Mock Assessment 2

Mock Assessment 2

Certificate in Business Accounting
Fundamentals of Management Accounting

You are allowed two hours to complete this assessment.

The assessment contains 50 questions.

All questions are compulsory.

Do not turn the page until you are ready to attempt the assessment under timed conditions.

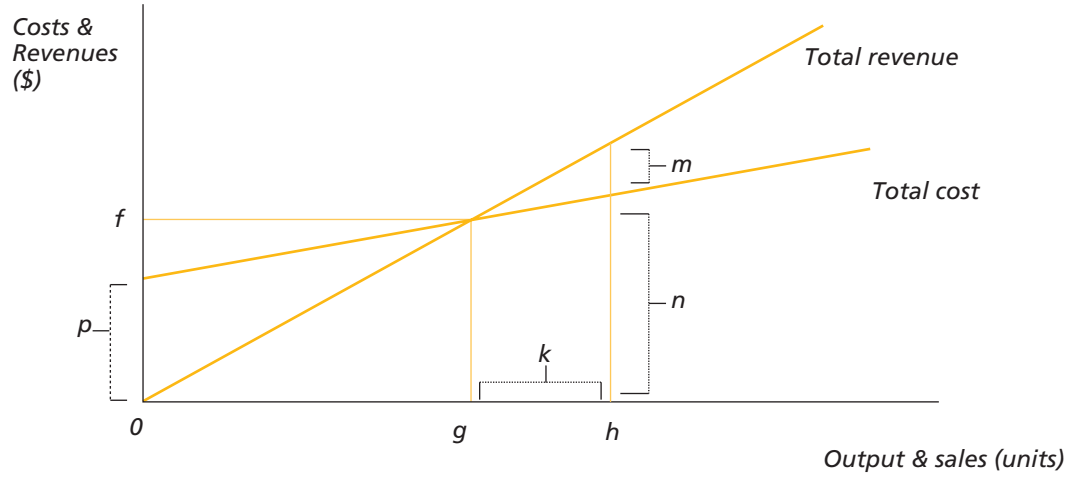
Question 1

In an integrated accounting system, the accounting entries to complete the production overhead control account at the end of the period, when the production overheads absorbed exceed the actual production overhead incurred are:

	Debit	*Credit*	*No entry in this account*
Production overhead control account	☐	☐	☐
Work in progress account	☐	☐	☐
Finished goods account	☐	☐	☐
Income statement	☐	☐	☐

Question 2

A company expects to sell *h* units in the next accounting period, and has prepared the following breakeven chart.



(a) The margin of safety is shown on the diagram by ☐ (insert correct letter).

(b) The effect of an increase in fixed costs, with all other costs and revenues remaining the same, will be

	increase	*decrease*	*stay the same*
m will	☐	☐	☐
k will	☐	☐	☐
f will	☐	☐	☐
p will	☐	☐	☐

Question 3

A company uses the repeated distribution method to reapportion service department costs. The use of this method suggests

☐ the company's overhead rates are based on estimates of cost and activity levels, rather than actual amounts.

☐ there are more service departments than production cost centres.

- ☐ the company wishes to avoid under- or over-absorption of overheads in its production cost centres.
- ☐ the service departments carry out work for each other.

Question 4

The management accountant's report shows that fixed production overheads were over-absorbed in the last accounting period. The combination that is certain to lead to this situation is

Production activity	*and*	*Fixed overhead expenditure*
☐ lower than budget		☐ lower than budget
☐ higher than budget		☐ higher than budget
☐ as budgeted		☐ as budgeted

Question 5

Which of the following costs would be classified as production overhead cost in a food processing company (tick all that apply)?

- ☐ The cost of renting the factory building.
- ☐ The salary of the factory manager.
- ☐ The depreciation of equipment located in the materials store.
- ☐ The cost of ingredients.

Question 6

The normal loss in process 2 is valued at its scrap value. Extracts from the process account and the abnormal gain account for the latest period are shown below.

Process 2

	£		£
Opening WIP	1,847	Output to finished goods	
Conversion costs	14,555	−5,100 units	22,695
Input materials	6,490	Normal loss −100 units	120
Abnormal gain −220 units		Closing WIP	

Abnormal gain

	£		£
Income statement	A	Process 2	B

The values to be entered in the abnormal gain account for the period are:

A = £ ☐

B = £ ☐

The following information is required for questions 7 and 8

The incomplete process account relating to period 4 for a company which manufactures paper is shown below:

Process account

	Units	$		*Units*	$
Material	4,000	16,000	Finished goods	2,750	
Labour		8,125	Normal loss	400	700
Production overhead		3,498	Work in progress	700	

There was no opening work in process (WIP). Closing WIP, consisting of 700 units, was complete as shown:

Materials	100%
Labour	50%
Production overhead	40%

Losses are recognised at the end of the production process and are sold for $1.75 per unit.

