



**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

<b>1</b>	<b>Scenario:</b> Suppose you started working on a Startup. You have realized you need to solve some dilemma and take decisions <i>(Total-7)</i>												
	a)	Explain (any 2) Principles of Hedging, Principles of Diversity or Principles of Liquidity & Profitability	[4]										
	b)	Explain <b>Investment Decision</b> From Managerial Function of Financial Manager. Draw an Imaginary balance sheet to show the Components.	[3]										
<b>2.</b>	<b>Plot:</b> suppose one of you relatives is asking for advice. Here are some questions that are asked to you <i>(Total-5)</i>												
	a)	Between Profit Maximization and Wealth Maximization which one is better?	[2]										
	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]										
<b>3.</b>	<b>Solve</b> Time Value of Money Problem <i>(Total-13)</i>												
	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]										
	b)	Compute the Simple interest on Tk. 38500 for 7 months at 15 ¼ %	[2]										
	c)	<p><b>Option 1:</b> 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.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Annual payment Number</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4.</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">Payment Amount</td> <td style="text-align: center;">\$900</td> <td style="text-align: center;">\$ 6500</td> <td style="text-align: center;">\$0</td> <td style="text-align: center;">\$3000</td> </tr> </tbody> </table> <p><b>Option 2:</b> The Present value of another option is \$15000.</p> <p><b>Which option is the best for investment? Why?</b></p>	Annual payment Number	1	2	3	4.	Payment Amount	\$900	\$ 6500	\$0	\$3000	[4]
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	d)	<p>You sold Land to John Cina. he gave you 3 options. and the interest is 15,25% semi-annual compounded.</p> <p>x) 100000 now.  y) Each year 20,000 for next 8 years  z) 2,40,000 at the end of 8 years.</p> <p><b>Which one will you take? why?</b></p>	[5]										



Reference of equation to be used as per your need -

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

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

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

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

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

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

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

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

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

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

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

$$= \sum PR$$

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

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

$$= SD/E(R)$$