Daffodil International University
Faculty of Business & Entrepreneurship
Department of Business Administration
Program: BBA

Semester: Spring 2026
Time: 1 Hour and 30 Minutes
Course Code: 0412-413
Section: All

Examination: Mid-Term
Full Marks: 25
Course Title: Investment Analysis and Portfolio Management
Teachers' Name: MOG

Question 1: ***Read each of the questions carefully and answer:***

(i) **Compare** the following terms:

a) Market order and Limit order. **[CLO 01, L02, Marks: 2]**

b) Buy-side analyst and Sell-side analyst with examples. **[CLO 01, L02, Marks: 3]**

(ii) **Explain** the assumptions of Markowitz Portfolio Theory. **[CLO 01, L02, Marks: 3]**

(iii) During a period of heightened uncertainty in global financial markets, three individuals Rahim Ahmed, Nusrat Khan, and Tanvir Hossain engaged in transactions involving spot and futures contracts, each driven by a different economic motive.

Rahim Ahmed works as the finance manager of a large textile manufacturing firm in Bangladesh that regularly imports raw cotton from abroad. His company is scheduled to make a USD 2 million payment in three months. Concerned that a potential appreciation of the US dollar against the Bangladeshi taka could significantly increase the firm's import cost, Rahim decided to enter into a currency futures contract to purchase US dollars at a predetermined exchange rate for settlement in three months. His primary intention was to protect the firm from unfavorable exchange rate movements and to ensure certainty in cash flow planning.

At the same time, **Nusrat Khan**, an independent market participant, was closely following developments in global commodity markets. She believed that rising inflation expectations and geopolitical tensions would lead to a sharp increase in gold prices in the near future. Nusrat did not own gold, nor did she require physical delivery of the metal at any point. Acting on her market outlook, she purchased gold futures contracts, fully aware that she was exposed to price risk, with the sole objective of selling the contracts later at a profit if her expectations proved correct.

Meanwhile, **Tanvir Hossain**, a professional trader with experience in commodity markets, noticed a clear pricing inconsistency between the spot and futures markets for crude oil. The spot price stood at $80 per barrel, while the three-month futures price was $88 per barrel, even though the combined cost of storage and financing for three months was only $4 per barrel. Recognizing an opportunity, Tanvir simultaneously bought crude

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oil in the spot market, stored it, and sold futures contracts for delivery in three months, thereby locking in a profit regardless of future price movements.

Based on the actions, objectives, and risk exposure described in the passage, **explain** the trading strategy of Rahim Ahmed, Nusrat Khan, and Tanvir Hossain. **[CLO 01, L02, Marks: 4]**

Question 2:

Lena Hunziger has designed the following three-asset portfolio:

Table 1: Expected return and portfolio weight

	SQUARPHARMA	T. Bond	GOLD
Expected Return	15%	12%	9%
Portfolio Weight	0.20	0.30	0.50

Table 2: Variance-Covariance Matrix

	SQUARPHARMA	T. Bond	GOLD
SQUARPHARMA	400	45	189
T. Bond	45	81	38
GOLD	189	38	441

Requirement: **Determine** the expected return and risk of the portfolio from the above tables. **[CLO 02, L03, Marks: 1+3=4]**

Question 3:

An equity analyst is designing a **Free-Float Market-Capitalization-Weighted Index** to track the performance of large, actively traded companies. The index includes three listed firms from different sectors.

Security	Beginning of Period Price ($)	End of Period Price ($)	Dividends per Share ($)	Shares Outstanding (Unit)
Apple Inc.	3,000	3,300	120	6,000
Toyota Motor Corp.	2,800	2,400	180	8,000
Unilever PLC	1,200	1,350	90	12,000

To ensure the index reflects investable market value, the analyst excludes promoter holdings, government stakes, and strategic cross-holdings.

Particulars	**Apple Inc.**	**Toyota Motor Corp.**	**Unilever PLC**
Percent of Shares Available for Trading	85%	70%	90%

Requirement:

a) **Estimate** the number of free-float shares outstanding for each company. **[CLO 03, L05, Marks: 1]**

b) **Estimate** the price return and total return of the index. **[CLO 03, L05, Marks: 2+2=4]**

Question 4:

A market has the following limit orders standing on its book for a particular stock:

Buyer	Bid Size (Number of Shares)	Limit Price (£)	Offer Size (Number of Shares)	Seller
Adam	1,200	48.40		
Brain	600	48.65		
Chloe	500	48.80		
Daniel	400	49.10		
		49.15	700	Olivia
		49.30	1,000	Sophia
		49.50	600	Ethan

Emma submits a day order to sell 2,800 shares with a limit price of £48.65. Assuming that no more buy orders are submitted on that day after Ian submits his order.

Requirements:

a) **Calculate** Emma's average trade price and **illustrate** with whom Emma Trades. **[CLO 02, L03, Marks: 2]**

b) **Prepare** the limit order book showing its status after the execution of Emma's order. **[CLO 02, L03, Marks: 2]**

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