Question 7

Given the outcome of the process, which ONE of the following accounting entries is needed in each account to complete the double entry for the abnormal loss or gain?

	Debit	*Credit*	*No entry in this account*
Process account	☐	☐	☐
Abnormal gain account	☐	☐	☐
Abnormal loss account	☐	☐	☐

Question 8

The value of the closing WIP was $ ☐.

Question 9

A machine operator is paid £10.20 per hour and has a normal working week of 35 hours. Overtime is paid at the basic rate plus 50%. If, in week 7, the machine operator worked 42 hours, the overtime premium paid to the operator would be £ ☐.

Question 10

An engineering firm operates a job costing system. Production overhead is absorbed at the rate of £8.50 per machine hour. In order to allow for non-production overhead costs and profit, a mark up of 60% of prime cost is added to the production cost when preparing price estimates.

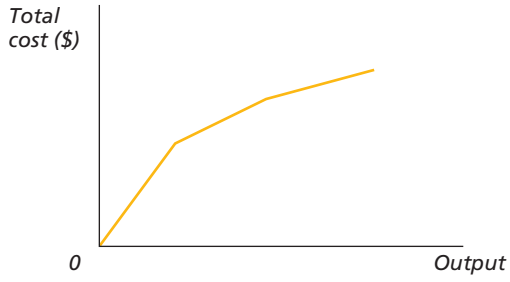
The estimated requirements of job number 808 are as follows:

Direct materials	£10,650
Direct labour	£3,260
Machine hours	140

The estimated price notified to the customer for job number 808 will be £ ☐.

Question 11

The diagram represents the behaviour of a cost item as the level of output changes:



Which ONE of the following situations is depicted by the graph?

- ☐ Discounts are received on additional purchases of material when certain quantities are purchased.
- ☐ Employees are paid a guaranteed weekly wage, together with bonuses for higher levels of production.
- ☐ A licence is purchased from the government which allows unlimited production.
- ☐ Additional space is rented to cope with the need to increase production.

Question 12

A hospital's records show that the cost of carrying out health checks in the last five accounting periods have been as follows:

Period	*Number of patients seen*	*Total cost* £
1	650	17,125
2	940	17,800
3	1,260	18,650
4	990	17,980
5	1,150	18,360

Using the high–low method and ignoring inflation, the estimated cost of carrying out health checks on 850 patients in period 6 is £ ☐.

Question 13

The principal budget factor for a footwear retailer is

- ☐ the cost item taking the largest share of total expenditure.
- ☐ the product line contributing the largest amount to sales revenue.
- ☐ the product line contributing the largest amount to business profits.
- ☐ the constraint that is expected to limit the retailer's activities during the budget period.

The following information is required for questions 14 and 15

Extracts from the budget of H, a retailer of office furniture, for the six months to 31 December show the following information:

	$
Sales	55,800
Purchases	38,000
Closing inventory finished goods	7,500
Opening inventory finished goods	5,500
Opening receivables	8,500
Opening payables	6,500

Receivables and payables are expected to rise by 10 and 5 per cent, respectively, by the end of the budget period.

Question 14

The estimated cash receipts from customers during the budget period are $ ☐.

Question 15

The profit mark-up, as a percentage of the cost of sales (to the nearest whole number) is ☐%.

Question 16

Which of the following actions are appropriate if a company anticipates a temporary cash shortage (tick all that apply)?

(i) ☐ issue additional shares;
(ii) ☐ request additional bank overdraft facilities;
(iii) ☐ sell machinery currently working at half capacity;
(iv) ☐ postpone the purchase of plant and machinery.

Question 17

A company manufactures three products, X, Y and Z. The sales demand and the standard unit selling prices and costs for the next accounting period, period 1, are estimated as follows:

	X	*Y*	*Z*
Maximum demand (000 units)	4.0	5.5	7.0
	£ per unit	*£ per unit*	*£ per unit*
Selling price	28	22	30
Variable costs:			
Raw material (£1 per kg)	5	4	6
Direct labour (£12 per hour)	12	9	18

(a) If supplies in period 1 are restricted to 90,000 kg of raw material and 18,000 hours of direct labour, the limiting factor would be

☐ direct labour.
☐ raw material.
☐ neither direct labour nor raw material.

