

2021**TWO YEAR M. COM. SEMESTER 3 EXAMINATION***(New Syllabus under CBCS)***Instructions for Examinees from Affiliated Colleges***The students are required to strictly adhere to the following instructions:*

1. Use A4 size paper for giving the examination.
2. Write the following on the top of the first sheet:
 - i) Roll Number: **(as per the Admit Card)**
 - ii) Registration Number: **(as per the Admit Card)**
 - iii) Paper Code and Name of the Paper
 - iv) Date of the Examination
 - v) Duration of Examination **(12 Noon to 2 P.M.)**
3. Put Page number on the top right of each page (including the first page).
4. Only one side of the paper should be used for examination.
5. Put your **full signature with date**, at the bottom right of every page used.
6. Before sending your answer scripts, arrange the pages sequentially. Scan them in the order of page number and convert them into a single **PDF File**.
7. Pdf. file name should be your **Full Roll Number <underscore> paper code**. While submitting the answer scripts, the subject of the mail will be exactly the same with the file name. [e.g., if the roll no of a student is **017/MCM/123456** for sixth paper **(Paper Code DSE306A)** the file name will be: **017-MCM-123456_DSE306A**.
8. Submit your answer scripts in **PDF Format** within the stipulated time through designated email id given to you.
9. Preserve your answer scripts in soft as well as hard-copy form of all the papers of your examination.

2021**COMMERCE****Paper: DSE-306A****(Security Analysis and Portfolio Management)****Full Marks: 40***The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.***Time: 2 Hours****Duration of Examination: 12noon to 2pm****Module - I**Answer *any two* questions.

1. (a) Firms Alpha, Beta and Gama belong to the FMCG sector. The earnings price ratio of the Firms Alpha, Beta and Gama are 0.6, 0.2 and 1.5, respectively. The earnings per share had been growing at @15% across all the firms in the FMCG sector but due to pandemic and gloomy market conditions the earnings per share are expected to grow @ 10% for all the firms in the FMCG sector. Which should be the most preferred firm for investment if an investor wants growth at reasonable price?

(b) The ROE of Delta Ltd. for 2017, 2018, 2019, 2020 and 2021 are 15%, 20%, 3%, 11% and 17%, respectively. The ROE of Bollinger Ltd. for 2017, 2018, 2019, 2020 and 2021 are 14%, 11%, 10%, 15% and 16%, respectively. As a fundamental analyst, give your analysis on Delta Ltd and Bollinger Ltd.

(c) Dow Theory is a useful tool to trace the trend of stocks in the market. Discuss. [2 + 2 + 6]

2. (a) Zen Ltd. has reported a return on equity 10.5%, earnings per share Rs. 8 and dividend per share Rs. 2.50. If a share of Zen Ltd. is selling in the market at the price of Rs.69, will you be interested to buy the shares of Zen Ltd. assuming that investors expect a 14% return on investments of similar risks and the growth rate in earnings and dividend will remain constant?

(b) X Ltd. has introduced new products and its earnings and dividends are expected to grow @18% a year during the next 3 years, @15% in the fourth year and at a constant rate of 8% thereafter. X Ltd.'s dividend in the last year was Rs.3.50 per share.

- i) Assuming that the dividend payout ratio will remain unchanged in the coming years, what value would you place on the equity now if the required rate of return on the stock is 10%?
- ii) What would be the price of the equity five years from now? [3 + (5+2)]

3.(a) Agro Ltd has issued bonds which have a face value of Rs. 50000. These bonds carry an interest rate of 11% p.a., payable annually and are redeemable in two annual instalments. The first redemption of 30% of the par value of the bond will happen at the end of the 3rd year and the balance at the end of the maturity period. The maturity period is 5 years and YTM of such type of bonds prevailing in the market is 15%. Find the value of the bond today. (PV factors should be rounded up to four decimal places)

(b) Mr. Roy acquired a bond for Rs.1250 offering a 9.5% coupon rate. At the time of purchase, the bond had six years to maturity and par value of Rs.1000. Assuming annual interest payments, calculate Mr. Roy's actual yield to maturity if all the interest payments were reinvested in an investment earning 15% per year?

[Given: $(1.465288)^{1/6} = 1.0659$; $(1.83161)^{1/6} = 1.1061$; $(1.25)^{1/6} = 1.0379$; $(0.8)^{1/6} = 0.9634$;
 $(1.389288)^{1/5} = 1.0679$] [5 + 5]

4. (a) Write short note on *any one* of the following

- i) Line chart
 ii) Support and Resistance Level

(b) Five years ago you purchased a 10-year 7% coupon bond (Face Value Rs.1000). At that time, the market rate of interest was 8%. Today, you sell the bond (the current market rate of interest is 6%). Assume interest is paid annually.

- i. How much did you pay for the bond when you purchased it 5 years ago?
 ii. How much can you sell the bond for today? [4 + (3 + 3)]

Given:

(r,n)	FVIFA(r,n)	PVIFA(r,n)	PVIF(r,n)
(0.05,10)	12.578	7.722	0.614
(0.05, 5)	5.526	4.329	0.784
(0.06,5)	5.637	4.212	0.747
(0.06, 10)	13.181	7.360	0.558
(0.07,5)	5.751	4.100	0.713
(0.07,10)	13.816	7.024	0.508
(0.08,05)	5.867	3.993	0.681
(0.08,10)	14.487	6.710	0.463

Module - II

Answer *any two* questions.

5. (a) Define *ex ante* return on a security.

(b) The financial year end market price of Python Ltd.'s shares and dividend paid by the company over the period 2015-2016 to 2020-2021 are given below.

Year ending 31st March	Market Price of Shares (Rs. per share)	Dividend paid (Rs. per share)
2016	2050	1.50
2017	2055	3.50
2018	2040	2.50
2019	2035	3.00
2020	2015	2.00
2021	2025	2.50

In addition, the company has declared and paid an interim dividend of Re. 1.00, Rs. 2.00 and Rs. 1.50 per share respectively in the month of November 2016, 2018 and 2019, and quarterly cash dividend of Rs. 2.00 per share each in the month of July 2016 and 2017. An investor has purchased shares of the company in October 2016 for Rs. 2045 per share.

Determine single period ex post total returns and real average rate of return over the investor's holding period if the inflation rate was 5% on an average over the period.

[2½ + 7½]

6. (a) What do you mean by 'residual risk' of a security?

(b) Consider the following –

	<u>Stock X</u>	<u>Stock Y</u>
Expected Return (%)	25	20
Variance (%)	16	9

Determine based on Markowitz principle whether a risk averse investor will have any diversification benefit by holding a combination of the above two stocks if they have a covariance of 8 between their returns. If you recommend portfolio formation, then also determine minimum variance portfolio combination and risk-return profile of such combination.

[2½ + 7½]

7. Can risk free borrowing or lending options in the capital market enable an investor to achieve a higher level of satisfaction as regards risk-return trade off than is possible without the risk-free option? Explain your answer with the help of a graphical illustration. [10]

8. (a) "Portfolio is to be constructed by optimizing beta coefficient" - Elucidate.
- (b) The following information is available on the performance of four portfolios and the market during the past ten year period.

Portfolios	Average Annual Return (%)	Standard Deviation (%)	Beta
P	15	5	1
Q	20	10	1.5
R	10	3	0.6
S	17	6	1.1
Stock Market Index	13	4	-
Market Risk Premium (%)	6	-	-

Rate the portfolios based on Sharpe and Treynor measures. Give your comments on the rankings.

[5 + 5]