

PART 1: COSTS OF PRODUCTION



ANSWERS TO



1

Pg. 23.1.6

Q1. Fill in the blanks for the various costs.

Qty of Goods	TFC (\$)	TVC (\$)	TC (\$)	AFC (\$)	AVC (\$)	AC (\$)	MC (\$)
0	60	0	60	-	-	-	-
1	60	30	90	60	30	90	30
2	60	40	100	30	20	50	10
3	60	45	105	20	15	35	5
4	60	55	115	15	13.75	28.75	10
5	60	75	135	12	15	27	20
6	60	120	180	10	20	30	45

(a) How much is total fixed cost at:

(i) an output of 0? **60**

(ii) an output of 6? **60**

(b) At which output is the marginal cost lowest? Output =3

Refer to the law of diminishing marginal returns:

Productivity falls eventually for each additional unit of output produced because the firm uses too much variable factor (e.g. workers) and too little of the fixed factor (e.g. machines). The resulting factor combination is inefficient thus causing diminishing returns. This is an important law in production which suggests that to obtain max yield or productivity for an additional unit of output produced the factor combination must be Optimal (i.e. not too much or too little of either fixed or variable factor employed).

Q2. Why do you think the vertical distance between AVC and AC becomes smaller as output increases?

The vertical distance between the AC and AVC curves, at each output level, represents AFC. The gap narrows as output increases because fixed costs gets spread over larger and larger output levels.

This idea is important in cost theory. It implies that a firm can reduce its overheads or fixed costs by increasing its output or more accurately by spreading its overheads over a bigger output.



2

Pg. 23.1.11

Q1: What is the difference between technical and non-technical internal economies of scale?

Internal economies of scale are cost savings from increasing the scale of production. Such cost savings enable a firm to produce each output at a lower unit or average cost.

Technical economies: refers to the reduction in unit costs which are related directly to the production process e.g. use of bigger machines like Jumbo Jets and double-decker buses and greater specialisation of the production process e.g. assembly line production.

Non-technical economies: refers to the cost savings which are not directly related to the production process e.g. marketing (advertising/transport/purchase of raw materials); administrative (cost of hiring managerial and clerical support staff) and financial (cheaper loans or borrowing costs).



3

Pg. 23.1.16

Q3: Illustrate the difference between reaping internal EOS & external EOS.

For internal EOS, it is a movement along the LRAC. That is, AC falls as output increases along the LRAC curve.

For external EOS, it is a shift of the LRAC. That is, the LRAC curve shifts downwards. The AC falls at every level of output.

Students are to attempt to draw the curves themselves and check with their tutors.