## Unit 4 - Week 3

## Course outline

How to access the portal?

## Week 1

## Week 2

## Week 3

Future Value
Annuities- 1 \& 2
Perpetuity
Amortization

Week 3
Assignment 1
Solution
Week 3
Assignment 2 Solution

Quiz: Week 3 Assignment 1

Quiz: Week 3
Assignment 2

## Week

## Week 3 Assignment 2

The due date for submitting this assignment has passed. Due on 2016-09-28, 23:00 IS As per our records you have not submitted this assignment.

1) Abhi is valuating a firm that is expected to earn cash flows of Rs. 100 per year in perpetuity. 2 points For Case ' $A$ ' he estimates a discount rate of $10 \%$, whereas for Case ' $B$ ' he again estimates a discount rate of $10 \%$ but with subsequent payments growing at a rate of $5 \%$. What is ratio of the present value of Case ' A ' to the present value of Case ' B '?

1:5
1:6
1:3
1:2
No, the answer is incorrect.
Score: 0
Accepted Answers:
1: 2
2) Canara Bank decided to give Rs. 1000 every year to Kuldeep as an education- loan for a 2 points period of 4 years at an interest rate of $10 \%$ annually. For repayment of loan Kuldeep has to pay infinite streams of annual equal cash flows of Rs. 1000 at the end of each year after the end of $4^{\text {th }}$ year.Calculate the present value of a perpetuity paid by Kuldeep?

Rs. 1000
Rs. 10020
Rs. 10,000
Rs. 10100
No, the answer is incorrect.
Score: 0
Accepted Answers:
Rs. 10,000
3) To receive Rs. 5000 each year, starting from the end of first year @ $8 \%$ per annum, Malik 3 points invested some money in perpetuity at the start of 1st year. The Present value of this Cash-flow is closest to which of the following Present value of annuity that compounded annually?
(Assume here A=Periodic Payment ; N= Number of Periods ; i = Interest Rate)

A = Rs. $5000 ; N=31 ; i=7 \%$
A =Rs. $5000 ; N=30 ; i=7 \%$
A = Rs. $5000 ; N=30 ; i=6.9 \%$
d) $A=$ Rs. $5000 ; N=31 ; i=6.9 \%$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$A=R s .5000 ; N=31 ; i=7 \%$
4) Pooja International is paying a third party, in exchange for the rights to a key patent.The first 2 points payment will be Rs.5,000 and is to be made in exactly one year, with subsequent payments growing at a rate of 7.5 percent annually. If Pooja international paid amount once a year in perpetuity, then third party able to secure a 10 percent annual rate of return on the payment. How much amount the company ha to invest today?

Rs. 50,000
Rs. 2,50,000
Rs. 1,00,000
None of these
No, the answer is incorrect.
Score: 0
Accepted Answers:
None of these
5) Dividend of a company A's stock is expected to increase at the rate of $0.5 \%$ and the rate of return of stock is $7.5 \%$ annually. Stock is paying dividend of Rs. 200 annually. Find out the present worth of stock?

Rs . 2875.14
Rs. 2857.14
Rs. 2800.00
Rs. 8257.14
No, the answer is incorrect.
Score: 0

## Accepted Answers:

Rs. 2857.14
6) Find the payment necessary to amortize a loan of $₹ 10,800$ at nominal interest rate of $14 \%$, if 1 point there are to be 36 monthly payments.
₹396.21
₹ 421.32
₹ 216.32
₹ 369.12
No, the answer is incorrect.
Score: 0
Accepted Answers:
₹369.12
7) A debt of Rs.10,000 is amortize in 21 equal monthly payments of Rs.534.973 at $13 \%$

2 points annual interest on remaining principal. What is the unpaid balance after third payment?

Rs. 8706.24
Rs. 9142.15
Rs. 8210.85
Rs.8596.21
No, the answer is incorrect.
Score: 0
Accepted Answers:
Rs. 8706.24
8) Common data for question 8 \&question 9:-

1 point

John bought a pent house at the cost of Rs.50,00,000. He put $25 \%$ down payment and went to a finance company for a simple interest amortized loan for balance at $6.75 \%$ annual interest rate for 30 years. The

Ioan was approved on the condition that all the monthly payments including home loan should not exceeding $36 \%$ of John's monthly income.

What should be John's monthly income to qualify the loan? (Assume no monthly payment other than home loan).
Rs.57,662.36

- Rs.66,972.73

Rs.67,562.31
Rs.65,578.95
No, the answer is incorrect.
Score: 0
Accepted Answers:
Rs.67,562.31
${ }^{9)}$ What is the balance due at the end $121^{\text {th }}$ installment?
$\sigma^{+}$
Rs.37,43,524.48
Rs. 31,98,787.23
Rs.37,46,771.32
Rs.31,92,457.98
No, the answer is incorrect.
Score: 0

## Accepted Answers:

Rs.31,92,457.98
10Assume that Mr.Jai have taken out an amortized loan for ₹ 30,000 from a bank to buy a 1 point sports bike. The annual interest rate charged on due balance by bank is $14 \%$ and time period of loan is 4 years. What is your monthly payment?
₹ 719.564
₹819.794
₹ 860.45
₹765.23
No, the answer is incorrect.
Score: 0
Accepted Answers:
₹819.794

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