ACC1701XA
SEMESTER 1 2025 / 2026
POST LECTURE SUPPLEMENT
LECTURE 09

Caterpillar Inc. In-Class Activity (PollEV):

PART 1:

In-class Activity: CATERPILLAR Inc.

Caterpillar Inc. is a construction company. The following information relates to one of its truck:

- A truck was purchased for cash on July 1, 2023. The cost of truck is:

Invoice cost (before sales tax)	$140,000
Paint job to change to company colors and insert logo	$5,000
Sales tax	$12,000

- Estimated useful life is 120,000 miles, and the estimated salvage value is $25,000

Q1 : Compute the annual depreciation expense under straight line method, assuming estimated useful life in years is 5 years.

Q2 : Compute depreciation expense for 2023 & 2024 under the units-of-production depreciation method. Miles driven is 11k in 2023 and 24k in 2024.

Through a series of PollEV questions, we worked together on how to arrive at the answers for Q1 and Q2.

PollEV (i) : How much would you record as the acquisition cost of the truck

Acquisition cost of the truck = $140k + 5k + 12k
= $157k

PollEV (ii): Q1. What is the annual depreciation under the straight-line method, assuming a 5 years useful life?

Annual depreciation expense under straight line
= (Acquisition cost – salvage value) / estimated life
= ($157,000 - $25,000)/5
= $ 26,400

PollEV (iii) Under the units of production method, what is the annual depreciation per mile of the truck? (round to 2 d.p)

Depreciation per mile = ($157,000 - $25,000)/120,000
= $1.10/mile

PollEV (iv) Q2: What is the depreciation expense for 2023? Miles driven is 11k in 2023.

Depreciation expense for 2023 = (11,000 miles x $1.10)
= $12,100

PollEV (v) Q2: What is the depreciation expense for 2024? Miles driven is 24k in 2024.

Depreciation expense for 2018 = (24,000 miles x $1.10)
= $26,400

PART 2:

Part 2 : CATERPILLAR Inc. (continued)

RECALL: Caterpillar Inc. purchased a truck in 2023 and the truck was depreciated using the **units-of-production** method for 2023 & 2024.

- In 2025, Caterpillar Inc. made the following expenditures on the truck:
  - (i) On Jan 1, spent $46,750 to re-engine the truck, which increased the total life to 200,000 miles. The expected salvage value remains unchanged.
  - (ii) $6,000 in cash on new tires and regular maintenance.
- Miles driven on the truck is 20k miles in 2025 (after engine upgrade).
- Truck was sold on Dec 31, 2025 for $120k.

Q3 : Compute depreciation expense for 2025 under the units-of-production depreciation method.

Q4 : Record journal entry for disposal of the truck on Dec 31, 2025.

PollEV (vi) Which expenditures can be capitalized?

Capitalize $46,750, as this is a major expenditure that extends the useful life of the truck beyond the original estimate.

PollEV (vii) What is the revised net book value (after capitalization) of the truck?

NBV at beginning of 2025 = Original Acquisition cost – Accumulated Depr.
= $157,000 – $12,100 – $26,400
= $118,500

Revised NBV = Revised asset value – salvage value
= (Beg Carrying amount + capitalized exp) – salvage
= ($118,500 + $46,750) – $25,000
= $140,250

PollEV (viii) What is the revised depreciation per mile? (round to 2 d.p)

Revised depreciation per mile
= (Revised NBV – salvage value) / revised remaining estimated life

= ($165,250 - $25,000)/ (200,000 – 11,000 – 24,000 miles)
= $140,250/165,000
= $0.85/mile

PollEV (ix) Q3: What is the depreciation expense for 2025? Miles driven is 20k in 2025.

Depreciation expense for 2025 = 20,000 miles x $0.85
= $17,000

PollEV (x) What is the gain/loss on the sale of the truck?

How to calculate the gain/loss on disposal of truck:

Total cost of truck = $157,000 + $46,750
= $203,750

Accumulated depreciation = Depreciation for 2023, 2024 and 2025
= $12,100 + $26,400 + $17,000
= $55,500

NBV at disposal = 203,750 – 55,500
= $148,250

Disposal value = $120,000

➔ Loss on sale of truck = $120,000 - $148,250
= - $28,250

Q4: Journal entry to record disposal of truck:

Dr	Cash	$120,000	
Dr	Accumulated depreciation	$55,500	
Dr	Loss on sale of truck	$28,250	
	Cr PPE - Truck		$203,750