Dr.SNS RAJALAKSHMI COLLEGE OF ARTS AND SCIENCE
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Accredited by NAAC – UGC with 'A+ Grade (Cycle IV)

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Coimbatore- 49

DEPARTMENT OF COMMERCE WITH INFORMATION TECHNOLOGY

21UCR402 – FUNCTIONAL ACCOUNTING
Unit-1: Methods of calculating Depreciation

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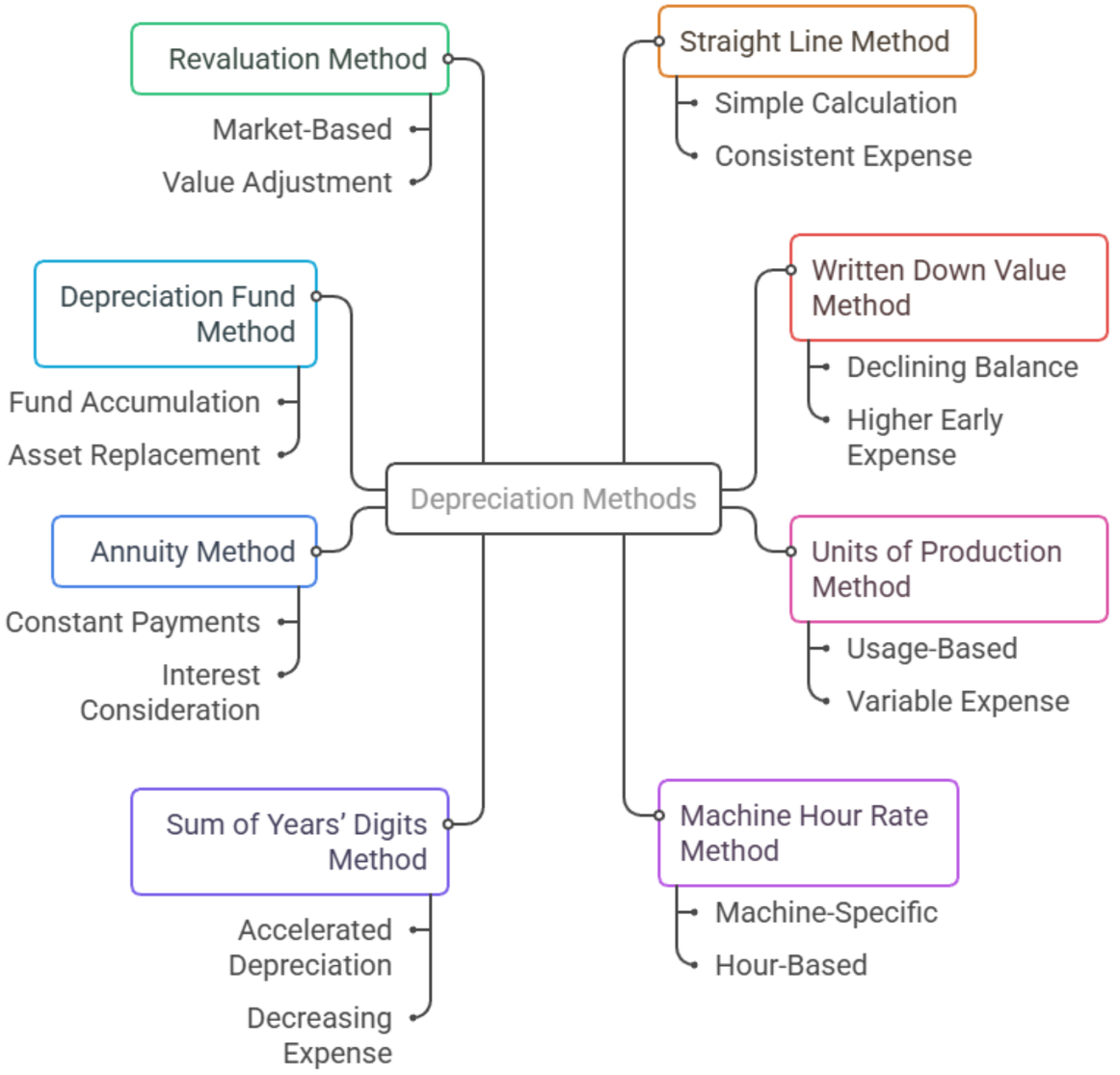
Introduction to Depreciation

- Systematic reduction in the value of fixed assets over time
- Recognized as an expense to reflect asset value decline due to its use, wear and tear, passage of time, or obsolescence.