(b) In period 2, the company will have a shortage of raw materials, but no other resources will be restricted. The standard selling prices and costs and the level of demand will remain unchanged.

In what order should the materials be allocated to the products if the company wants to maximise profit?

First: product ☐
Second: product ☐
Third: product ☐

Question 18

A performance standard which assumes efficient levels of operation, but which includes allowances for factors such as waste and machine downtime is known as:

☐ an allowable standard
☐ an attainable standard
☐ an ideal standard
☐ a current standard

The following information is required for questions 19 and 20

W makes leather purses. It has drawn up the following budget for its next financial period:

Selling price per unit	$11.60
Variable production cost per unit	$3.40
Sales commission	5% of selling price
Fixed production costs	$430,500
Fixed selling and administration costs	$198,150
Sales	90,000 units

Question 19

The margin of safety represents ☐ per cent of budgeted sales.

Question 20

The marketing manager has indicated that an increase in the selling price to $12.25 per unit would not affect the number of units sold, provided that the sales commission is increased to 8 per cent of the selling price.

These changes will cause the breakeven point (to the nearest whole number) to be ☐ units.

Question 21

Over long time periods of several years, supervisory labour costs will tend to behave as:

- ☐ linear variable costs
- ☐ step fixed costs
- ☐ fixed costs
- ☐ semi-variable costs

Question 22

A firm calculates the material price variance when material is purchased. The accounting entries necessary to record a favourable material price variance in the ledger are:

	Debit	*Credit*	*No entry in this account*
Material control account	☐	☐	☐
Work-in-progress control account	☐	☐	☐
Material price variance account	☐	☐	☐

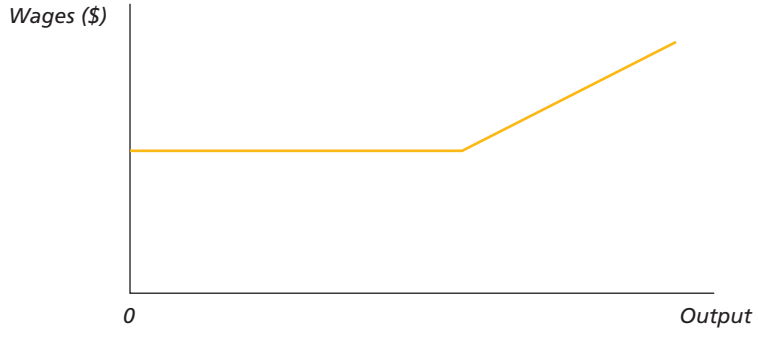
Question 23

The accounting entries necessary to record an adverse labour efficiency variance in the ledger accounts are:

	Debit	*Credit*	*No entry in this account*
Wages control account	☐	☐	☐
Labour variance account	☐	☐	☐
Work-in-progress control account	☐	☐	☐

Question 24

The following graph shows the wages earned by an employee during a single day:



Which ONE of the remuneration systems listed below does the graph represent?

- ☐ Differential piecework.
- ☐ A flat rate per hour with a premium for overtime working.
- ☐ Straight piecework.
- ☐ Piecework with a guaranteed minimum daily wage.

Question 25

J absorbs production overheads on the basis of machine hours. The following budgeted and actual information applied in its last accounting period:

	Budget	*Actual*
Production overhead	$180,000	$178,080
Machine hours	40,000	38,760

(a) At the end of the period, production overhead will be reported as:

- ☐ under-absorbed
- ☐ over-absorbed

(b) The amount of the under/over-absorption will be $ ☐.

The following data are to be used to answer questions 26 and 27

A company's purchases during a recent week were as follows:

Day	*Price per unit* ($)	*Units purchased*
1	1.45	55
2	1.60	80
3	1.75	120
4	1.80	75
5	1.90	130

There was no inventory at the beginning of the week. 420 units were issued to production during the week. The company updates its inventory records after every transaction.

Question 26

Using a first in, first out (FIFO) method of costing issues from stores, the value of closing inventory would be $ ☐.

