

ECO 332 : VALUATION AND PORTFOLIO MANAGEMENT
End Sem – Winter 2025 – VARIANT A

Time: 90 minutes

Max. Marks 35

Instructions for Candidates:

1. *All questions are compulsory*
2. *All questions are of 1 mark each. There is no negative marking.*
3. *You have to write the correct answer or in case of an MCQ the correct alternative (only one) in the response sheet provided at the end of the question paper.*
4. *Make sure you write your Name and Roll Number in the response sheet.*

1. An analyst gathered the spot rates given below. The two-year forward rate (in % p.a.) two years from now is (answer rounded off to the nearest whole number):

Time (years)	Annual Spot rates
1	15%
2	10%
3	12%
4	7.5%

2. What is the geometric average return over 1 year if the quarterly returns are 8%, 9%, 5%, and 12%? (2 decimal places)
3. A project has a 60% chance of doubling your investment in 1 year and a 40% chance of losing half your money. What is the standard deviation of this investment (in percentage)?
4. A stock has a correlation with the market of 0.45. The standard deviation of the market is 21%, and the standard deviation of the stock is 35%. What is the stock's beta?
5. The expected return for asset A is 20% and the standard deviation of returns is 25% for asset B the expected return is 10% with a standard deviation of 20%. The correlation between the fund returns is 0.2 What is the standard deviation (in %) of the minimum variance portfolio? Round off your answer to the nearest whole number
6. Consider two stocks, A and B. Stock A has an expected return of 12% and a beta of 1.5 Stock B has an expected return of 14% and a beta of 1.8. The expected market rate of return is 10% and the risk-free rate is 6%. Between A and B, the better security offers an excess return of _____ % (answer to one decimal place)

7. What is the standard deviation (in %) of a portfolio of two stocks given the following data: Stock A has a standard deviation of 20%, Stock B has a standard deviation of 15%. The portfolio contains 50% of stock A, and the correlation coefficient between the two stocks is -0.20. Round off the answer to the nearest whole number
8. A benchmark index has three stocks priced at Rs.20, Rs.25, and Rs.50. The number of outstanding shares for each is 350,000 shares, 400,000 shares, and 500,000 shares, respectively. If the market value weighted index was 950 yesterday and the prices changed to Rs.25, Rs.30, and Rs.60, what is the new index value?
9. Based on 5 years of monthly data, you get the following information for the companies listed. Compute the ratio of beta coefficient for stock B and beta coefficient of Stock A. (2 decimal places). i.e. [Beta value of B/Beta value of A]

Company	σ_i	$r_{i,M}$
A	11%	0.72
B	13.75%	0.30
C	7.60%	0.55
D	10.20%	0.60
Index	5.50%	1.00

10. You pay Rs. 50,000 to the Dhandapani Fund, which has a NAV of Rs.18 per unit at the beginning of the year. The fund charges a front-end load of 5%. The securities in the fund increased in value by 15% during the year. The fund's expense ratio is 1.5% and is deducted from year-end asset values. What is your rate of return on the fund if you sell your units at the end of the year?
11. A firm is expected to produce earnings next year of Rs. 5 per share. It plans to reinvest 40% of its earnings at 25%. If the cost of equity is 12%, what should be the value of the stock?
12. A portfolio generates an annual return of 18%, a beta of 1.5, and a standard deviation of 20%. The market index return is 15% and has a standard deviation of 20%. What is Jensen's alpha of the portfolio if the risk-free rate is 5%?
13. At the end of April, the average yields on 10 top-rated corporate bonds and 10 intermediate-grade bonds were 7.5% and 8.0%, respectively. At the end of August, the average yields on 10 top-rated corporate bonds and 10 intermediate-grade bonds were 8% and 9.0%, respectively. The confidence index _____ during August, and bond technical analysts are likely to be _____.
- Increased; bullish
 - Increased; bearish
 - Decreased; bullish
 - Decreased; bearish

14. On day 1, the stock price of Motor Ltd was Rs15 and the automotive stock index was 153. On day 2, the stock price of Motor Ltd was Rs.17 and the automotive stock index was 163. Consider the ratio of Motor Ltd. to the automotive stock index at day 1 and day 2. Motor Ltd. is _____ the automotive industry, and technical analysts who follow relative strength would advise _____ the stock.
- outperforming; buying
 - Outperforming; selling
 - Underperforming; buying
 - Underperforming; selling
15. On a particular day, there were 920 stocks that advanced on the NSE and 723 that declined. The volume in advancing issues was 80,846,000, and the volume in declining issues was 70,397,000. The trin ratio is _____
16. Suppose that in 2024 the expected dividends of the stocks in a broad market index equaled Rs.240 million when the discount rate was 8% and the expected growth rate of the dividends equaled 6%. Using the constant-growth formula for valuation, if interest rates increase to 9%, the value of the market will change by what percentage (2 decimal places)?
17. The underlying asset of a Rs.55 put is trading at Rs.48. This put would be considered...
- In-the-money.
 - At-the-money.
 - Out-of-the-money.
18. What is the intrinsic value of a Rs.40 put option if the underlying asset is trading at Rs.45?
19. A certain underlying asset is trading at Rs.60. A Rs.50 call is trading in the marketplace for Rs.14. What is the time value of the option?
20. An analyst wants to use Dividend Discount Model (constant growth) model to find a justified P/E for a company Axtra Ltd. The following information is given:

Current Stock price	Rs.56.94
Estimated earnings per share	Rs.1.837
Estimated Dividends for the year	Rs.0.575
Dividend growth rate	8.18%
Risk free rate	5.34%
Market Risk premium	5.32%
Beta	0.83

What is the justified P/E ratio based on the model? (correct to 2 decimal places).

