DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

STAMFORD UNIVERSITY BANGLADESH

Course Title: **Engineering Economics**

Course Code: 0311HUM319

ASSIGNMENTS

SUBMITTED TO

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Net Present Value

Net Present Value : The net present value formula calculates NPV. which is the difference between the present value of cash inflows and the present value of cash outflows over a period of time. NPV determine the total current value of all cash flows generated, including the initial capital investment, by a project.

NPV=

N= Total number of time periods

n= Time period

C_n= Net cash flow at time period

r = Internal rate of return (IRR)

Present value = $\frac{\text{Cash value at time period}}{(1 + \text{rate of return})^{\text{time period}}}$

Ques: 01

Mr Khan made an investment of $1000 in a Russian Company. and gets back $1090 the next year. If the rate of return is 8%. Calculate the net present value.

Solution:

It is given,

Amount investment = $1000

Money got after a year = $1090

Rate of return = 8% = 0.08

Using net present value formula,

$$\text{Present value} = \frac{\text{Cash value at time period}}{(1+\text{rate of return})^{\text{time period}}}$$

$$PV = \frac{\$1090}{(1+0.08)^1}$$

$PV = \$1009.25$

Net present value $= (\$1009.25 - \$1000)$

$= \$9.25$

Therefore, for 8% [illegible] return NPV = $9.25

Ques:02: Robot bought a house, for $755,000 and sells it a year later for $1,000,000, where $10000 as taxes and insurance fees were included after deducting all installment's fees and taxes Calculate net present value, if the rate of return is 7%.

Solution: Given

investment on buying the house = $750,000

Money received from a sale a year later after deducting all fees and taxes = (1000 000 − 10000) $

= $990000

Rate of return = ~~7% = 0.07~~

= 7% = 0.07

Using net present value formula,

$$PV = \frac{\text{Cash value at time period}}{(1 + \text{rate of return})^{\text{time period}}}$$

$$PV = \frac{\$990000}{(1 + 0.07)^{1}}$$

$$PV = \frac{\$990000}{1.07}$$

$$= \$925233.64$$

Net present value = ($925233.64 - $755000)

= $170233.64

Therefore,

for 7% rate of return,

~~inves~~ The net present value = $170233.64