Question 27

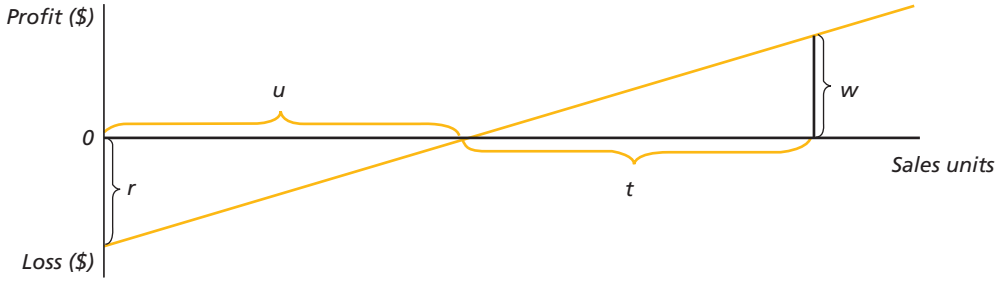
If the company changes to the weighted average method of inventory valuation, the effect on closing inventory value and on profit for the week compared with the FIFO method will be:

(a) Closing inventory value will be: higher ☐ lower ☐

(b) Gross profit for the week will be: higher ☐ lower ☐

The following data are to be used to answer questions 28 and 29

The diagram shows the profit-volume chart for the latest accounting period. The company made a profit of $\$w$ during the period.



Question 28

An increase in the fixed costs per period (assuming the selling price per unit and the variable cost per unit remain unchanged), will cause:

	increase	*decrease*	*remain the same*
r to	☐	☐	☐
w to	☐	☐	☐
t to	☐	☐	☐
u to	☐	☐	☐

Question 29

The following results were achieved in the last accounting period:

r = \$50,000 w = \$16,000 t = 800 units u = 2,500 units

The company expects to make and sell an additional 1,400 units in the next accounting period. If variable cost per unit, selling price per unit and total fixed costs remain unchanged, profit will increase by \$ ☐.

Question 30

Information concerning contract H7635 is as follows:

	£
Cost incurred to date	592,000
Cost to be incurred to complete contract	189,000
Value of work certified	800,000
Cash received from customer	640,000
Total contract value	1,015,000

No problems are foreseen on the contract and no profit has been recognised on the contract to date.

The formula used by the company when recognising profits on incomplete contracts is:

$$\text{Profit to be recognised} = \text{Final contract profit} \times \frac{\text{Revenue earned to date}}{\text{Final contract revenue}}$$

The profit to be recognised in the company's income statement in respect of contract H7635 is (to the nearest £) £ ☐.

Question 31

An advertising agency uses a job costing system to calculate the cost of client contracts. Contract A42 is one of several contracts undertaken in the last accounting period. Costs associated with the contract consist of:

Direct materials	$5,500
Direct expenses	$14,500

Design staff worked 1,020 hours on contract A42, of which 120 hours were overtime. One-third of these overtime hours were worked at the request of the client who wanted the contract to be completed quickly. Overtime is paid at a premium of 25 per cent of the basic rate of $24.00 per hour.

The prime cost of contract A42 is $ [ ].

Data for questions 32 and 33

Sales of product G are budgeted as follows.

	Month 1	*Month 2*	*Month 3*	*Month 4*	*Month 5*
Budgeted sales units	340	420	290	230	210

Company policy is to hold in inventory at the end of each month sufficient units of product G to satisfy budgeted sales demand for the forthcoming 2 months.

Question 32

The budgeted production of product G in month 2 is [ ] units.

Question 33

Each unit of product G uses 2 litres of liquid K. Company policy is to hold in inventory at the end of each month sufficient liquid K for the production requirements of the forthcoming month.

The budgeted purchases of liquid K in month 2 are [ ] litres.

Question 34

The following data have been extracted from the budget working papers of GY Limited.

Production volume (units)	2,000	3,000
	£ per unit	£ per unit
Direct materials	6.00	6.00
Direct labour	7.50	7.50
Production overhead – department A	13.50	9.00
Production overhead – department B	7.80	5.80

(a) The total budgeted variable cost per unit is £ [ ].
(b) The total budgeted fixed cost per period is £ [ ].

Question 35

A company undertaking long-term building contracts has a financial year-end of 30 April. The following details on the purchase and use of machinery refer to contract A44, which was started on 1 May year 3 and is due for completion after 27 months.

1 July year 3:	Machine 1 was purchased at a cost of $55,000. It is to be used throughout the contract, and will be sold for $6,400 when the contract finishes.
1 October year 3:	Machine 2 was purchased at a cost of $28,600. The machine will be scrapped at the end of contract A44, and is not expected to have any saleable value.