Various Methods of Calculating Depreciation

1. Straight Line Method
2. Written Down Value Method
3. Units of Production Method
4. Machine Hour Rate Method
5. Sum of Years' Digits Method
6. Annuity Method
7. Depreciation Fund (Sinking Fund) Method
8. Revaluation Method



1. Straight Line Method (SLM)

Meaning: Same amount of depreciation is charged every year.

Formula:

Depreciation per year = (Cost – Scrap value) / Useful life

Example

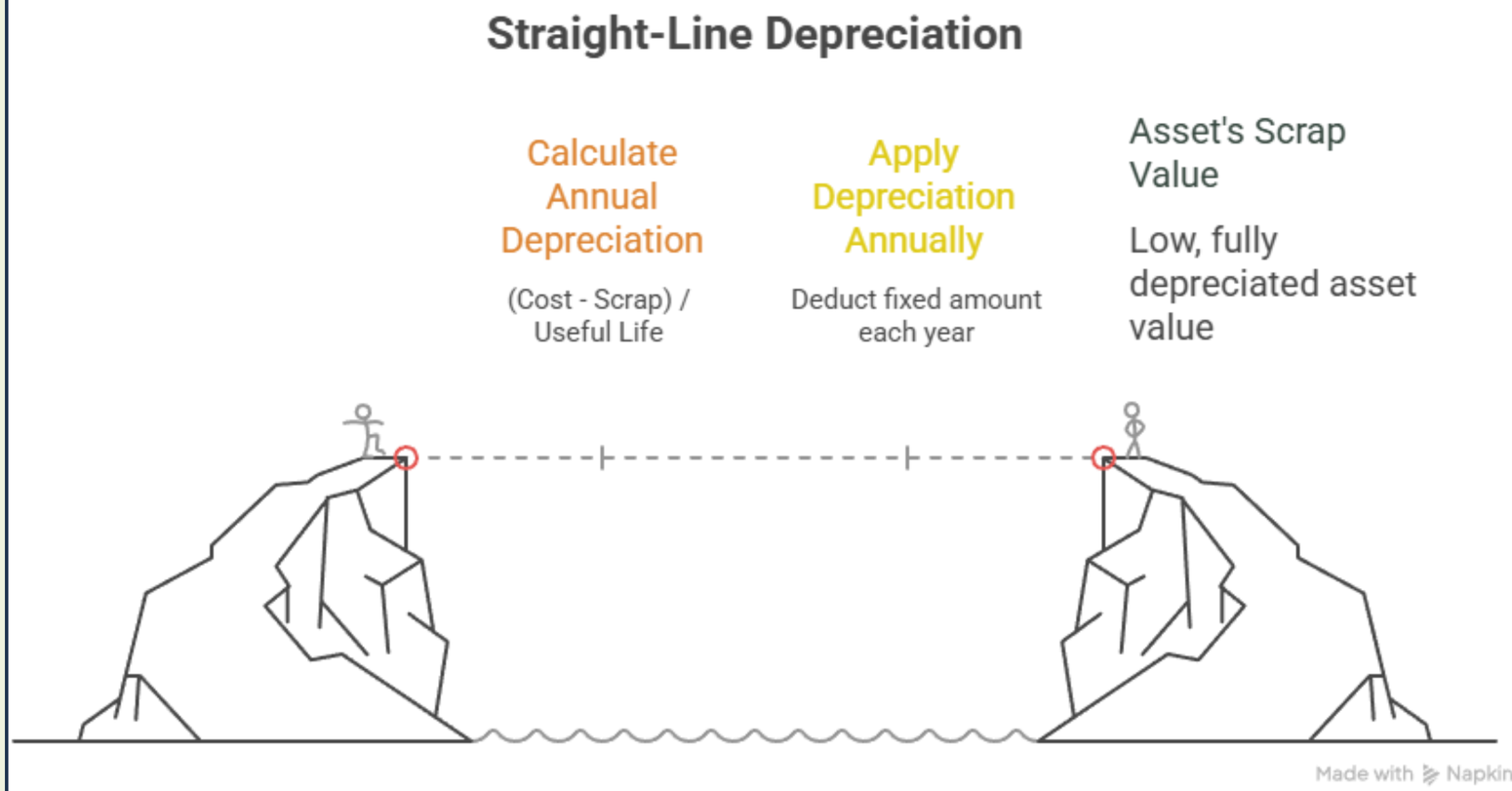
Cost of machine = ₹50,000

Scrap value = ₹5,000

Life = 5 years

Depreciation per year = (50,000 – 5,000) / 5 = **₹9,000 per year**

So every year, depreciation = **₹9,000**.



