ECON1005 Assignment 4

1. In the short run,
   - **a. at least one of the firm's inputs is fixed**
   - b. customer tastes and preferences are fixed
   - c. the firm may vary all inputs
   - d. sunk costs are variable
   - e. government intervention is inevitable

2. The marginal product of labor is the
   - a. total output produced when one more worker is hired
   - b. change in average output produced when one more worker is hired
   - c. total output per worker when one more worker is hired
   - **d. change in total output when one more worker is hired**
   - e. maximum quantity of output when one more worker is hired

3. If a firm is experiencing diminishing marginal returns to labor, then
   - a. total output must be decreasing
   - **b. total output rises more slowly as additional workers are added**
   - c. the firm must decrease the amount of labor it hires
   - d. total output per worker must be rising
   - e. the firm must be operating in the long run

4. When the marginal product of labor falls, the marginal cost of output
   - a. declines, then increases
   - b. becomes negative
   - **c. rises**
   - d. remains constant
   - e. falls

5. If marginal cost is greater than average total cost then
   - a. profits are increasing
   - b. economies of scale are becoming greater
   - c. average total cost remains constant
   - **d. average total cost is increasing**
   - e. average total cost is decreasing

Short-run Costs	
Output	TVC
0	$ 0
10	$200
20	$350
30	$575
40	$900

6. The table above shows a firm's total variable cost for different daily output levels. In addition, the firm has total fixed cost of $50 per day. If output increases from 20 to 30 units, average total cost rises from
   a. $17.50 to $19.17, and marginal cost is $225.00
   b. $400 to $625, and marginal cost is $225.00
   c. $15.00 to $22.50, and marginal cost is $22.50
   d. $20.00 to $20.83, and marginal cost is $22.50
   e. $20.00 to $20.83, and marginal cost is $225.00

7. Marginal cost is
   a. the increase in total cost from producing one more unit of output
   b. total variable cost per unit of output
   c. fixed cost per marginal unit
   d. average total cost divided by the quantity of inputs used
   e. total cost per unit of output

8. Average Fixed Cost is the
   a. horizontal distance (at any particular cost level) between ATC and AVC
   b. vertical distance (at any particular quantity) between ATC and AVC
   c. vertical distance (at any particular quantity) between ATC and the horizontal axis
   d. vertical distance (at any particular quantity) between AVC and the horizontal axis
   e. horizontal distance (at any particular cost level) between ATC and the vertical axis

9. In the short run, costs that arise from resources that cannot vary in quantity are known as _____, whereas costs from inputs that can vary in quantity are known as _____.
   a. fixed costs; variable costs
   b. explicit costs; implicit costs
   c. opportunity costs; variable costs
   d. fixed costs; opportunity costs
   e. variable costs; fixed costs

10. Along its long-run total cost curve, a firm is producing
    a. at the minimum points of its various average total cost curves
    b. at the minimum points of its various total cost curves
    c. each level of output using the input mix that has the lowest cost
    d. each level of output using the fewest possible inputs
    e. at the output level for each plant size that uses the fewest possible inputs

11. The total cost to a firm of producing zero units of output is
    a. zero in both the short run and the long run
    b. its fixed cost in the short run, zero in the long run
    c. its fixed cost in the long run, zero in the short run
    d. its fixed cost in both the short run and the long run
    e. its variable cost in both the short run and the long run

12. For a given level of output, the short-run total cost of production
    a. always falls below the long-run total cost of production
    b. always exceeds the long-run total cost of production
    c. always equals the long-run total cost of production
    d. may exceed or equal the long-run total cost of production
    e. may exceed or fall below the long-run total cost of production

13. An indivisible input is one that
    a. is fixed
    b. is not smooth
    c. can only be adjusted in large amounts
    d. can not be legally employed
    e. can be easily adjusted in small amounts

14. If a firm increases all inputs by 50 percent and, as a result, its output level increases by 30 percent, the firm is experiencing _____ and it might be due to ____.
    a. constant returns to scale; gains from specialization
    b. increasing returns to scale; gains from specialization
    c. increasing returns to scale; more efficient use of lumpy inputs
    d. decreasing returns to scale; managerial difficulties
    e. Both b and c are correct

15. When long-run average total cost decreases as output increases, a firm experiences
    a. increasing average fixed cost
    b. decreasing total cost
    c. economies of scale
    d. diseconomies of scale
    e. constant returns to scale