If the company's policy is to charge depreciation in equal monthly amounts, the balance sheet value of machinery on contract A44 at 30 April year 4 will be $ [ ].

Question 36

Data for product W are as follows.

Direct material cost per unit	£22
Direct labour cost per unit	£65
Direct labour hours per unit	5 hours
Production overhead absorption rate	£3 per direct labour hour
Mark-up for non-production overhead costs	8% of total production cost

The company requires a 15 per cent return on sales revenue from all products.
The selling price per unit of product W, to the nearest penny, is £ [ ]

Question 37

G repairs electronic calculators. The wages budget for the last period was based on a standard repair time of 24 minutes per calculator and a standard wage rate of $10.60 per hour.

Following the end of the budget period, it was reported that:

Number of repairs	31,000
Labour rate variance	$3,100 (A)
Labour efficiency variance	Nil

Based on the above information, the actual wage rate per hour during the period was $ [ ].

Question 38

Which ONE of the following factors could explain a favourable direct material usage variance?

A ☐ More staff were recruited to inspect for quality, resulting in a higher rejection rate.
B ☐ When estimating the standard product cost, usage of material had been set using ideal standards.
C ☐ The company had reduced training of production workers as part of a cost reduction exercise.
D ☐ The material price variance was adverse.

Question 39

A company produces a single product B. The company budgets to sell 2,200 units of product B during period 4 and sales are budgeted to be 10 per cent higher in period 5. It is company policy to hold inventories of finished goods equal to 20 per cent of the following period's sales.

The budgeted production of product B for period 4 is ☐ units.

Question 40

The following extract is taken from the delivery cost budget of D Limited:

Miles travelled	4,000	5,500
Delivery cost	£9,800	£10,475

The flexible budget cost allowance for 6,200 miles travelled is £ ☐.

Data for questions 41 to 49

Standard cost and revenue details for product C are as follows.

	£ per unit
Selling price	90.50
Direct material 12 kg at £1.70 per kg	20.40
Direct labour 3 hours at £14 per hour	42.00
Variable overhead	12.00

Budgeted sales and production for June were 47,200 units. However a machine breakdown occurred and as a result labour were idle for 150 hours and actual sales and production were 45,600 units.

Other actual data for June are as follows.

	£
Sales revenue	4,058,400
Direct material cost for 539,800 kg purchased and used	944,650
Direct labour cost for 134,100 hours, including 150 idle hours	1,850,580
Variable overhead cost	542,800

Question 41

The sales price variance for June is £ ☐

adverse ☐
favourable ☐

Question 42

The sales volume contribution variance for June is £ ☐

adverse ☐
favourable ☐

Question 43

The materials price variance for June is £ ☐

adverse ☐
favourable ☐

Question 44

The materials usage variance for June is £ ☐

adverse ☐
favourable ☐

Question 45

The idle time variance for June is £ ☐

adverse ☐
favourable ☐

Question 46

The labour rate variance for June is £ ☐

adverse ☐
favourable ☐

Question 47

The labour efficiency variance for June is £ ☐

adverse ☐
favourable ☐

Question 48

The variable overhead expenditure variance for June is £ ☐

adverse ☐
favourable ☐

Question 49

The variable overhead efficiency variance for June is £ ☐

adverse ☐
favourable ☐

Question 50

A company provides a shirt laundering service. The standard cost and revenue for laundering one batch of shirts is as follows.

	£ per batch
Selling price	23
Materials cost (detergent, starch, etc.)	3
Labour cost	14
Variable overhead cost	1

Fixed costs incurred each month amount to £15,900.

The number of batches of shirts to be laundered to earn a profit of £4,300 per month is [ ] batches.

Second Mock Assessment – Solutions

Solution 1

	Debit	*Credit*	*No entry in this account*
Production overhead control account	✓		
Work in progress account			✓
Finished goods account			✓
Income statement		✓	

Solution 2

(a) The margin of safety is shown on the diagram by *k*. This is the difference between the expected sales level and the breakeven point.

(b) *m* will decrease (extra fixed cost = lower profit)
k will decrease (extra fixed cost = higher breakeven point = smaller margin of safety)
f will increase (extra fixed cost = higher breakeven point)
p will increase (p = fixed costs, which have increased)

Solution 3

The use of this method suggests the service departments carry out work for each other.

