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ISE 307, Term 173
ENGINEERING ECONOMIC ANALYSIS

Quiz# 4

Date: Monday, August 6, 2018

Q1. A machine purchased for \$50,000 has a depreciable life of five years. It will have an expected salvage value of \$5000 at the end of the depreciable life. Using the straight-line method, what is the book value at the end of year 3?

- (a) \$15,000
- (b) \$18,000
- (c) \$20,000
- (d) \$23,000

Q2. A machine purchased for \$50,000 has a depreciable life of five years. It will have an expected salvage value of \$10,000 at the end of the depreciable life. Using the double-declining balance (200% DB) method, what is the depreciation amount for year 4?

- (a) \$0
- (b) \$800
- (c) \$3,456
- (d) \$4,320

Q3. A machine purchased for \$26,000, has a depreciable life of five years. It will have an expected salvage value of \$1000 at the end of the depreciable life. Using the double-declining balance (200% DB) method with switching to straight line method, what is the depreciation amount for year 4?

- (a) \$2,246.4
- (b) \$2,308
- (c) \$2,808
- (d) None of the given answers

Q4. A truck for hauling coal has an estimated net cost of \$60,000 and is expected to give service for 200,000 miles, resulting in \$5,000 salvage value. The book value of the truck after it has been driven for 30,000 miles in the first year and 40,000 miles in the second year is:

- (a) \$19,250
- (b) \$21,000
- (c) \$39,000
- (d) \$40,750

Q5. Suppose that you placed a commercial building (warehouse) in service in March. The building depreciates in 39 years. The cost of the property is \$300,000, which includes the \$100,000 value of land. Determine the amount of depreciation that is allowed during the first year of ownership.

- (a) \$4,059.83
- (b) \$4,273.50
- (c) \$6,089.74
- (d) \$6,410.26

Q6. A company purchased a drill press priced at \$170,000 in year 0. The company additionally incurred \$30,000 for site preparation and labor to install the machine. The drill press was classified as a seven-year MACRS class property. The company is considering selling the drill press for \$70,000 at the end of year 4. Compute the book value at the end of year 4 that should be used in calculating the taxable gains.

0	1	2	3	4	5	6	7	8
	14.29%	24.49%	17.49%	12.49%	8.93%	8.92%	8.93%	-4.46%

- (a) \$53,108.0
- (b) \$62,480.0
- (c) \$63,724.5
- (d) \$74,970.0

Q7. The average tax rate for a taxable income of \$200,000 using the US Corporate tax schedule given below is around:

<u>Taxable income</u>	<u>Tax rate</u>	<u>Tax computation</u>
0-\$50,000	15%	\$0 + 0.15(D)
\$50,001-\$75,000	25%	\$7,500 + 0.25 (D)
\$75,001-\$100,000	34%	\$13,750 + 0.34 (D)
\$100,001-\$335,000	39%	\$22,250 + 0.39 (D)

- (a) \$30.6%
- (b) \$34.0%
- (c) \$36.5%
- (d) \$39.0%

Q8. Given an asset that has a cost basis of \$250,000 and was sold for \$300,000. The book value for the asset at the time of sale was \$150,000. Assume that the capital gain tax rate is 40% while the ordinary gain tax rate is 30%. Then, the net proceeds from this sale is:

- (a) \$150,000
- (b) \$250,000
- (c) \$300,000
- (d) None of the given answers