21. When a stock price breaks through the moving average from below this is considered to be:
- a) A bullish signal
 - b) A bearish signal
 - c) Sideways pattern
 - d) The starting point for a new moving average
22. Following a period of falling prices, the moving average will
- a) Be above the current price
 - b) Be below the current price
 - c) Be equal to the current price
 - d) Become more volatile than it had been before the price fell
23. A support level is:
- a) a level below which the market is unlikely to fall
 - b) a level beyond which the market is unlikely to rise
 - c) an equilibrium price level justified by characteristics such as earnings and cash flows
 - d) peak of a market wave or cycle
24. Lifecycle Motorcycle Company is expected to pay a dividend in year 1 of \$2, a dividend in year 2 of \$3, and a dividend in year 3 of \$4. After year 3, dividends are expected to grow at the rate of 7% per year. An appropriate required return for the stock is 12%. Using the multistage DDM, the stock should be worth _____ today.
25. According to technical analysis, a shift in market fundamentals will
- a) Lead to a gradual price change that can be recognized as a trend
 - b) Be reflected in stock prices immediately
 - c) Lead to high volatility in stock prices
 - d) Leave prices unchanged
26. Bill and Shelly are friends. Bill invests in a portfolio of hot stocks that almost all his friends are invested in. Shelly invests in a portfolio that is totally different from the portfolios of all her friends. Both Bill's and Shelly's stocks fall 15%. According to regret theory, _____.
- A. Bill will have more regret over the loss than Shelly
 - B. Shelly will have more regret over the loss than Bill
 - C. Bill and Shelly will have equal regret over their losses
 - D. Bill and Shelly's risk aversion will increase in the future
27. A 2-year bond of par value Rs.1000 that pays 5% annually is selling in the market at Rs.950. Find the YTM for this bond (2 decimal places).

28. You consider buying a share of stock at a price of Rs.25. The stock is expected to pay a dividend of Rs.1.50 next year, and you expect to sell the stock in 1 year for Rs.28. The stock's beta is 1.1, r_f is 6%, and market risk premium is 10%. Is the stock fairly valued? Yes or No
29. In which one of the following cases is the bond selling at a discount
- Coupon rate is greater than current yield, which is greater than yield to maturity
 - Coupon rate, current yield and yield and yield to maturity are same.
 - Coupon rate is less than current yield, which is less than yield to maturity
 - Coupon rate is less than current yield, which is greater than yield to maturity
30. A fund manager has to pay Rs.1 million, Rs.2 million and Rs.1 million at the end of each of the next three years respectively. Find the duration of the fund manager's obligations if the interest rate is 10% annually?
31. You own a fixed income asset with a Macaulay duration of four years. If the level of interest rates which is currently 8% goes up by 50 basis points how much percent do you expect the asset price to change? (two decimal places)
32. The yield to maturity on a bond is:
- Above the coupon rate when the bond sells at a discount and below the coupon rate when the bond sells at a premium
 - The discount rate that will set the present value of the payments equal to the bond price
 - Equal to the true compound return on investment only if all interest payments received are reinvested at the yield to maturity
- I only
 - II only
 - III only
 - I, II and III
 - I and II only
 - II and III only
 - I and III only
33. The duration rule always _____ the value of a bond following a change in its yield
- Underestimates
 - Overestimates
 - Provides an unbiased estimate of
 - The estimated price may be biased either upward or downward, depending on whether the bond is trading at a discount or a premium

- 34.** Which of the following statements regarding the importance of covariance is most accurate?
- a) As the number of securities held in a portfolio increases, the importance of each individual security's risk (variance) decreases, while the importance of the covariance relationships increases.
 - b) As the number of securities held in a portfolio decreases, the importance of each individual security's risk (variance) decreases, while the importance of the covariance relationships increases.
 - c) As the number of securities held in a portfolio increases, the importance of each individual security's risk (variance) increases, while the importance of the covariance relationships decreases.
 - d) As the number of securities held in a portfolio decreases, the importance of each individual security's risk (variance) increases, while the importance of the covariance relationships decreases.
- 35.** You are considering investing Rs.10,000 in a complete portfolio. The complete portfolio is composed of Treasury bills that pay 5% and a risky portfolio, P , constructed with two risky securities, X and Y. The optimal weights of X and Y in P are 60% and 40%, respectively. X has an expected rate of return of 14%, and Y has an expected rate of return of 10%. The amounts invested in Treasury bills will be _____, if you decide to hold a complete portfolio that has an expected return of 8%.

VALUATION AND PORTFOLIO MANAGEMENT
VARIANT A
(RESPONSE SHEET)

Name _____

Roll No.

--	--	--	--	--	--	--	--	--

Ques No	Answer	Ques No	Answer
1		21	
2		22	
3		23	
4		24	
5		25	
6		26	
7		27	
8		28	
9		29	
10		30	
11		31	
12		32	
13		33	
14		34	
15		35	
16			
17			
18			
19			
20			