Solution 4

The combination that is certain to lead to over-absorption is production activity higher than budget *and* fixed overhead expenditure lower than budget.

Solution 5

The costs are all production overheads with the exception of the cost of ingredients, which is a direct cost.

Solution 6

A = £715
B = £979

Workings:
Cost per complete unit in process 2 = £22,695/5,100 = £4.45
Cost of abnormal gain units = £4.45 × 220 = £979
Scrap value of normal loss per unit = £120/100 = £1.20
Forgone scrap value of abnormal gain = £1.20 × 220 units = £264
Transfer to income statement in respect of abnormal gain = £979 − £264 = £715

Solution 7

Process account = credit; abnormal gain account = no entry in this account; abnormal loss account = debit.

Abnormal loss = (4,000 − 2,750 − 400 − 700) units = 150 units

Solution 8

The value of the closing WIP was $4,158.

Statement of equivalent units

	Total units	*Material equiv units*	*Labour equiv units*	*Production overhead equiv units*
Finished goods	2,750	2,750	2,750	2,750
Normal loss	400	–	–	–
Abnormal loss	150	150	150	150
WIP c/fwd	700	700	350	280
		3,600	3,250	3,180
		$	$	$
Costs		16,000	8,125	3,498
Scrap value normal loss		(700)		
		15,300		
Cost per equivalent unit		$4.25	$2.50	$1.10

Statement of evaluation of WIP

		$
WIP c/fwd	− material (700 × $4.25)	2,975
	labour (350 × $2.50)	875
	production overhead (280 × $1.10)	308
		4,158

Solution 9

The overtime premium paid to the operator would be £35.70.

Overtime = 7 hours

Overtime premium per hour = £5.10

Overtime premium = £35.70

Solution 10

The estimated price notified to the customer for job number 808 will be £23,446.

	£
Direct material	10,650
Direct labour	3,260
Prime cost	**13,910**
Production overhead (140 × £8.50)	1,190
Mark up on prime cost (60%)	8,346
	23,446

Solution 11

Discounts are received on additional purchases of material when certain quantities are purchased. The graph depicts a variable cost where unit costs decease at certain levels of production.

Solution 12

The estimated cost of carrying out health checks on 850 patients is £17,625.

	Patients	*Total cost*
		£
High	1,260	18,650
Low	650	17,125
	610	1,525

$$\text{Variable cost per patient} = \frac{£1{,}525}{610} = £2.50$$

At 650 patients:	£
Total cost	17,125
Total variable cost (650 × £2.50)	1,625
Total fixed cost	15,500
Total cost of 850 patients:	£
Fixed cost	15,500
Variable cost (850 × £2.50)	2,125
	17,625

Solution 13

The principal budget factor for a footwear retailer is the constraint that is expected to limit the retailer's activities during the budget period.

Solution 14

The estimated cash receipts from customers during the budget period are $54,950.

$$\begin{aligned}\text{Cash received} &= \text{Sales} + \text{opening receivables} - \text{closing receivables}\\ &= \$(55{,}800 + 8{,}500 - 9{,}350)\\ &= \$54{,}950.\end{aligned}$$

Solution 15

The profit mark-up is 55%.

$$\begin{aligned}\text{Cost of sales} &= \text{Opening inventory} + \text{purchases} - \text{closing inventory}\\ &= \$(5{,}500 + 38{,}000 - 7{,}500)\\ &= \$36{,}000\end{aligned}$$

$$\$36{,}000 + \text{Mark up} = \$55{,}800$$

$$\text{Mark Up} = \$19{,}800$$

$$\text{Mark Up\%} = \frac{19{,}800}{36{,}000} \times 100\% = 55\%.$$

Solution 16

The appropriate actions are (ii) and (iv). These are short term actions to cover a temporary cash shortage. Actions (i) and (iii) would be more appropriate for a longer term cash shortage.

Solution 17

(a) The limiting factor would be direct labour.

	X	*Y*	*Z*	*Total*
Material (kg)	20,000	22,000	42,000	84,000
Direct labour (hours)	4,000	4,125	10,500	18,625

(b) First: product *Y*; Second: product *X*; Third: product *Z*

	X	*Y*	*Z*
	£	£	£
Selling price	28	22	30
Variable cost	17	13	24
Contribution	11	9	6
Kg	5	4	6
Contribution per kg	£2.20	£2.25	£1.00
Ranking	2	1	3

Solution 18

A performance standard which assumes efficient levels of operation, but which includes allowances for factors such as waste and machine downtime is known as an attainable standard.

