Elements of costing (ELCO)

Question and answer book

October 2018
Questions

Question 1
If the total cost of 3,000 units is £6,750 and the total cost of 3,900 units is £8,775, which of the following best describes the way in which the cost behaves.

a) Fixed
b) Variable
c) Semi-variable
d) Average

Question 2
Julian runs a small engineering company and is currently looking at the costs of producing product EXO. The total cost of producing 1,100 units of EXO is £20,500 and the total cost of producing 2,200 units is £39,750. Using the high-low method, calculate the total cost of producing 2,000 units of EXO.

a) £36,515
b) £36,250
c) £37,273
d) £36,136

Question 3
Indirect costs are costs that can be directly identified with the units of output produced.

True or False?

Question 4
Denby Deliveries is a business that provides transport and delivery services to other businesses. Which of the following costs could be classified as direct costs of the business?

a) Rent for the administration office
b) Road tax for the delivery vehicles
c) Fuel for the delivery vehicles
d) Delivery drivers' wages
Question 5
A business has part-finished items at the beginning and the end of an accounting period. In the manufacturing account, the opening work-in-progress of part-finished goods will be added to, and the closing work-in-progress of part-finished goods will be subtracted from, the manufacturing cost to get the total cost of goods manufactured.

True or False?

Question 6
In the manufacturing account which of the following is the calculation for the manufacturing cost?

a) Direct materials used + Direct labour + Manufacturing overheads + Opening working progress - Closing working progress.

b) Opening inventory of raw materials + Purchases of raw materials - Closing inventory of raw materials + Direct labour + Manufacturing overheads

c) Direct materials used + Direct labour + Manufacturing overheads + Cost of good manufactured.

d) Opening inventory of raw materials + Purchases of raw materials - Closing inventory of raw materials + Direct labour - Manufacturing overheads

Question 7
Embridge Ltd has made the following purchases of inventory and issues to production: 3 April purchased 100 kgs for £420; 19 April purchased 150 kgs for £675; and 23 April issued 190 kgs to production. Using the FIFO inventory valuation method, what would be the value of the issue to production on 23 April and the closing inventory at the end of the month?

a) Value of issue £825 Value of closing inventory £252

b) Value of issue £843 Value of closing inventory £252

c) Value of issue £825 Value of closing inventory £270

d) Value of issue £843 Value of closing inventory £270
Question 8

Embridge Ltd has made the following purchases of inventory and issues to production: 8 May purchased 1,000 litres for £8,000; 15 May purchased 3,000 litres for £27,000; and 24 May issued 1,200 litres to production. Using the AVCO inventory valuation method, what would be the value of the issue to production on 24 May and the closing inventory at the end of the month?

a) Value of issue £9,800  Value of closing inventory £25,200  
b) Value of issue £10,800  Value of closing inventory £24,200  
c) Value of issue £10,500  Value of closing inventory £25,200  
d) Value of issue £10,500  Value of closing inventory £24,500

Question 9

Employees in the production department of Felstead Ltd work a standard 40 hours per week and receive a basic wage of £12 per hour. Each employee is required to produce 25 units per hour and a bonus of £0.50 per unit is paid for any units produced in excess of 25 per hour. Last week Samira worked 44 hours and produces 1,194 units. What is Samira's gross pay for the week?

a) £528  
b) £575  
c) £597  
d) £577

Question 10

Employees in the finishing department of Dimcote Ltd are paid on a piecework basis and receive £1.60 per completed unit. The business has agreed that all employees should earn at least £8.20 per hour and should work at least 35 hours per week. During the last week Jackson worked 37 hours and completed 194 units. What will Jackson's gross wage be for the week?

a) £303.40  
b) £310.40  
c) £613.80  
d) £287.00
**Question 11**

When calculating a percentage variance this is done by working out the difference between the budgeted cost and the actual cost, dividing this by the actual cost and then multiplying by 100.

True or False?

**Question 12**

Charlie has budgeted Direct materials to be £9,500, Direct labour to be £7,400 and Production overheads to be £2,100. The actual costs of Direct materials were £9,073, Direct labour was £7,962 and Production overheads was £2,394. What are the percentage variances for each of these three costs and are they adverse (A) or Favourable (F)?

- a) Direct materials = 4.7% (F), Direct labour = 7.1% (A), Production overheads = 12.3% (A)
- b) Direct materials = 4.5% (F), Direct labour = 7.6% (A), Production overheads = 14% (A)
- c) Direct materials = 4.7% (A), Direct labour = 7.1% (F), Production overheads = 12.3% (F)
- d) Direct materials = 4.5% (A), Direct labour = 7.6% (F), Production overheads = 14% (F)

**Question 13**

Browns Ltd have a policy to investigate variances that are more than 5% of budget over £1,500. In January, direct materials were budgeted to cost £22,000 and actually cost £20,740. Which of the following statements is true?

