Daffodil International University (DIU)
Faculty of Business & Entrepreneurship
Department of Business Administration
Program: BBA
Summer 2026
Final Examination
Title of the Course: **Advanced Financial Theory and Practice (0412-325)**

Points: **40** Time: **Two (02) Hours**

[**Instructions**: Answer all the questions. The figures the in the right margin indicate the points of each question. Maintain the sequence of all parts of each question. Be specific while answering the questions.]

Group A:			**15**
Q. 1.	**Describe** 'costs of bankruptcy', 'effect of bankruptcy costs', and 'incentive signaling approach' related to capital structure.	**CLO1 L02**	**05**
Q.2.	**Explain** the uses of Y = MX + C in finance. **Distinguish** between capital allocation line (CAL) and capital market line (CML).	**CLO1 L02**	**05**
Q.3.	"Dividend changes may communicate information about future performance" – **demonstrate** the statement by putting the required arguments.	**CLO1 L02**	**05**
Group B:			**10**
Q. 4.	Consider the following information: Asset X: E(R) = 12%, SD = 20% Asset Y: E(R) = 8%, SD = 15% Correlation, $r_{xy} = 0.30$ **Compute** the percentage investment needed in X and Y for minimum risk. Also, **compute** the variance for the minimum variance portfolio.	**CLO2 L03**	**05**
Q. 5.	A company has 200,000 outstanding shares selling at \$50 each. Net profit is \$2,000,000, planned investment is \$4,000,000, the cost of equity is 10%, and the proposed dividend is \$15 per share. **Estimate** the number of new shares needed to be issued to preserve the investment program when **(i)** dividend is paid and **(ii)** when dividend is not paid.	**CLO3 L05**	**05**
Group C:			**15**
Q. 6.	Suppose you are working as a financial consultant for a company. Information provided in the following tables is available for you. The first table reports the subjectively estimated returns on three securities A, B, and C; and the changes in the two factors δ_1 and δ_2 for five equally likely states of nature. On the other hand, the second table includes the expectations of each security and transformed factor. It also includes a few of the factor loadings/sensitivities. After computing the missing information in the second table, **evaluate** the possible arbitrage	**CLO3 L05**	**15**

opportunity by using the market equilibrium rate of return prescribed by the Arbitrage Pricing Theory (APT) and accordingly advise your client. Assume that the risk-free rate is 10%.

State of Nature	Prob.	Securities' Returns (%)			Factor Changes	
		A	B	C	δ_1	δ_2
Horrid	0.20	53.00	623.99	(55.23)	(10.00)	(5.00)
Bad	0.20	413.37	10.00	70.70	(5.00)	38.48
Average	0.20	(1493.12)	25.00	(9.00)	25.00	8.00
Good	0.20	1058.75	(3771.42)	(12.47)	40.00	(1.44)
Excellent	0.20	83.00	3237.44	61.00	50.00	0.00

Securities	R_i (in %)	Factor Loadings		Factor Expectations (in %)
		b_{i1}	b_{i2}	
A	23	0.50	2.00	$\delta_1 = 20.00$
B	25	1.00	?	$\delta_2 = 8.00$
C	11	1.50	1.00	