

QNo1 (A)

A Property dealer in Hayatabad township has an option to purchase a twenty Marla plot that will be worth Rs. 100 million in six years. If the value of the plot increases at 8% how much the property dealer is willing to pay for this property?

Sol we know that

$$P = F(1+i)^n \rightarrow \text{①}$$

So putting values in eq ①

we get

$$P = 100m(1+0.08)^6$$

$$P = 100m(1.08)^6$$

$$P = 100m(1.8)^6$$

$$P = 100m(34.0122)$$

$$P = 3401.22 \text{ million}$$

$$P = 3401.22 \text{ million}$$

Q1b

$$P = A[(1+i)^n - 1/i(1+i)^n]$$

$$10 = (1.06)^n - 1/0.06(1.06)^n$$

$$10 \times 0.06(1.06)^n = (1.06)^n - 1$$

$$0.6(1.06)^n = (1.06)^n - 1$$

$$1 = (1.06)^n - 0.6(1.06)^n$$

$$1 = (1.06)^n [1 - 0.6]$$

$$1/0.4 = (1.06)^n$$

$$2.5 = (1.06)^n$$

$$\ln 2.5 = n \times \ln(1.06)$$

$$0.916 = n \times 0.0583$$

$$N = 0.916 / 0.0583$$

$$\del N = 15.7 \text{ years.}$$

Q2 A Four generators installed at Jebel Dam --

Sol Given \rightarrow $A = 30$ million $N = 5$ years
 $i = 15\%$

So

$$P = A \left[\frac{(1+i)^N - 1}{i(1+i)^N} \right]$$

$$P = 30000000 \left[\frac{1.0113}{0.3017} \right]$$

$$P = 30000000 (3.5200)$$

$$P = 105,600,000 \text{ Ans}$$

Q2 b

Suppose Mr. Zabar make 15 equal annual deposits of \$10,000 each --

Sol

$$A = 10,000, \quad i = 5\%, \quad N = 15$$

$$F = A \left[\frac{(1+i)^N - 1}{i} \right]$$

$$F = 10,000 \left[\frac{(1+0.05)^{15} - 1}{0.05} \right]$$

$$F = 10,000 [21.578563]$$

$$F = 215785.63 \text{ Ans}$$

Q3 2 Depreciation is the decrease in value of physical property with the passage of time and use. A non-cash expense that reduces the value of an asset as a result of wear and tear, age, or obsolescence. Most assets lose their value over time (in the words, they depreciate) and must be replaced once the end of their useful life is reached. There are several accounting methods that are used in order to write off an asset's depreciation cost over the period of its useful life. Because it is a non-cash expense, depreciation lowers the company's reported earnings while increasing free cash flow.

Property is depreciable if it meets the following basic requirements.

- It must be used in business or held to produce income.
- It must have a useful life and the life must be longer than one year.
- It must be something that wears out, decays, gets used up, becomes obsolete or loses value from natural causes.

Q4 (2)

\$28,000

\$4,000

14.29%

Gross income = \$50,000

Cost of goods sold = \$20,000

Depreciation on DC machine = \$4,000

operation expenses = \$6,000

If the company pays taxes at the rate of 40% on its taxable income, what is its net income during its first year from the project?

Given: Gross income and expenses as stated
Income-tax rate = 40%.

Find = Net income

Consider the purchase of the machine to have been made at the end of year zero which is also the beginning of year one

Note that our example explicitly assumes that the only depreciation charges for year one are those for the DC machine a situation that may not be typical

item	amount	
Gross income (Revenue)	\$50,000	
Expenses		
Cost of goods sold	\$20,000	
Depreciation	\$2,000	
operating expenses	\$6,000	
Taxable income	\$20,000	
Taxes (40%)	\$8,000	Net income \$12,000

Q 4 | b |

SolutionBenefits

Improvement of the image of the area of Abbottabad city

Potential to attract conferences and conventions to Abbottabad city.

Potential to attract professional sports franchises to the city.

Revenue from rental of the facility
Use of facility for civic events.

Costs Architectural design of the facility.
Construction of the facility. Design and construction of parking facility. Operation and maintenance costs Insurance costs

Disbenefits Loss of use of portion of the park, hilce path natural drain. and the pond. Loss of wildlife habitat in urban area.

Q5 sol) First to determine the equivalent AW of all costs at the MARR of 12%/year of cash exactly 12%, the annual rental income adjustment for 9% overpayment equals the AW of costs.

Initial investment cost

$$= 50000 + 225000 = 275000$$

Taxes and insurance per year

$$= 0.1 (275000) = 27500$$

$$\text{up keep/year} = 30(12+30)0.9 = 9720$$

$$\text{OR cost/year} = 275000 (A/P, 12\%, 20) - 50000 (A/F, 12\%, 20) \\ = 36123$$

(Assume that the investment in land is constant at the year of 20)

$$\text{Equivalent AW (of costs)} = -27500 - 9720 - 36123 \\ = -73343$$

Therefore minimum annual rental received equals 73,343 and with annual compounding the monthly rental amount R is

$$P = 73343 / (12+30)0.9 = 1226.36$$