SIR SYED UNIVERSITY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF SOFTWARE ENGINEERING

NAME: Mashym Ali

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SECTION: B

COURSE TITLE: ENGINEERING ECONOMICS

COURSE CODE: HS-301T

COURSE TEACHER: Engr. Abdul Moid Khan

ASSIGNMENT # 02

Question No - 1:
What are the different types of Depreciation Methods to calculate the book value of an asset? Explain with examples.
Answer:
There are three depreciation methods to calculate value of an asset. Below are there names and some examples:

Straight-Line Method:
Straight-line depreciation is a method of calculating the depreciation of an asset over time in a uniform way. Under this method, the asset is assigned a fixed useful life, and the depreciation is calculated by dividing the cost of the asset by its useful life. The resulting amount is then deducted from the asset's value each year over its useful life. It is generally used when an asset is expected to be used evenly over its useful life and when the asset's value decreases at a consistent rate over time.

Declining Method:
In this method, the asset is assigned a fixed useful life and a fixed depreciation rate, which is applied to the asset's book value (the original cost of the asset minus any accumulated depreciation) each year. The resulting amount is then deducted from the asset's value, and the process is repeated for each year of the asset's useful life. Declining balance method may be used when an asset's value decreases more rapidly at the beginning of its useful life, while the sum-of-the-years'-digits method may be used when an asset is expected to be used more heavily in the earlier years of its useful life.

Units-of-Production Method:
The units of production depreciation method is a method of calculating the depreciation of an asset based on its usage or output. Under this method, the asset is assigned a fixed useful life and a fixed depreciation rate per unit of output. The depreciation expense is calculated by multiplying the asset's usage or output for a given period by the depreciation rate. It is often used for assets that are used to produce goods or services, such as manufacturing equipment or vehicles.

Question No - 2:
Consider a piece of equipment that costs $25,000 with an estimated useful life of 8 years and a $0 salvage value. The depreciation expense per year for this equipment.
Answer:
Depreciation expense per year = Cost - Salvage Value / Useful Years, In Years

Depreciation expense per year = $25000 – $0 / 8

Depreciation expense per year = $3125

Question No - 3:

On April 1, 2012, company X purchased a piece of equipment for Rs.100, 000. This is expected to have 5 useful life years. The salvage value is Rs.14, 000. Company X considers depreciation expenses for the nearest whole month. Calculate the depreciation expenses for 2012, 2013, 2014 using a declining balance method.

Answer:

Asset Cost = Rs.100,000
Useful years = 5
Salvage value = Rs.14,000
Depreciation rate per year = 1/5 = 0.2

Date	DB rate	Book Value	Depreciation Expense
4.1.2012	0.2	Rs.100,000	Rs.20,000
4.1.2013	0.2	Rs.80,000	Rs.16,000
4.1.2014	0.2	Rs.64,000	Rs.12,800