Assignment 6

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-03-11, 23:59 IST.

1) A firm is employing 100 units of labor and 50 units of capital to produce 20 widgets. Labor cost is $10 per unit and capital $5 per unit. For the quantities of inputs employed, \( MP_L = 2 \) and \( MP_K = 5 \). In this situation, the firm

- [ ] is producing the maximum output possible given the prices and relative productivity of inputs
- [ ] could lower its production costs by using more labor and less capital.
- [ ] could increase its output at no extra cost by using more capital and less labor.

No, the answer is incorrect.

Scores: 0
Accepted Answers:
- could increase its output at no extra cost by using more capital and less labor.

2) If the capital-labor ratio changes from 100 to 150, while the marginal rate of technical substitution between capital and labor changes from 50 to 100, the elasticity of input substitution

- [ ] Can not be calculated
- [ ] equals 2
- [ ] equals 0.5

No, the answer is incorrect.

Scores: 0
Accepted Answers:
- equals 0.5

3) A firm has a production function \( Q = \min\{L, K\} \) where \( K \) is capital and \( L \) is labor. The firm exhibits

- [ ] Decreasing returns to scale
- [ ] Increasing returns to scale
- [ ] Constant returns to scale

No, the answer is incorrect.

Scores: 0
Accepted Answers:
- Constant return to scale

4) The production function for the personal computers of DISK Inc., is given by \( q = 10K^{0.3}L^{1.2} \) where \( q \) is the number of computers produced per day, \( K \) is hours of machine time, and \( L \) is hours of labor input. DISK’s competitor, FLOPPY, Inc., is using the production function \( q = 10K^{0.6}L^{0.4} \). If both companies use the same amounts of capital and labor, which will generate more output?

- [ ] DISK
- [ ] FLOPPY
- [ ] both firms generates the same output

No, the answer is incorrect.

Scores: 0
Accepted Answers:
- both firms generates the same output

5) The technical rate of substitution between factors \( X_1 \) and \( X_2 \) is -5. If you desire to produce the same amount of output but cut your use of \( X_1 \) by 4 units, how many more units of \( X_2 \) will you need?

- [ ] 12
- [ ] 20

No, the answer is incorrect.

Scores: 0
Accepted Answers:
- 20