

- 1 On 1 January 2013 Martin Ltd had an opening stock of 560 units costing £16 each. At this date the business entered into a three-year contract with a sole supplier. The contract stated that all purchases in 2013 would be maintained at £16 each. Subsequent purchase price movements would be in line with a specific industry price index based on a retrospective year basis (i.e. the 2014 purchase price would be the 2013 purchase price plus the 2013 specific industry price index movement).

The specific industry price index movements were:

2013: 5%
2014: 2.5%

Purchase quantities:

2013: 600 units per month
2014: 660 units per month
2015: 750 units per month

Sales quantities:

2013: 7120 units per annum
2014: 7900 units per annum
2015: 9260 units per annum

The selling price for 2013 was based on a sales margin of 20% against the 2013 purchase price. The selling price was increased by 5% for all sales made in 2014. The 2014 selling price was then maintained for all sales made in 2015.

REQUIRED

- (a) The closing stock valuation for Martin Ltd as at 31 December 2013, 2014 and 2015, using **each** of the following methods of stock valuation (periodic basis):
- FIFO
 - LIFO. [8]
- (b) The gross profit for **each** of the years 2013, 2014 and 2015 under the FIFO method of stock valuation (periodic basis). [9]
- (c)* Discuss the appropriateness of the FIFO, LIFO and AVCO methods of stock valuation. [14]

- 2 Grant Ltd offers a sub-contracting service to the motor industry. Components are supplied by customers, the required operations are carried out and the completed work is then returned to the customer. The work is done by different grades of labour. The company also purchases a small amount of material to complete the work.

The company has produced the following budgeted data.

Department	Direct labour costs £	Direct labour hours	Direct material costs £	Direct machine hours	Factory overheads £
Finishing	1 000 000	250 000	12 000	15 000	450 000
Assembly	900 000	300 000	13 000	9 000	360 000
Packing	500 000	187 500	16 000	7 500	150 000

Currently a single factory overhead recovery rate is used, which is a percentage of total direct labour costs.

The cost sheet for job NG113 shows the following information:

Department	Direct labour costs £	Direct labour hours	Direct material costs £	Direct machine hours
Finishing	8800	1100	260	70
Assembly	10 000	1500	240	65
Packing	2400	400	300	80

General office expenses of 20% are added to the total factory cost. The selling price to the customer is based on a 40% profit margin.

The company has been using the single factory overhead recovery rate for some time. However, one of the directors has questioned this method, and has asked whether it would be possible to calculate alternative methods using individual departments.

REQUIRED

- (a) (i) The current factory overhead rate. [2]
- (ii) Calculate the selling price of job NG113 using the current factory overhead rate. [5]
- (b) In line with the director's comments, calculate the overhead recovery rate for **each** department using the following methods:
- direct labour hour rate
 - machine hour rate. [6]
- (c) The selling price of job NG113 to the customer using the direct labour hour rate for **each** department. [7]
- (d) Evaluate, for Grant Ltd, the current method **and** both methods stated in part (b) for the recovery of factory overheads. [9]
- (e) Discuss how an inaccurate rate of overhead absorption can adversely affect the profits of a business. [6]

- 3 Malcolm Ltd started in business on 1 April 2013. The following information is available for its first three years in business:

	2013	2014	2015
Fixed costs (£)	64 000	70 000	72 000
Variable costs per unit (£)	31	32	36
Selling price per unit (£)	42	42	40
Sales (units)	14 000	16 000	21 500
Production (units)	16 000	16 000	20 000

The variable costs per unit include the direct materials, direct labour and variable overheads required for production.

REQUIRED

- (a)* A statement showing the gross profit for **each** of the three years under the FIFO basis of valuing issues, if the company used the:
- marginal costing approach to valuing stock
 - absorption costing approach to valuing stock. [24]
- (b) State **three** applications of marginal costing in decision-making for a business. [3]

- 4 Reed Ltd manufactures a single product. The standard monthly production cost based on a production of 4500 units is as follows:

Materials	108 000 kilos at £6.40 per kilo
Labour	15 750 hours at £12 per hour
Variable overheads	15 750 hours at £7 per hour
Fixed overheads	£11 per unit

Actual results for May 2016 were as follows:

Production	4680 units
Materials	£724 500 for 115 000 kilos
Labour	£183 520 for 14 800 hours
Variable overheads	£114 000
Fixed overheads	£48 300

REQUIRED

- (a) Calculate

- the standard cost for the total production in May 2016
- the actual cost for the total production in May 2016.

[5]

- (b) Calculate **each** of the following variances:

- material price
- material usage
- labour rate
- labour efficiency
- total variable overhead
- total fixed overhead.

[12]

- (c) A reconciliation statement for the budgeted (standard) cost for the total production in May 2016 and the actual cost of production in May 2016.

[4]

- (d) Discuss **two** possible effects of a favourable material price variance for a business.

[6]

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