- a) The variance is over £1,500 so it must be investigated
- b) The variance is under £1,500 so need not be investigated
- c) The variance is more than 5% of budget, but as it is favourable it does not need to be investigated
- d) The variance is more than 5% of budget, and must be investigated
Question 14

Marina is calculating the cost of two products. She has decided to absorb overheads based on labour hours. Each unit of Product A takes 30 minutes to produce and each unit of Product B takes 45 minutes. Budgeted overheads for the month are £12,000 and Marina expects her employees will work a total of 750 labour hours in the month. How much overhead will be absorbed into each unit of Product A and each unit of Product B?

a) Product A £12 per unit  Product B £8 per unit
b) £12 per unit of each product
c) Product A £8 per unit  Product B £12 per unit
d) £16 per unit of each product

Question 15

Sven is calculating the cost of two products. He has decided to absorb overheads based on machine hours. Each unit of Product X takes 24 minutes to produce and each unit of Product Y takes 1 hour. Budgeted overheads for the month are £18,200 and Sven expects to produce 2,600 units of Product X and 2,460 units of Product Y. How much overhead will be absorbed into each unit of Product A and each unit of Product B?

a) £3.60 per unit of each product
b) Product X £2.08 per unit   Product Y £5.20 per unit
c) Product X £5.20 per unit   Product Y £2.08 per unit
d) Product X £1.42 per unit   Product Y £5.90 per unit
Answers

Question 1

If the total cost of 3,000 units is £6,750 and the total cost of 3,900 units is £8,775, which of the following best describes the way in which the cost behaves.

a) Fixed
b) Variable
c) Semi-variable
d) Average

Answer: The costs change in proportion to changes in the level of output. 
£6,750/3,000 units = £2.25 and £8,775/3,900 units = £2.25.

Question 2

Julian runs a small engineering company and is currently looking at the costs of producing product EXO. The total cost of producing 1,100 units of EXO is £20,500 and the total cost of producing 2,200 units is £39,750. Using the high-low method, calculate the total cost of producing 2,000 units of EXO.

a) £36,515
b) £36,250
c) £37,273
d) £36,136

Answer: (£39,750 - £20,500) ÷ (2,200 - 1,100) = £17.50 Variable cost per unit
£39,750 - (2,200 x £17.50) = £1,250 Fixed cost
£1,250 + (2,000 x £17.50) = £36,250

Question 3

Indirect costs are costs that can be directly identified with the units of output produced.

True or False

Answer: Direct costs are costs that can be directly identified with the units of output produced.
Question 4

Denby Deliveries is a business that provides transport and delivery services to other businesses. Which of the following costs could be classified as direct costs of the business?

a) Rent for the administration office
b) Road tax for the delivery vehicles
c) Fuel for the delivery vehicles
d) Delivery drivers' wages

Answer: Direct costs are costs that can be directly identified with the units of output produced. Fuel and delivery drivers' wages can be directly identified to the individual deliveries that are made.

Question 5

A business has part-finished items at the beginning and the end of an accounting period. In the manufacturing account the opening work-in-progress of part-finished goods will be added to, and the closing work-in-progress of part-finished goods will be subtracted from, the manufacturing cost to get the total cost of goods manufactured.

True or False

Answer: Work-in-progress must be completed during the manufacturing process therefore opening work-in-progress should be added to the manufacturing cost and closing work-in-progress should be subtracted to give the true number of units manufactured in the period.

Question 6

In the manufacturing account which of the following is the calculation for the manufacturing cost?

a) Direct materials used + Direct labour + Manufacturing overheads + Opening working progress - Closing working progress.

b) Opening inventory of raw materials + Purchases of raw materials - Closing inventory of raw materials + Direct labour + Manufacturing overheads

c) Direct materials used + Direct labour + Manufacturing overheads + Cost of good manufactured.

d) Opening inventory of raw materials + Purchases of raw materials - Closing inventory of raw materials + Direct labour - Manufacturing overheads

Answer: Direct materials used = Opening inventory of raw materials + Purchases of raw materials - Closing inventory of raw materials

Manufacturing cost = Direct materials used + Direct labour + Manufacturing overheads
Question 7

Embridge Ltd has made the following purchases of inventory and issues to production: 3 April purchased 100 kgs for £420; 19 April purchased 150 kgs for £675; and 23 April issued 190 kgs to production. Using the FIFO inventory valuation method, what would be the value of the issue to production on 23 April and the closing inventory at the end of the month?

a) Value of issue £825 Value of closing inventory £252
b) Value of issue £843 Value of closing inventory £252
c) **Value of issue £825** Value of closing inventory £270
d) Value of issue £843 Value of closing inventory £270

**Answer:** FIFO values issues of inventory at the earliest purchase price.
Issue = (100 kg x £4.20) + (90 kg x £4.50) = £825
Closing inventory = (150 kg - 90 kg) x £4.50 = £270

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Question 8

Embridge Ltd has made the following purchases of inventory and issues to production: 8 May purchased 1,000 litres for £8,000; 15 May purchased 3,000 litres for £27,000; and 24 May issued 1,200 litres to production. Using the AVCO inventory valuation method, what would be the value of the issue to production on 24 May and the closing inventory at the end of the month?

