**EC1110**

**Assignment 3**

**6th Edition Sayre Answer Key**

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**Chapter 6 36U.** **Key Problem**

a) See the following table

**Table 6.16 (completed)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Quantity of Labour** | **Total Output** | **MPL** | **APL** |
| 1 | 200 | **200** | **200** |
| 2 | 600 | **400** | **300** |
| 3 | 900 | **300** | **300** |
| 4 | 1000 | **100** | **250** |
| 5 | 1040 | **40** | **208** |

b) See the following figure

**Figure 6.13 (completed)**

**22**

**1 2 3 4 5**

**Quantity of labour**

c) See the following table

**Table 6.17 (completed)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Quantity of**  **Labour** | **Total Output** | **TVC** | **AVC** | **MC** |
| 1 | 200 | **$160** | **$0.80** | **$0.80** |
| 2 | 600 | **320** | **0.53** | **0.40** |
| 3 | 900 | **480** | **0.53** | **0.53** |
| 4 | 1000 | **640** | **0.64** | **1.60** |
| 5 | 1040 | **800** | **0.77** | **4.00** |

d) See the following figure

**Figure 6.14 (completed)**

**23**

**200 400 600 800 1000 1200**

##### Quantity of output

e) 3 workers

f) 900 tons

g) AVC is at a minimum

h) 2 workers

i) 600 tons

j) marginal cost is at a minimum

k) Yes, the lowest points of the MC and AVC curves correspond with the highest points of the MP and AP curves.

**Chapter 7 38U**. See the following table:

**Table 6.19**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Output** | **TFC**  **($)** | **TVC**  **($)** | **TC**  **($)** | **AFC**  **($)** | **AVC**  **($)** | **ATC**  **($)** | **MC**  **($)** |
| 1 | 2000 | 600 | **2600** | **2000** | **600** | **2600** | **600** |
| 2 | **2000** | 1000 | **3000** | **1000** | **500** | **1500** | **400** |
| 3 | **2000** | 1290 | **3290** | **667** | **430** | **1097** | **290** |
| 4 | **2000** | 1600 | **3600** | **500** | **400** | **900** | **310** |
| 5 | **2000** | 2100 | **4100** | **400** | **420** | **820** | **500** |
| 6 | **2000** | 2640 | **4640** | **333** | **440** | **773** | **540** |
| 7 | **2000** | 3500 | **5500** | **286** | **500** | **786** | **860** |

**Chapter 7 36U.** **Key Problem**

a) See the following figure

**Figure 7.12 (completed)**

b)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Output** | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| **Plant** | **1** | **2** | **2** | **3** | **3** | **4** | **4** | **4 or 5** | **5** | **5** | **5** |

c) see Figure 7.12 (completed)

d) plant 4

e) output: 16

f) Yes

g) output: 8

h) outputs up to 16

i) outputs above16

j) There is no evidence of diseconomies of scale.

k) plants 3, 4, and 5