2. Written Down Value Method (WDV)

Meaning: Depreciation is charged at a fixed **percentage** on the **book value** each year. Amount decreases every year.

Formula:

Depreciation = Book value × Rate

Example

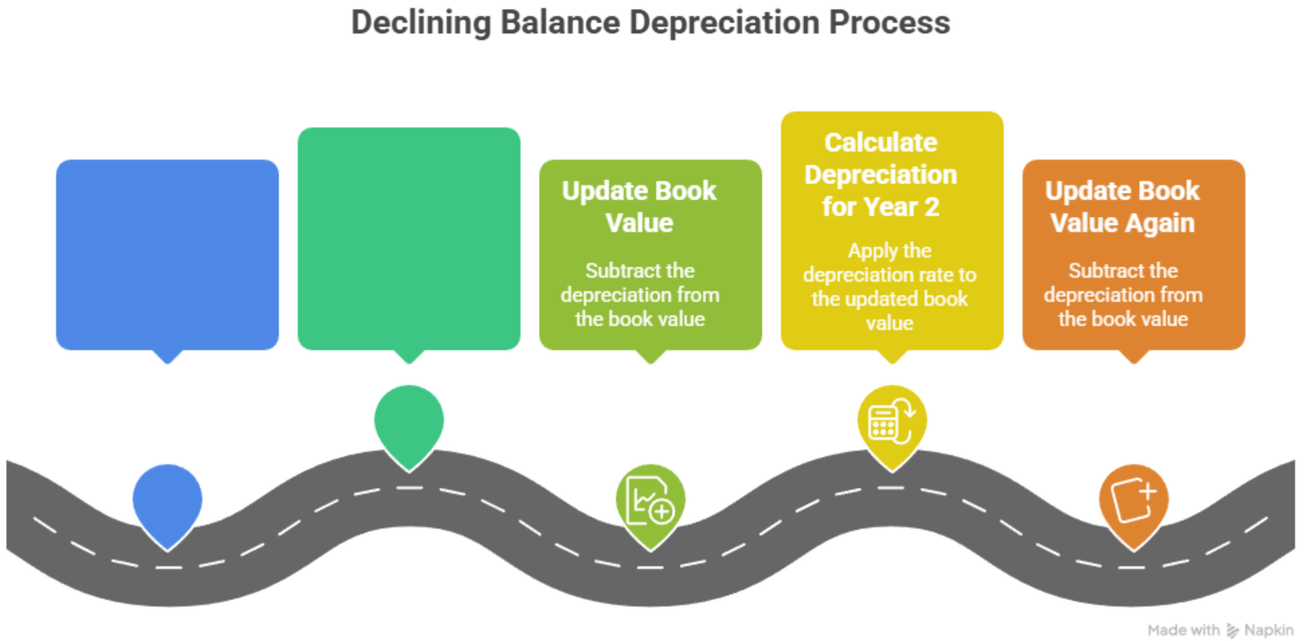
Cost = ₹40,000

Rate = 10% per year

Year 1 depreciation = 40,000 × 10% = **₹4,000**

Book value at end of Year 1 = 40,000 – 4,000 = **₹36,000**

Year 2 depreciation = 36,000 × 10% = **₹3,600**



3. Units of Production Method

Meaning: Depreciation depends on **usage**, not on time.
Used for machines where output can be measured.

Example

Cost of machine = ₹1,00,000
Scrap value = ₹10,000
Total estimated units = 10,000 units
Depreciation per unit = (1,00,000 – 10,000) / 10,000 = **₹9 per unit**
If in Year 1, machine produces 2,000 units:
Depreciation = 2,000 × 9 = **₹18,000**

4. Machine Hour Rate Method

Meaning: Depreciation is charged based on hours the machine is used.