a) Value of issue £9,800 Value of closing inventory £25,200
b) Value of issue £10,800 Value of closing inventory £24,200
c) Value of issue £10,500 Value of closing inventory £25,200
d) **Value of issue £10,500 Value of closing inventory £24,500**

**Answer:** AVCO values issues of inventory at the average purchase price.
Average price per litre = (£8,000 + £27,000) / (1,000 litres + 3,000 litres) = £8.75.
Issue = 1,200 litres x £8.75 = £10,500.
Closing inventory = (4,000-1,200) x £8.75 = £24,500
Question 9

Employees in the production department of Felstead Ltd work a standard 40 hours per week and receive a basic wage of £12 per hour. Each employee is required to produce 25 units per hour and a bonus of £0.50 per unit is paid for any units produced in excess of 25 per hour. Last week Samira worked 44 hours and produces 1,194 units. What is Samira’s gross pay for the week?

a) £528
b) £575
c) £597
d) £577

Answer: 44 hrs x £12/hr = £528
44 hrs x 25 units per hr = 1,100 units
(1,194 - 1,100) x £0.50 = £47
£528 + £47 = £575

Question 10

Employees in the finishing department of Dimcote Ltd are paid on a piecework basis and receive £1.60 per completed unit. The business has agreed that all employees should earn at least £8.20 per hour and should work at least 35 hours per week. During the last week Jackson worked 37 hours and completed 194 units. What will Jackson’s gross wage be for the week?

a) £303.40
b) £310.40
c) £613.80
d) £287.00

Answer: Wage using piecework = £1.60 x 194 = £310.40
Wage using minimum rate of pay = £8.20 x 37 = £303.40
The piecework payment is higher than the minimum rate per hour.

Question 11

When calculating a percentage variance this is done by working out the difference between the budgeted cost and the actual cost, dividing this by the actual cost and then multiplying by 100.

True or False

Answer: Percentage variances are calculated as a percentage of the budgeted cost rather than the actual cost.
Question 12

Charlie has budgeted Direct materials to be £9,500, Direct labour to be £7,400 and Production overheads to be £2,100. The actual costs of Direct materials were £9,073, Direct labour was £7,962 and Production overheads was £2,394. What are the percentage variances for each of these three costs and are they adverse (A) or Favourable (F)?

a) Direct materials = 4.7% (F), Direct labour = 7.1% (A), Production overheads = 12.3% (A)

b) Direct materials = 4.5% (F), Direct labour = 7.6% (A), Production overheads = 14% (A)

c) Direct materials = 4.7% (A), Direct labour = 7.1% (F), Production overheads = 12.3% (F)

d) Direct materials = 4.5% (A), Direct labour = 7.6% (F), Production overheads = 14% (F)

Answer: Direct material variance = (£9,500 - £9,073) ÷ £9,500 x 100 = 4.5%
Direct labour variance = (£7,400 - £7,962) ÷ £7,400 x 100 = 7.6%
Production overheads variance = (£2,100 - £2,394) ÷ £2,100 x 100 = 14%
Where actual cost is lower than budget it is favourable and adverse when it is higher.

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a) The variance is over £1,500 so it must be investigated

b) The variance is under £1,500 so need not be investigated

c) The variance is more than 5% of budget, but as it is favourable it does not need to be investigated

d) The variance is more than 5% of budget, and must be investigated

Answer: £22,000 - £20,740 = £1,260 favourable variance
£1,260/£22,000 x 100 = 5.73%
Variances must be investigated if they are over 5% whether they are adverse or favourable.
Question 14

Marina is calculating the cost of two products. She has decided to absorb overheads based on labour hours. Each unit of Product A takes 30 minutes to produce and each unit of Product B takes 45 minutes. Budgeted overheads for the month are £12,000 and Marina expects her employees will work a total of 750 labour hours in the month. How much overhead will be absorbed into each unit of Product A and each unit of Product B?

a) Product A £12 per unit  Product B £8 per unit
b) £12 per unit of each product

c) Product A £8 per unit  Product B £12 per unit
d) £16 per unit of each product

Answer: £12,000 ÷ 750 hours = £16/hr
Product A = £16 x 30/60 = £8
Product B = £16 x 45/60 = £12

Question 15

Sven is calculating the cost of two products. He has decided to absorb overheads based on machine hours. Each unit of Product X takes 24 minutes to produce and each unit of Product Y takes 1 hour. Budgeted overheads for the month are £18,200 and Sven expects to produce 2,600 units of Product X and 2,460 units of Product Y. How much overhead will be absorbed into each unit of Product X and each unit of Product Y?

a) £3.60 per unit of each product
b) Product X £2.08 per unit  Product Y £5.20 per unit
c) Product X £5.20 per unit  Product Y £2.08 per unit
d) Product X £1.42 per unit  Product Y £5.90 per unit

Answer: Product X = 24/60 x 2,600 units = 1,040 hours and Product Y = 1hr x 2,460 units = 2,460 hours. Total hours = 3,500 hours
£18,200 ÷ 3,500 hours = £5.20/hr
Product X = £5.20 x 24/60 hours = £2.08
Product Y = £5.20 x 1 hour = £5.20