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.	[5]	

x) 1,00000 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?

Reference of equation to be used as per your need -

$$PV = \frac{CF_t}{(1+r)^t}$$

$$FV_t = CF_0(1+r)^t$$

$$PV = \sum_{t=0}^{n} \frac{CF_t}{(1+r)^t}$$

$$FV_n = \sum_{t=0}^{n} CF_t(1+r)^{n-t}$$

$$PVA = PMT\left[\frac{1-(1+r)^{-t}}{r}\right]$$

$$FVA_t = PMT\left[\frac{(1+r)^t - 1}{r}\right]$$

$$r = \frac{r_{nom}}{m}$$

$$EAR = \left(1 + \frac{r_{nom}}{m}\right)^m - 1$$

$$PV = \frac{CF_t}{\left(1 + \frac{r_{nom}}{m}\right)^{mt}}$$

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

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

$$= \sum PR$$

$$= \sqrt{\sum [R - E(R)]^2 * P}$$

$$= R_f + [R_m - R_f]\beta$$

$$= SD/E(R)$$