SOLUTION 1

(a) (i) Materials: Each job may consume different materials but in processing costing the same materials are used for all units produced.

(ii) Cost: Cost is calculated for each job separately but under process the cost per unit is the average cost.

(iii) Finished Goods: Stock of finished goods for job costing is made up of unlike and unique items while those of process costing is made up of like items.

(iv) Steps in Production: A job is started and completed so there is one work-in-proceess account that accumulates the cost. Under process the output of one process becomes the input for the next process.

(b) Total production

Units to be accounted for:	
Work in process, beginning	100
Started into production	10,000
Total unites accounted for	10,100

(i) Equivalent Unites

		Equivalent Units	
		Materials	Conversion
Units accounted for as follows:			
Transferred to Department 2	9,700	9,700	9,700
Work in process, ending	400	360	280
Total units	10,.100	10,060	9,980

(ii) Costs per equivalent unit

	Total Cost GHS	Materials GHS	Conversion GHS
Cost to be accounted for:			
Work in process, beginning	3,611	182	3,429
Cost added during the month	401,801	27,986	373,815
Total cost (x)	405,412	28,168	377,244
Equivalent units (y)		10,060	9,980
Cost per EU,(x) ÷ (y)		2.800	37.800
Cost per whole unit	40.600		

Cost reconciliation

				Equivalent Units	
		GHS	Total Cost GHS	Materials	Conversion
(iii)	Transferred to Department 2		393,820	9,700	9,700
(iv)	Work in process, ending:				
	Materials (360 x GHS2.80)	1,008			
	Conversion (280 x GHS37.80)	10,584			280
	Total Work in process, ending		11,592		
	Total cost		405,412		

(c) i. Materials price variance = (AQ x AP) – (AQ x SP)
= GHS100,725 – (5,100 x GHS19.00) = GHS3,825 U

ii. Materials quantity variance = SP)AQ – SQ*)
= GHS19.00 (4,700 – 4,692) = GHS152 U
* SQ = Standard quantity per unit x Actual output
= 2.3 x 2.040 = 4,692 litres

iii. Variable overhead spending variance = (AH x AR) – (AH x SR) = GHS44,980 – 5,200 x GHS7.70) = GHS4.940 U

iv. Variable overhead efficiency variance = SR (AH – SH*) = GHS7.70 (5,200 – 5,100) = GHS770 A
* SH = Standard hours per unit x Actual output = 2.5 x 2,040 = 5,100

SOLUTION 2

(a) IMPORTANCE OF BUDGETING

- Planning of annual operations
- Coordination of activities
- Communication
- Control activities
- Evaluate performance
- Motivation

CONDITIONS FOR EFFECTIVE BUDGETING

- Top management support
- Training
- Sound organisational structure
- Proper standard costing system

- Active participation of line managers
- Investigation and reporting of all budget variances.

(b) Budgeted Profit & Loss Accounts

	October GHS		November GHS		December GHS
Sales (20 x 10,000)	200,000	(20 x 12,000)	240,000	(20 x 15,000)	
Open stock (given	18,000	(given)	20,000	(given)	
Add purchases (derived)	122,000	(derived)	139,000		
Cost of good available (derived)	140,000		159,000		
Closing stock (given)	20,000	(given)	15,000	(145 + 25)	
Cost of sales (derived)	120,000	(240,000 – 9,600)	144,000	(300 – 155)	
Gross profit (40/100 x 200,000)	80,000	(40/100 x 240,000)	96,000	(51.667x 300,000) / 100	
Add other income	25,000		25,000		
Rent income	105,000		121,000		
Less:					
Admin expenses	20,000	(240/200 x 20,000)	24,000	(300/400 x 24000)	
Selling & Dist. (25/100 x 200,000)	50,000	(25/100 x 240,000)	60,000	(25/100 x 300000)	
D3epreciation (2/100 x 500,00)	10,000	(2/100 x 600,000)	12,000	(2/100 x 600,000|)	
Total expenses	80,000		96,000		
Net profit before tax	25,000		25,000		
Taxation @ 10% of NPBT	2,500		2,500		
Net profit after tax	22,500		22,500		

