MA and FMA Extra MTQs Specimen Exam Answers

MTQ 1
Task 1 (6 marks)

Return on investment	**20** % ROI = (operating profit/capital employed) x 100 = ($700/$3,500) x 100 = 20%
Return on sales	**1.4** % Return on sales = (operating profit/sales) x100 = ($700/$50,000) x 100 = 1.4%
Asset turnover	**14** times Asset turnover = sales/capital employed = $50,000/$3,500 = 14
Residual income	$**280** Residual income = operating profit - imputed interest = $700 - (12% x $3,500) = $280
Market share	**4** % Market share = (sales of south division/total industry sales) x 100 = $50,000/$1,250,000 x 100 = 4%

Task 2 (2 marks)

It ensures that managers will select projects with positive net present values (NPV)	**No**
It helps in comparing performance of the managers of divisions of different sizes	**No**
It relates the size of the divisions income to the size of the investment	**No**
It makes divisional managers aware of the cost of financing their divisions	**Yes**

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It avoids short term dysfunctional decision making	**Yes**
It is directly related to net present value (NPV)	**Yes**
It gives an absolute measure of performance	**Yes**
It is more easily understood by divisional managers	**No**

Residual income does make divisional managers aware of the cost of financing their decisions through the deduction of impacted interest in the calculation, which is based on the company's cost of capital. As it uses the cost of capital it is more directly related to NPV. It does give an absolute measure of performance, not a % which is a relative measure. It does avoid dysfunctional decision-making as it will encourage managers to take decisions which have a positive RI.

The other statements relate to the benefits of ROI and NPV.

Task 3 (2 marks)

Non-productive hours per month
Defects per product per month

Non-productive hours per month and defects per product per month are non-financial indicators.
Return per machine per month and profit per product per month are financial indicators.

MTQ 2
Task 1 (2 marks)

Opening finished goods inventory **150** thousand	**150** Company policy is to hold in inventory the equivalent of 1 weeks sales of the next quarter. Quarter 1 forecast sales = $1,950,000 Forecast sales for 1 week = £1,950,000/13 = 150,000 units
Closing inventory goods inventory **175** thousand	**175** At the end of Quarter 1 the company will hold inventory equivalent to 1 week of Quarter 2 sales.

	Quarter 2 forecast sales = $2,275,000 Forecast sales for 1 week = $2,275,000/13 = 175,000 units

Task 2 (2 marks)

Production in Quarter 4 **2250** thousand units	**2250** Production budget = Sales + closing inventory - opening inventory = 2,275,000 + 150,000 - 175,000 = 2,250,000 Note: Opening inventory of 175,000 is based on the closing inventory required at the end of Quarter 3 which is equivalent to 1 week of Quarter 4's sales.

Task 3 (2 marks)

$ **57150** thousand

Raw material usage budget = production budget x material usage per unit x standard cost per kg

= 3,175,000 x 3kg x $6 = $57,150,000

Task 4 (2 marks)

0 units

As 6,600,000kg of material is available then the company can only produce 2,200,000 units as each unit requires 3kg.
Even taking into account the opening inventory of 325,000 units, the company will only be able to sell 2,525,000 units of its forecast Quarter 3 sales. This means that closing inventory will be 0.

Task 5 (2 marks)

Requesting a trade discount
Using the economic order quantity model

Requesting a trade discount will not overcome patterns in supply, as during a period where materials are in short supply prices are likely to go up and suppliers would not be inclined to offer this option.

Using the EOQ model would not overcome restrictions in supply, as it assumes orders are placed regularly, which might not be possible if raw material is scarce and would restrict production. In addition the model could determine an order size which is higher than the amount of raw material available.

MTQ 3

Task 1 (10 marks)

Absorption
higher than
1200 less than
$1640000
100 units less
Less than
320kg more than flexed

Gap 1 -Absorption - the sales volume variance has been valued at standard profit and the fixed overhead variances include an expenditure and volume variance.
Gap 2- Higher than - the sales price is favourable which indicates the units sold achieved a higher price than the standard selling price.
Gap 3 - 1,200 less than - the sales volume variance is adverse which indicates less units were sold than budgeted. The sales volume variance is valued at standard profit, therefore is $60,000/$50 = 1,200 units less than budgeted.
Gap 4 - $1,640,000 - actual sales units are 10,800 (standard profit on actual sales/standard profit). Therefore sales revenue = (10,800 x 150) + 20,000 (favourable price variance) = $1,640,000
Gap 5 - Less than - Fixed overhead volume variance is calculated based on production units. It is adverse which indicates less units have produced than budgeted for. FOH volume variance is valued at standard overhead absorption rate = $2,000/$20 = 100 units less than budgeted.
Gap 6 - Less than - the material price is favourable which indicates that the materials purchased were bought for a lower price than was budgeted for.
Gap 7 - 320kg more than flexed - the material usage variance is adverse which indicates more materials used than budgeted for. The usage variance is valued at standard material cost = $8,000/$25 = 320kg. It is flexed as all cost variances are flexed to reflect the actual production activity in the period.