Example

Cost = ₹60,000

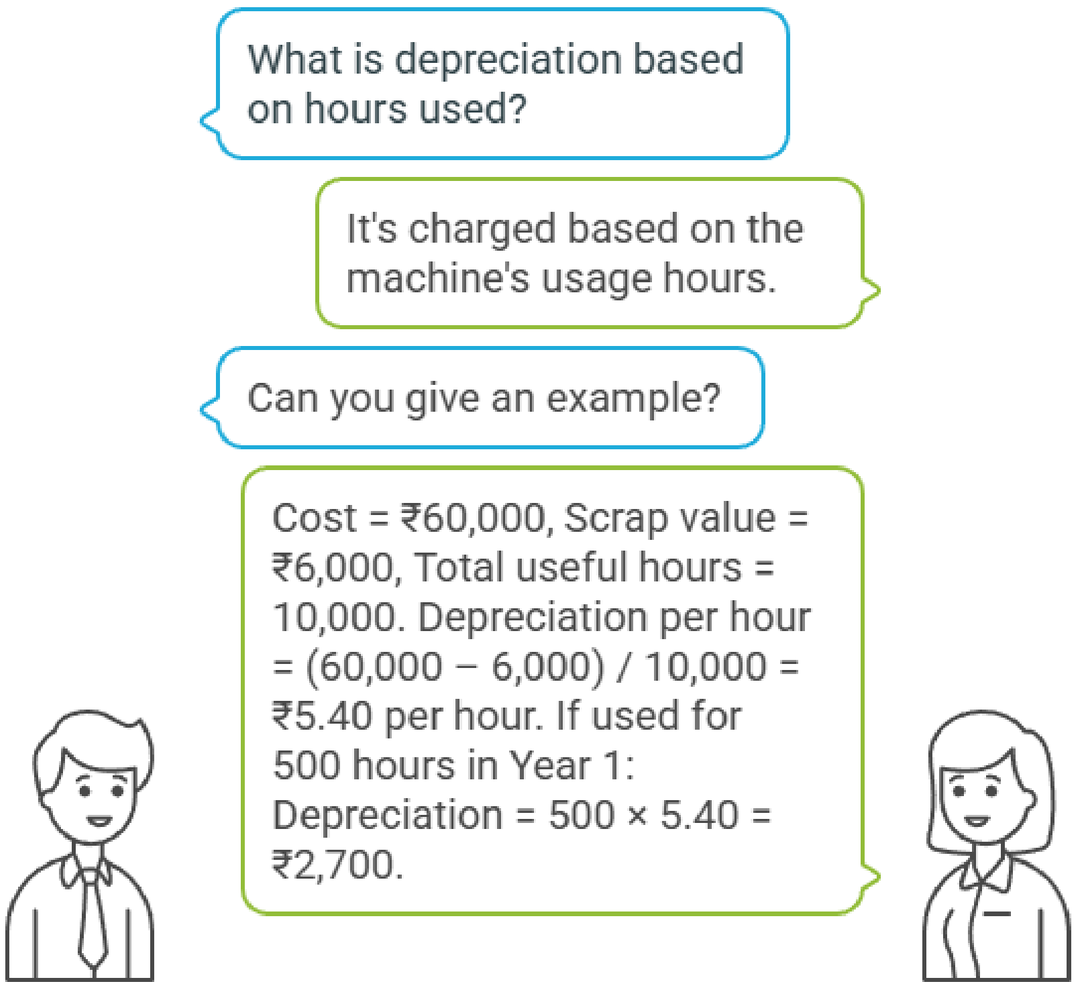
Scrap value = ₹6,000

Total useful hours = 10,000 hours

Depreciation per hour = (60,000 – 6,000) / 10,000 = **₹5.40 per hour**

If used for 500 hours in Year 1:

Depreciation = 500 × 5.40 = **₹2,700**



5.Insurance Policy Method

Meaning:
Under this method, the business takes an insurance (endowment) policy to replace an asset after its useful life.
The business pays a fixed premium every year.
When the policy matures, the insurance company pays a lump sum, which is used to buy a new asset.
The annual premium is treated as the amount set aside for depreciation.

A machine costs ₹1,00,000 and will last for 5 years.
The business takes an endowment policy that will pay ₹1,00,000 after 5 years.
The annual insurance premium to be paid is ₹18,000 per year.