Solution 19

The margin of safety represents 8.3% of budgeted sales.

$$\text{BEP} = \frac{\$(430{,}500 + 198{,}150)}{\$11.60 - \$(3.40 + 0.58)} = 82{,}500 \text{ units}$$

$$\text{Margin of safety} = \frac{90{,}000 - 82{,}500}{90{,}000} \times 100\% = 8.3\%$$

Solution 20

These changes will cause the breakeven point to be 79,879 units.

$$\text{New BEP} = \frac{\$628{,}650}{\$12.25 - \$(3.40 + 0.98)} = 79{,}879 \text{ units.}$$

Solution 21

Over long time periods of several years, supervisory labour costs will tend to behave as step fixed costs.

Solution 22

Material control account = debit; work in progress = no entry in this account; material price variance account = credit.

The price variance is calculated at the point of purchase, therefore, the work in progress account is not affected. The favourable variance is credited to the variance account and debited in the material control account.

Solution 23

Wages control account = no entry in this account; labour variance account = debit; work in progress control account = credit.

The efficiency variance is recorded at the point at which it arises, i.e. in the work in progress account rather than in the wages control account. The adverse variance is debited to the variance account.

Solution 24

The graph represents piecework with a guaranteed minimum daily wage.

Solution 25

Production overhead will be reported as $3,660 under absorbed.

Machine hour rate = $180,000/40,000 = $4.50 per machine hour

	$
Overheads incurred	178,080
Overheads absorbed (38,760 × $4.50)	174,420
Under absorbed	3,660

Solution 26

Using FIFO, the value of the closing inventory would be $76.

Units in inventory = 460 purchased − 420 issued = 40 units.

Issues would have been made at the earliest prices, therefore, the latest prices paid would be used to value remaining inventory = 40 units × $1.90 = $76.

Solution 27

(a) Closing inventory value will be lower (prices are rising and FIFO uses latest prices to value items held in the stores)

(b) Gross profit for the week will be lower (higher average price charged to cost of sales)

Solution 28

r will increase (*r* = loss at zero activity = fixed costs)
w will decrease (*w* = profit = lower if fixed costs increase)
t will decrease (*t* = margin of safety = lower if fixed costs increase)
u will increase (*u* = breakeven volume = higher if fixed costs increase)

Solution 29

Profit will increase by $28,000.

Contribution per unit = (w + r)/(t + u) = $(16,000 + 50,000)/(800 + 2,500) = $20

Increase in profit = 1,400 additional units × $20 = $28,000

Solution 30

The profit to be recognised in the company's income statement in respect of contract H7635 is £184,434.

Estimated final contract profit = £1,015,000 − £(592,000 + 189,000) = £234,000

$$\text{Profit to be recognised} = £234,000 \times \frac{£800,000}{£1,015,000}$$

$$= £184,434$$

Solution 31

The prime cost of contract A42 is $44,720.

	$
Direct materials	5,500
Direct expenses	14,500
Basic staff hours 1,020 hrs × $24	24,480
Overtime premium 40 hrs × $6	240
	44,720

Solution 32

The budgeted production of product G in month 2 is 230 units.

Workings:

	units	
Closing inventory month 2 (290 + 230)	520	
Month 2 sales requirements	420	
	940	
Less opening inventory month 2 (420 + 290)	(710)	
Budgeted production month 2	230	(i.e. month 4 sales volume)

Solution 33

The budgeted purchases of liquid K in month 2 are 420 litres.

Workings:

Purchases each month will be the quantity required for production the following month. Production in month 3 = 210 units (month 5 sales), therefore, purchases in month 2 will be 210 × 2 litres = 420 litres.

Solution 34

(a) The total budgeted variable cost per unit is £15.30

(b) The total budgeted fixed cost per period is £39,000

Workings:

Department A production overhead = fixed cost
= 2,000 units × £13.50 or 3,000 units × £9.00
= £27,000

Department B production overhead = semi-variable cost

Using the high-low method:

Units	*Total cost*
	£
3,000	17,400
2,000	15,600
1,000	1,800

Variable cost per unit = £1,800/1,000 = £1.80
Fixed cost = £17,400 − £(1.80 × 3,000) = £12,000
Total budgeted variable cost = £(6.00 + 7.50 + 1.80) = £15.30
Total budgeted fixed cost = £(27,000 + 12,000) = £39,000

Solution 35

The balance sheet value of machinery on contract A44 at 30 April year 4 is $55,060.

