



NPTEL

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## Unit 5 - Week 4

### Course outline

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### Week 4 Assignment 1

The due date for submitting this assignment has passed. **Due on 2016-10-05, 23:00 IST**  
As per our records you have not submitted this assignment.

1) Mr. XYZ just purchased a new bike and wish to put enough money in bank account to pay **1 point** the maintenance of bike for first 4 years. A dealer told him to expect a maintenance ₹4500 for 1st year & additional ₹1500 after each year. What amount should be deposited in bank now with interest rate 7% per year compounded annually, so that maintenance amount can be covered?

- ☐ ₹23234.65
- ☐ ₹22434.45
- ☐ ₹24835.94
- ☐ ₹21786.03

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

₹22434.45

2) A company wants to build a mall for which they need a large amount of money. A bank **2 points** agreed to lend money to company today (at  $N=0$ ) at an interest rate of 5% annually compounding. To complete the deal bank required that the loan to be paid in 9 equal installments which starts at the end of 4th year ( $N=4$ ) with ₹1,00,000 payment. Subsequent payments decreases by ₹4,000 each year thereafter. What is the present worth of the loan today?

- ☐ ₹498782.133
- ☐ ₹507322.14
- ☐ ₹512373.05
- ☐ ₹502742.37

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

₹498782.133

3) ABC deposits an amount of Rs.5000 at end of every year. At the end of 7th year he wants **2 points** to raise the amount of deposit by Rs.3000 and now deposits Rs.8000 at end of every year. What is the balance in the account after 12 years when interest rate is 6% compounded yearly?

- ☐ Rs.101260.72
- ☐ Rs.106370.11
- ☐ Rs.108730.21
- ☐ Rs.103263.27

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:****Rs.101260.72**

4) Anil borrow a loan of ₹1,50,000 for his bike from a finance company. If the loan is to be repaid in ten years then how much amount he will require each year if the interest rate is 12 % compounded annually?

**1 point**

- ☐ ₹33432.66
- ☐ ₹46775.87
- ☐ ₹36574.00
- ☐ ₹26547.62

**No, the answer is incorrect.****Score: 0****Accepted Answers:****₹26547.62**

5) A man wants to deposit his saving ₹1000 at end of first year in a saving account at 10% annual interest rate. He increases his saving by ₹400 at the end of each year for next nine years after first year. What should be the annual uniform amount he deposits that yields an equal future value of balance in comparison to the above data by end of 9 years?

**2 points**

- ☐ ₹3348.87
- ☐ ₹2236.02
- ☐ ₹2348.94
- ☐ ₹2289.79

**No, the answer is incorrect.****Score: 0****Accepted Answers:****₹2348.94**

6) Mrs. Y makes a series of annual deposit into a bank account that pays 17% interest rate compounded annually. She deposit ₹15000 at end of first year. If deposit amount decreases by ₹100 in each year for next 5 years. How much she have at the end of sixth deposit?

**1 point**

- ☐ ₹141726.91
- ☐ ₹131437.34
- ☐ ₹142511.22
- ☐ ₹136216.43

**No, the answer is incorrect.****Score: 0****Accepted Answers:****₹136216.43**

7) An unequal end of year cash flow is given in table. If interest rate is 14.5% per annum compounded monthly. What is the future worth of total amount at end of 6th year?

**4 points**

- ☐ Rs.51226.82
- ☐ Rs.53163.19
- ☐ Rs.62254.04
- ☐ Rs.62968.57

**No, the answer is incorrect.****Score: 0****Accepted Answers:****Rs.51226.82**

8) An oil company purchased an Oil tanker for transportation purpose which has a useful life of 8 years. The engineers estimate that its maintenance cost for the first year will be ₹1500 and expected to increase at a rate of ₹250 at end of each year over remaining life. If Oil Company wants to set up a maintenance balance in an account that earns interest at rate of 11% compounded annually. How much the company have to deposit in the account now, so that all maintenance amount will be paid in future?

**1 point**

- ☐ ₹12193.10
- ☐ ₹11525.34
- ☐ ₹10664
- ☐ ₹17475.15

No, the answer is incorrect.

Score: 0

Accepted Answers:

₹11525.34

9) Compare two cash flow A & B where A is equal end of year cash flow & B is Unequal end of 5 points  
year cash flow with an annual rate of interest 13% compounded monthly. Total of cash flow at end of  
1.25 year is given for both A&B. find the present worth of A using present worth method & future worth of  
B using future worth method. What is the difference between the future worth B and Present worth of

- ☐ ₹8970
- ☐ ₹7897.76
- ☐ ₹9470
- ☐ ₹8768

No, the answer is incorrect.

Score: 0

Accepted Answers:

₹9470

10) An equal cash flow of ₹3000 per year is received at end of each year for seven years. 3 points  
Interest rate is 16% per year compounded annually. What is the present worth of the cash flow?

- ☐ ₹11761.98
- ☐ ₹12416.34
- ☐ ₹12115.69
- ☐ ₹12978.15

No, the answer is incorrect.

Score: 0

Accepted Answers:

₹12115.69

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