KSU – Chemical Engineering Department
ChE 418 (Chemical Plant Economics and Safety) – TUT #8 (Economics)
Name: **ID:** **SN:**

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1. At the start of the first year of operation of a chemical company, a composite account of all depreciable assets shows a value of $850,000 with a MACRS recovery period of 5 years, and a straight-line recovery period of 9.5 years. 35% of all profits before taxes must be paid out for income taxes. What would be the reduction in income tax charges for the first year of operation, if the MACRS method were used for the depreciation accounting instead of the straight-line method?

2. The total value of a new liquefied natural gas plant is $10 million. A write-off of 60 percent of the initial cost of the plant in the first 5 years, is permitted. The balance of the plant investment requires a write-off period of 10 years. Using the straight-line depreciation method and assuming negligible salvage and scrap value, determine the total depreciation cost during the first year. If the MACRS method of depreciation (15 yr recovery period for this type of plant) had been selected, what would have been the total depreciation cost during the first year?