Workings

CREDITORS SCHEDULE/CASH PAYMENT COMPUTATION

	October GHS	November GHS	December GHS
Desired balance	30,000	25,000	20,000
Add purchases	122,000	139,000	155,000
	152,000	164,000	175,000
Desired ending balance	25,000	20,000	28,000
Cash payment	127,000	144,000	147,000

DEBTORS SCHEDULE/CASH (RECEIVED) COMPUTATION

	October GHS	November GHS	December GHS
Desired debtors balance	25,000	15,000	30,000
Add sales	200,000	240,000	300,000
	225,000	255,000	330,000
Desired closing debtors	15,000	30,000	15,000
	210,000	225,000	315,000

Cash budgeted

	October GHS	November GHS	December GHS
Inflow			
Cash receipts (Debtors)	210,000	225,000	315,000
Loan	-	80,000	-
Rent	25,000	25,000	25,000
Total inflow	235,000	330,000	340,000
Outflow			
Fixed Assets	-	100,000	-
Admin expenses	20,000	24,000	30,000
Selling & distribution	50,000	60,000	75,000
Payment to creditors	127,000	144,000	147,000
Taxation	3,000	2,500	2,500
Total outflow	200,000	330,500	254,500
Net inflow	35,000	(500)	85,500
Balance b/f	80,000	115,000	114,500
Balance b/d cash balances	115,000	114,500	200,000

(c) Budgeted Balance Sheet Statement of Financial Position

	October GHS	November GHS	December GHS
Fixed Assets	370,000	458,000	446,000
Current Assets			
Stock	20,000	15,000	25,000
Debtors	15,000	30,000	15,000
Expected cash balance	115,000	114,500	200,000
Total current assets	150,000	159,500	240,000
Current Liabilities:			
Creditors	25,000	20,000	28,000
Taxation	2,500	2,500	6,300
Total current liabilities	27,500	22,500	34,300
Net current assets	122,500	137,000	205,700
Net assets	492,500	595,000	651,700
Financed by:			
Capital (derived)	470,000	492,500	515,000
Add profit	22,500	22,500	56,700
	492,500	515,000	571,700
Loan	-	80,000	80,000
	492,500	595,000	651,700

SOLUTION 3

(a)

				GHS
(i)	A	-	3460 kg @ GHS1.84 per kg	6,366.40
	B	-	5860 kg @ GHS1.20 per kg	7,032.00
	C	-	3270 kg @ GHS1.00 per kg	3,270.00
	D	-	1900 kg @ GHS1.65 per kg	3,132.00
				19,803.40
			5% increase	990.17
	Direct labour cost at full capacity			20,793.57

		GHS
(ii)	Direct labour to be released if B is outsourced (2000 kg @ GHS1.20 per kg)	2,400.00
(iii)	Capacity to be available (GHS2,400 + GHS990.17)	3,390.17
(iv)	The output of product A can be increased by: (GHS3,390.17 ÷ GHS1.84)	1,842.48 kg

IMPACT ON PROFIT

	*(e)	
Additional contribution for A (1842.48 kg @ GHS7.07)		13,026.33
	*(f)	
Less: Loss of contribution for B (2000 kg @ GHS3.618)		7,236.00
		5,790.33

Koboko Ltd should outsource 2000 kg of B and produce an extra 1842.48 kg of A.

*** *Workings***

		SP		UC
(e)	GHS7.07	=	17.30	- 10.23

(f) GHS3.618 = 85% z 12.48 – 6.99

(b) Determination if limiting factor
Labour hours: Required

A	10,000 x 5	=	50,000
B	6,000 x 4	=	24,000
C	12,000 x 4	=	48,000
D	8,000 x 6	=	48,000
			170,000
Total available		=	175,000 more than enugh.

Direct materials

A	10,000 x 3	=	30,000
B	6,000 x 2	=	12,000
C	12,000 x 2	=	24,000
D	8,000 x 3	=	24,000
			90,000 units only 60,000 available.

