

**19. Correct. The answer is false.** When the discount rate goes up the cost per kwh also goes up but it does not quite double.

The turbine will generate:

$$400 \times 24 \times 365 \times 0.25 = 876,000 \text{ kW per year}$$

Total costs are:

$$\$300,000 + \$100,000 = \$400,000$$

The real capital cost per kilowatt hour  $\$_k$  is:

$$(400,000) = \sum_{i=0}^{20} [\$_k 876,000 / (1+0.20)^i]$$

$$\$_k = 400,000 / \{ \sum_{i=0}^{20} [876,000 / (1+0.20)^i] \}$$

$$\$_k = \$0.078 \text{ per kwh}$$