

1. PV of 10000 at 9%

$$PV = (1+r)^{-n} \times 10000$$
$$= (1.09)^{-5} \times 10000 = 6499$$

2. Total amt equals the (PV of 50000) + 30000

$$= 50000 \times (1.08)^{-2} + 30000$$
$$= 72867$$

3. $Em = ROE / ROA$

$$\Rightarrow ROE = Em \times ROA$$
$$= 2.36 \times 10^3$$
$$= 24.3\%$$

5. Total = $8000 + 20000(1.1)^{-3}$

$$= 23026$$

6. Before tax income = 620 000

$$\text{Total gains} = \frac{+200\,000}{820\,000}$$

$$\text{Tax} = 40\% \times 820\,000 = 328\,000$$

$$\text{Net income} = 820\,000 - 328\,000$$
$$= 492\,000$$

7. Investment cost = 2000 000

Divided by annual return 500 000

PV factor of \$1 annuity 4.

The PV factor at 20% occurs at 9 years

$$(1 - (1.20)^{-9}) / 0.20 = 4.03$$

Therefore minimum no. of years = 9 years

8. Income from sale of assets = 80 m

Less book value of asset = 48 m

Profit on sale of asset = 32 m

Less operating loss = 10 m = 22 m

Less tax 40% = $22 \times 40\% = 8.8$

Net income = $22 - 8.8 = 13.2$

Without any sale being done

80

40

40

10

$40\% \times 30 = 12$

$30 - 12 = 18 \text{ million}$

9. Total restoration costs = $(100\,000 \times 40\% + 150\,000 \times 30\% + 200\,000 \times 30\%)$

$$= 145\,000$$

$$10. \text{ Income tax expense} = \text{operating income} \times \text{income tax rate} \\ = 25000 \times 40\% \\ = 100,000$$

$$\text{Total income tax expense} = \text{operating income} + \text{income on discounted operations} \times \text{income tax rate} \\ = (25000 + 70000) \times 40\% = 128000$$

Therefore income tax expense and total income tax would be 100,000 and 128,000 respectively.

$$12. \text{ PV} = 50000 \times (1.03)^{-6} = 41874 \\ n = 3 \times 2 = 6 \\ r = 6\% = 3\%$$

$$13. \text{ Fair value of building} = 75 \\ \text{Divide by annual payments} = 10 \\ \text{PV factor of annuity due} = 7.500 \\ \text{PV factor annuity due of } 7\% (n=10) = 7.515 = 1 + (1 - (1.07)^{-9}) / 0.07 \\ \text{PV factor annuity due of } 8\% (n=10) = 7.247 = 1 + (1 - (1.08)^{-9}) / 0.08$$

Therefore ratio is between 7% and 8%

14. Explodia is not primarily responsible for providing the product to customer, they are not the primary, as they are not the manufacturer, they act like agent with 20% commission.

$$15. \text{ Income} = 6200000 - 3800000 - 1300000 - 200000 - 80000 = 820000$$

$$17. \text{ FV} = (1.09)^5 \times 220000 \\ = 1.53862 \times 220000 = 338496$$

$$20. \text{ Percentage Completed} = \text{cost incurred till this year end} / \text{Total estimated cost of Project}$$

$$= 36 / (36 + 84) = 36 / 120 = 30\%$$

$$\text{Revenue for this year} = 30\% \times \text{Total project revenue} \\ = 30\% \times 150 = 45 \text{ Million}$$

$$\text{Gross profit} = \text{Revenue} - \text{cost incurred} = 45 - 36 = 9 \text{ million}$$