Q-1.

Solution: A.

Economic profit = Accounting profit – Total implicit opportunity costs

Where

Accounting profit = Total revenue – Total variable costs – Total fixed costs

Total opportunity costs = opportunity cost of capital + opportunity cost of labor

Total revenue	3,500 × $1,100	$3,850,000	# units × average revenue
Less Total variable costs	3,500 × $720	$2,520,000	# units × average variable cost
Less Total fixed costs		$200,000	given
Accounting profit		**$1,130,000**	
Opportunity cost:			
capital	$1,500,000 ×0.12	$180,000	Investment × Required return
owner's labor		$130,000	Given
Total opportunity costs		$310,000	
Economic profit		**$820,000**	

Q-2.

Solution: C.

As long as marginal product is positive, total product is increasing. If the marginal product declines as additional units of labor are added, the rate of increase in total product is declining, i.e., increasing at a decreasing rate.

Q-3.

Solution: A.

Under perfect competition, a firm is a price taker at any quantity supplied to the market, and AR = MR = Price.

Q-4.

Solution: C.

The optimal output level is 60 units as that level produces the highest profit:

Output (units)	Price ($/unit)	Total Revenue ($)	Total Costs ($)	Profit ($)
20	2,700	54,000	11,500	42,500
40	2,500	100,000	30,500	69,500
60	2,300	138,000	65,500	72,500
80	2,100	168,000	100,500	67,500
100	2,000	200,000	160,500	39,500

Q-5.

Solution: C.

A firm in a monopolistic competition that introduces a new and differentiated product is able to better differentiate its products, and thus demand would be less elastic as close substitutes would be less readily available. Thus the firm would be able to increase price and enjoy economic profit in the short run.