer	6,000	13.9	83,400	Normal loss	400	3	1,200
Add: Material			5,000	Output	4,000	18.4	73,600
Labour			7,000	Abnormal loss	1,600		29,600
Expenses			2,500				
other exp.			500				
Production overhead			6,000				
	6,000		104,400		6,000		104,400

$$CPU = \frac{\text{Cost} - \text{Scrap}}{\text{Input Material} - \text{normal loss}}$$

$$= \frac{104,400 - 1,200}{6,000 - 400}$$

$$= \frac{103,200}{5,600}$$

$$= ₦18.4$$

Abnormal Loss Account

Narration	Qty	Rate	Amount (₹)	Narration	Qty	Rate	Amount (₹)
Process I	400		2,500	Scrap	2,000	3	6,000
Process III	1,600		29,600	P/L			26,100
	2,000		32,100		2,000		32,100

Abnormal Gain Account

Narration	Qty	Rate	Amount (₹)	Narration	Qty	Rate	Amount (₹)
Scrap	1,500	3	4,500	Process II	1,500		20,700
P/L			16,200				
	1,500		20,700		1500		20,700

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Question 2

Running Cost	₦	₦
Petrol $\left[\frac{50 \times 2 \times 2 \times 8}{8} \times 50\right]$	10,000	
Repair (120 × 8)	960	
Depreciation of tyres $\left[\frac{2000}{20,000} \times \frac{5000}{1}\right]$	500	
Depreciation of lorry $\left[\frac{20000 - 2000}{100,000} \times \frac{5000}{1}\right]$	900	12,360
Running Cost		
Drivers wages	200	
Garage bills (5 × 10 × 8)	400	
Insurance $\left[\frac{2000}{52} \times 8\right]$	307.69 ≈ 308	
Vehicle License $\left[\frac{5200}{52} \times 8\right]$	800	
Other overhead cost $\left[\frac{7800}{52} \times 8\right]$	1200	2,908
Standing Cost		15,268

b. Vehicle cost per km $= \frac{₦15,268}{5000} = ₦3.5/\text{km}$

Total cost/km $= \frac{₦15,268}{\frac{5000}{2} \times 12} = 0.51 \text{ tonnes/km}$