Working:
Year 1: Business pays ₹18,000 to the insurance company → treated as depreciation.
Year 2: Again pays ₹18,000 → treated as depreciation.
...
Year 5: Pays ₹18,000.
After 5 years, the insurance company pays **₹1,00,000**, which exactly replaces the old machine.

6. Annuity Method

Meaning: Depreciation includes interest on the asset's value. Used when assets involve investment value.
(Simple version for UG: involves fixed annual charge including interest.)
Very Simple Example
Cost = ₹50,000
Interest rate = 10%
Annual charge (from annuity table for 5 years, rate 10%) ≈ 0.2638 × 50,000
= **₹13,190 per year**
(This combines depreciation + interest.)

7. Depreciation Fund Method / Sinking Fund Method

Meaning: A fixed amount is set aside every year and invested. The investment + interest helps to replace the asset later.

Simple Idea Example:

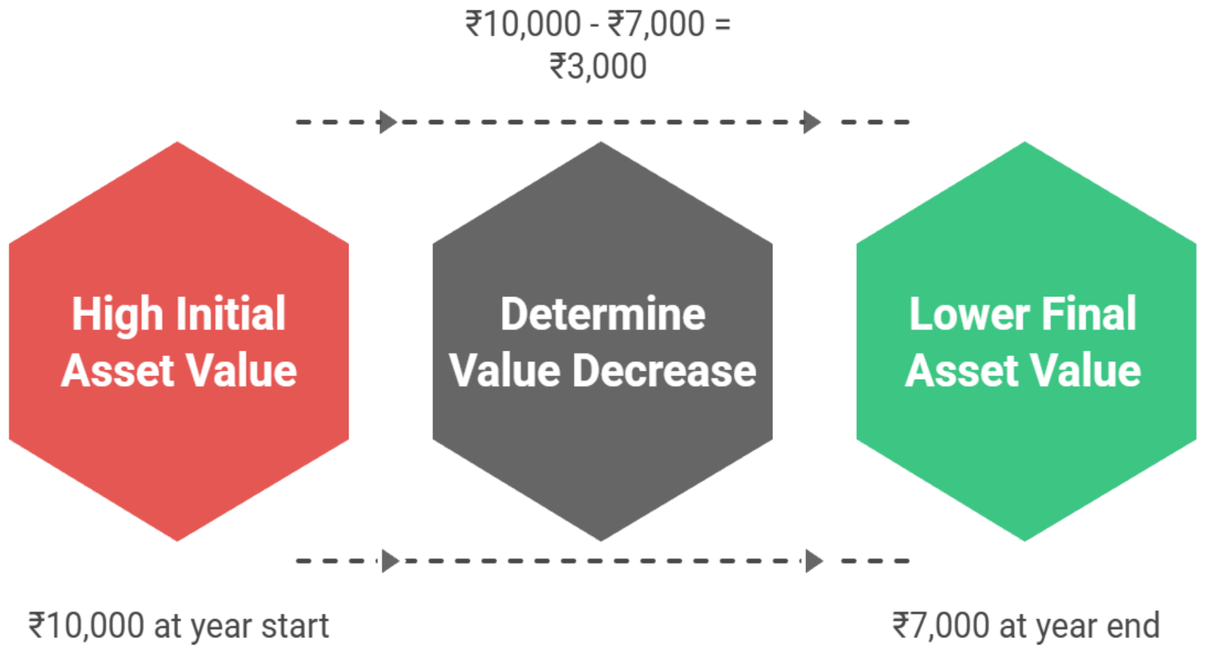
Annual sinking fund amount from table ≈ 0.1527 (at 5% for 10 years)

Asset cost = ₹1,00,000

So amount to invest every year = 1,00,000 × 0.1527 = **₹15,270**

8. Revaluation Method

Meaning: Used for assets like livestock, loose tools, etc.
Depreciation = Decrease in value.
Example:
Value at beginning of year = ₹10,000
Value at end = ₹7,000
Depreciation = **₹3,000**



Assessment

1. Method with reducing annual depreciation — **WDV**
2. Depreciation based on usage — **Units**
3. Depreciation recorded on asset value — **Expense**
4. Depreciation on machine hours — **Activity**
5. Method with equal yearly depreciation — **SLM**

THANK YOU