



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. <table><tr><td>Annual payment Number</td><td>1</td><td>2</td><td>3</td><td>4.</td></tr><tr><td>Payment Amount</td><td>\$900</td><td>\$ 6500</td><td>\$0</td><td>\$3000</td></tr></table> Option 2: The Present value of another option is \$15000. Which option is the best for investment? Why?	Annual payment Number		1	2	3	4.	Payment Amount	\$900	\$ 6500	\$0	\$3000	[4]
Annual payment Number	1	2	3		4.									
Payment Amount	\$900	\$ 6500	\$0	\$3000										
	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]											

Reference of equation to be used as per your need -

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

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

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

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

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

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

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

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

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

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

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

$$= \sum PR$$

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

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

$$= SD/E(R)$$