Determination of Contribution per Limiting Factor

	A	B	C	D
SP	60	45	50	65
VC	47	34	36	50
CM	13	11	14	15
	3	2	2	3
CM/LF	4.33	.5	7	5
Ranking	4th	2nd	1st	3rd

Allocation of Direct materials for Production

A	3,000 x 3	=	9,000
C	12,000 x 2	=	24,000
B	6,000 x 2	=	12,000
D	5,000 x 3	=	15,000
			60,000

Total Contribution:

	A	B	C	D	Total
Units	3,000	6,000	12,000	5,000	
CM	13	11	14	15	
	39,000	66,000	168,000	75,000	348,000
Fixed cost					240,000
Profit					108,000

SOLUTION 4

(a) (i) Return on Capital Employed: (ROCE)
This expresses divisional profit as a percentage of the assets employed in the division. ROCE considers whether divisions are returning a sufficiently high return on the capital invested in the division.

Adu (1) ROCE provides a useful overall approximation in the success of a firm's past

investment policy.

(2) It also focuses manager's attention on the impact of levels of working capital (particularly stocks and ……) on the ROCE.

Problems

(1) ……. divisional managers on the basis of ROCE may not encourage goal congruence.

(2) Managers can be motivated to make incorrect asset disposal decisions.

(3) Managers can increase their ROCE by making decisions that are not in the best interest of the company.

(ii) Residual Income (RI)

RI is defined as controllable contribution less a cost of capital charge on the invesmnet controllable by the divisional manager.

Advantages

(1) It encourages managers to make the correct asset disposal decisions.

(2) It is more flexible, because different cost of capital percentages rates can be applied to investments that have different levels of risk.

(3) It makes decisions in the best interest of the company as a whole.

(4) RI measure enables different risk-adjusted capital costs to be incorporated in the calculation.

(iii) Problems of RI

It is difficult to compare the performance, of a division with that of others or companies of a different size.

(b) (i) ROCE = $\frac{\text{Div Sales – Div Expenses}}{\text{Capital Employed}} \times 100$

	Naa	Hewo
ROCE	$\frac{56{,}000 - 44{,}070}{17{,}600} \times 100$	$\frac{35{,}000 \times 25{,}690}{10{,}700} \times 100$
	= 67.8%	= 87%

(ii) RI = Div Profit – (Cost of Capital x Capital Employed)

	Naa	Hewo

RI:	11,930 - (20% x 17,600)	9,310 – (20% x 10,700)
	GHS8,410	GHS7,170

(iii) Controllable Profit = Div Profit + depreciation

	Naa	Hewo
C.P:	11,930 + 720	9,310 + 990
	GHS12,650	GHS10,300

SOLUTION 5

(a) i. Computation of cost driver rates

Labour Related	=	GHS40,000/8,000 DLHs	=	GHS5/DLH
Machine Related	=	GHS50,000/12,500 MHs	=	GHS4/MH
Quality Control	=	GHS12,000/800 inspections	=	GHS15/inpection

ii. Job 400 FL cost Sheet

		GHS
Direct materials		900
Direct labour (GHS40 x 30)		1,200
Overheads:		
Labour related (GHS5 x 30)	150	
Machine related (GHS4 x 80)	320	
Quality control+ (GHS15 x 5)	75	545
Production cost		2,645
Mark-up (1/5x GHS2,645)		529
Selling price		3,174

iii. Undercosted by GHS162.50

Total Overheads = GHS40,000 + GHS50,000 + GHS12,000 = GHS102,000
Traditional overhead absorption rate = GHS102,000,8,000 DLHs = GHS12.75.DLH

	GHS
Overheads absorbed under Activity-based = GHS150 + GHS320 + GHS75 =	545
Overheads absorbed under traditional systems = GHS12.75 x 30 =	382.50
Under-absorbed	162.50

(b) Some of the main assumptions underlying CVP analysis in short term decisions making include the following:

i. All costs can be segregated into fixed and variable elements;

ii. Fixed costs will remain constant while variable costs vary proportionately with the level of activity;

iii. The only factor affecting costs and revenues is volume of activity;

iv. Technology, production methods and efficiency remain unchanged;

v. There are no inventory level changes, or that inventories are valued at marginal cost; and

vi. There is no uncertainty.

Some of the typical limitations of CVP analysis include the following:

i. The concept can apply to a single product or a single mix of a group of products.

ii. It assumes that fixed costs are constant at all levels of output

iii. It assumes that variable costs are the same per unit at all levels of output

iv. The assumption that selling prices are constant at all levels of output may not hold.

v. The assumption that production equal sales may not hold as there may exist inventories.

vi. The concept ignores uncertainties, especially in the estimates of fixed costs and per unit variable cost.