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Daffodil International University

Department of Information Technology and Management
Faculty of Science & Information Technology
Midterm Examination, Spring 2022
Course Code: **Introduction to Finance; Course** Title: **ITM- 307**
Level: 3 Term: 2 Section: A
Date: Sat, 23 Mar 2024 Instructor/Teachers: NI Time Slot (C)
Time: 1:30 Hr. Marks: 25

1	**Scenario:** Suppose you started working on a Startup. You have realized you need to solve some dilemma and take decisions ***(Total-7)***			
	a)	Explain (any 2) Principles of Hedging, Principles of Diversity or Principles of Liquidity & Profitability	**[4]**	**CO- 1** ***Level-5***
	b)	Explain **Investment Decision** From Managerial Function of Financial Manager. Draw an Imaginary balance sheet to show the Components.	**[3]**	
2.	**Plot**: suppose one of you relatives is asking for advice. Here are some questions that are asked to you *(Total-5)*			
	a)	Between Profit Maximization and Wealth Maximization which one is better?	**[2]**	**CLO-3** ***Level-5***
	b)	Build an argument (describe) how agency problem can create a Funding Problem in a Company	**[1]**	
	c)	Show 2 Distinguishing facts between of Internal Funds and external fund	**[2]**	
3.	**Solve** Time Value of Money Problem ***(Total-13)***			
	a)	Irfan received USD 6050 for an investment that was held for 12 years at 18% Simple interest. Find the interest amount and the Present value	**[2]**	**CLO- 4** ***Level- 5***
	b)	Compute the Simple interest on Tk. 38500 for 7 months at 15 ¼ %	**[2]**	
	c)	***Option 1*:** Find the Future Value of the following cash flow stream given that the interest rate is 18% compounded annually at the end of the period in 4 years.	**[4]**	

Annual payment Number	1	2	3	4.
Payment Amount	$900	$ 6500	$0	$3000

***Option 2*:** The Present value of another option is $15000.

Which option is the best for investment? Why?

	d)	You sold Land to John Cina. he gave you 3 options. and the interest is 15,25% semi-annual compounded. x) 100000 now. y) Each year 20,000 for next 8 years z) 2,40,000 at the end of 8 years. Which one will you take? why?	**[5]**	

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Reference of equation to be used as per your need -

$$PV = \frac{CF_t}{(1+r)^t} \qquad FV_t = CF_0(1+r)^t \qquad PV = \sum_{t=0}^{n} \frac{CF_t}{(1+r)^t} \qquad FV_n = \sum_{t=0}^{n} CF_t(1+r)^{n-t}$$

$$PVA = PMT\left[\frac{1-(1+r)^{-t}}{r}\right] \qquad FVA_t = PMT\left[\frac{(1+r)^t - 1}{r}\right] \qquad r = \frac{r_{nom}}{m} \qquad EAR = \left(1+\frac{r_{nom}}{m}\right)^m - 1$$

$$PV = \frac{CF_t}{\left(1+\frac{r_{nom}}{m}\right)^{mt}} \qquad FVA_t = PMT\left[\frac{\left(1+\frac{r_{nom}}{m}\right)^{mt} - 1}{\frac{r_{nom}}{m}}\right] \qquad PVA = PMT\left[\frac{1-\left(1+\frac{r_{nom}}{m}\right)^{-mt}}{\frac{r_{nom}}{m}}\right]$$

$= \sum PR \qquad = \sqrt{\sum [R - E(R)]^2 * P} \qquad = R_f + [R_m - R_f]\,\beta \qquad = SD/E(R)$