Tutorial-1

Future value

Q1) Rs 10000 - end of every year - 7 years - 12% interest compounded annually

- Money at the end of 7th year $= 10000 \left[\frac{(1+0.12)^7 - 1}{0.12}\right]$

$= 100890.117$

Q2) Present value - 25000 per year - 10 years - 12%.

- $PV = 25000 \left[\frac{1.12^{10} - 1}{0.12(1.12)^{10}}\right] = 141255.5757$

Q4) 250000 – end of 10 years – 10%.

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

$$\Rightarrow 250000 = A\left[\frac{1.1^{10} - 1}{0.1}\right] \Rightarrow 250000 \times \frac{0.1}{1.1^{10} - 1} = A$$

$$\Rightarrow A = 15686.3487$$

Q5) ₹1000 – beginning of every year – 8% – 3 years more – total 4

$$FV = A\left[\frac{(1+i)^n - 1}{i}\right](1+i) = 4866.60$$

$$= 1000\left[\frac{1.08^4 - 1}{0.08}\right]1.08$$

Q6) 25 deposits of ₹1000 – 9%.

$$FV = A\left[\frac{(1+i)^n - 1}{i}\right](1+i) = 1000\left[\frac{1.09^{25} - 1}{0.09}\right]1.09$$

$$= 92323.977$$

Q3) $$PV = 250000\left[\frac{1.1^{12} - 1}{0.1 \times 1.1^{12}}\right] = 1703415.75$$

TVM Questions

Total points 6/6

The respondent's email (**21103105@mail.jiit.ac.in**) was recorded on submission of this form.

✓ Mr. Rajesh deposits Rs. 10000 at the end of every year for 7 years in his saving account paying 12% interest compounded annually. He wants to determine how much sum of money he will have at the end of the 7th year. 1/1

Rs 100890 ✓

✓ Mr. A wishes to determine the present value of the annuity consisting of cash inflows of Rs. 25000 per year for 10 years. The rate of interest he can earn from his investment is 12 %. 1/1

Rs 141255.5 ✓

✓ The ABC company expects to receive Rs. 2,50,000 for a period of 12 years from a new project it has just undertaken, assuming a 10% rate of interest, how much would be the present value of this annuity? 1/1

Rs 1703415.75 ✓

✓ Mr. Vinay plans to send his son for higher studies abroad after 10 years. He expects the cost of these studies to be Rs. 250,000. How much should he save annually to have a sum of Rs. 250,000 at the end of 10 years, if the interest rate is 10 per cent? 1/1

Rs 15686.35 ✓

✓ Suppose that you start a savings plan by depositing Rs. 1,000 at the beginning of every year into an account that offers 8% per year. If you make the first deposit today, and then three additional ones, how much will have accumulated after four years? 1/1

Rs 4866.6 ✓

✓ An investor invests 25 annual amounts of Rs. 1,000 with the first amount investing today. What is the future value of this investment as of 25 years from now if the interest rate is 9%? 1/1

Rs 92323.97 ✓