

MASTER OF ARTS EXAMINATION, 2024

(2nd Year, 1st Semester)

ECONOMICS

PAPER : ECO 304

(Financial Economics I)

Time : Two Hours

Full Marks : 30

Answer *any three* questions :

3×10=30

1. (a) Suppose you estimate that stock A has a volatility of 32% and a beta of 1.42, whereas stock B has a volatility of 68% and a beta of 0.75. Which stock has more total risk? Which stock has more market risk? Suppose the risk-free rate is 2% and you estimate the market's expected return as 10%. Which firm has a higher cost of equity capital?
- (b) How is writing a covered call different from designing a protective put?
- (c) What is the difference between operating cycle and cash cycle?
- (d) What are co-incidental indicators?

4+3+2+1=10

(2)

2. (a) Suppose the expected return on the tangent portfolio is 10% and its volatility is 40%. The risk-free rate is 2%. What is the equation of the Capital Market Line (CML)? What is the standard deviation of an efficient portfolio whose expected return is of 8%? How would you allocate \$1,000 to achieve this position?
- (b) What is the rationale behind Efficient Market hypothesis?
- (c) What is a pivot point? $5+3+2=10$
3. (a) What is put-call parity? Suppose that the stock price is \$31, the exercise price is \$30, the risk-free interest rate is 10% per annum, the price of a three-month European call option is \$3, and the price of a 3-month European put option is \$2.25. Does put call parity hold in this case? What would be the profits from the alternative strategies in this case if the three month put price is 1\$?
- (b) Under what conditions is it possible to attain complete coverage in insurance?
- (c) A company is considering whether to **purchase** a new machine. Machines A and B are available for \$80,000 each. Earnings after taxation are as follows :

Year	Machine A	Machine B
	\$	\$
1	24,000	8,000
2	32,000	24,000
3	40,000	32,000
4	24,000	48,000

(3)

Given a discount rate of 10%, evaluate two alternatives using pay back method and net present value approach.

$$4+3+3=10$$

4. (a) “Tax-exempt persons and institutions will invest only in debt-securities and high-tax bracket investors will invest only in equities.” Do you agree? Explain in the light of Modigliani- Miller theorem.
- (b) How can you interpret the slope and intercept of the Arbitrage Pricing line? $5+5=10$

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