		Machine 1		*Machine 2*
		$		$
Cost		55,000		28,600
Depreciation	$\frac{(55{,}000 - 6{,}400)}{25 \text{ months}} \times 10$	19,440	$\frac{28{,}600}{22 \text{ months}} \times 7$	9,100
		35,560		19,500

Net book value = $35,560 + $19,500 = $55,060

Solution 36

The selling price per unit of product W, to the nearest penny is £129.60

Workings:

	£ per unit
Direct material cost	22.00
Direct labour cost	65.00
Production overhead absorbed = 5 hours × £3	15.00
Total production cost	102.00
Mark-up for non-production costs = 8% × £102.00	8.16
Full cost	110.16
Profit mark-up = 15/85 × £110.16	19.44
Selling price	129.60

Solution 37

Labour efficiency variance = zero, therefore hours worked = standard hours for 31,000 repairs.

Hours worked = 31,000 × 24/60 = 12,400 hours
Adverse rate variance per hour = 3,100/12,400 = $0.25
Therefore, actual wage rate per hour = $10.60 + $0.25 = $10.85

Solution 38

Option D is the only factor that could explain a favourable direct material usage variance. Higher priced material may be of a higher quality than standard with the result that scrap and rejections were lower than standard.

Options A to C are all likely to result in an adverse direct material usage variance.

Solution 39

The budgeted production of product B for period 4 is 2,244 units.

	Units
Period 4 sales	2,200
Period 4 closing inventory (2,200 × 1.10 × 0.20)	484
Period 4 opening inventory (2,200 × 0.20)	(440)
Period 4 budgeted production	2,244

Solution 40

The flexible budget cost allowance for 6,200 miles travelled is £10,790.

	Miles	£
High	5,500	10,475
Low	4,000	9,800
	1,500	675

Variable cost per mile = £675/1,500 = £0.45
Fixed cost = £10,475 − £(0.45 × 5,500) = £8,000
Total cost for 6,200 miles = £8,000 + £(0.45 × 6,200) = £10,790

Solution 41

The sales price variance for June is £68,400 adverse.

Workings:

	£	
45,600 units should sell for (×£90.50)	4,126,800	
But did sell for	4,058,400	
	68,400	adverse

Solution 42

The sales volume contribution variance for June is £25,760 adverse

Workings:

Actual sales volume	45,600	units
Budget sales volume	47,200	units
Sales volume variance in units	1,600	units adverse
× standard contribution per unit	×£16.10	
	£25,760	adverse

Solution 43

The materials price variance for June is £26,990 adverse

Workings:

	£	
539,800 kg should cost (×£1.70)	917,660	
but did cost	944,650	
	26,990	adverse

Solution 44

The materials usage variance for June is £12,580 favourable

Workings:

45,600 units produced should use (×12 kg)	547,200 kg	
But did use	539,800 kg	
Variance in kg	7,400 kg	favourable
× standard price per kg	×£1.70	
	£12,580	favourable

Solution 45

The idle time variance for June is £2,100 adverse

Workings:

Idle time variance = 150 hours idle × £14 standard labour cost per hour = £2,100 adverse

Solution 46

The labour rate variance for June is £26,820 favourable

Workings:

	£	
134,100 hours should cost (×£14)	1,877,400	
but did cost	1,850,580	
	26,820	favourable

Solution 47

The labour efficiency variance for June is £39,900 favourable

Workings:

45,600 units produced should take (×3 hours)	136,800	hours
But did take (active hours)	133,950	hours
Variance in hours	2,850	hours favourable
× standard rate per hour	×£14	
	£39,900	favourable

Solution 48

The variable overhead expenditure variance for June is £7,000 adverse

Workings:

	£	
133,950 active hours should cost (×£4)	535,800	
but did cost	542,800	
	7,000	adverse

Solution 49

The variable overhead efficiency variance for June is £11,400 favourable

Workings:

Efficiency variance in hours from labour variance	2,850	hours favourable
× standard rate per hour	×£4	
	£11,400	favourable

Solution 50

The number of batches of shirts to be laundered to earn a profit of £4,300 per month is 4,040 batches.

Workings:

Contribution per batch of shirts = £(23 − 3−14 − 1) = £5

Number of batches to achieve required profit = £(15,900 + 4,300)/£5 = 4,040 batches.