

### Workshop Lecture 3

Tuesday plc has carried out extensive market research on a new product (codenamed Hubris) that it is about to launch. This research suggests that the volume of sales will be a linear function of price. Typical sales volume and price levels that could be achieved are:

Sales	20,000 units	100,000 units
Unit Selling Price	£220	£140

The budgeted unit costs of the new product are

<i>Manufacturing costs:</i>		£	<i>Selling Cost</i>		£
Variable	Direct Material	10	Variable		22
	Direct Labour	20			
	Overhead	8			
Fixed overhead		40			

The fixed selling and administrative overhead associated with the product is expected to be £1,000,000 per annum. The budgeted figures have been produced assuming capacity output of 100,000 units per annum.

The sales campaign is about to begin and a final decision on selling price is needed. One of the directors feels that production should be at capacity but there is a suggestion from others that profits could be higher with a lower output and higher selling price.

#### Required

#### Note:

You may assume that all production will be sold in the period in all cases and therefore there will be no change in finished goods stock levels

- (i) Calculate the annual profit at maximum output from product Hubris. **(3)**
- (ii) Find, by setting marginal cost equal to marginal revenue, the output/price combination that will maximise the annual profit and show the increase in profit attainable from this policy compared to a policy of producing to capacity. **(12)**
- (iii) At what output level, assuming no capacity constraints, could sales revenue be maximised? **(2)**
- (iv) Briefly compare the technique of deciding on a selling price by setting marginal cost equal to marginal revenue, with the "cost plus" approach. **(8)**

**(25)**