B.COM (A&F). DEGREE EXAMINATION NOVEMBER 2023
ACCOUNTING AND FINANCE
FIFTH SEMESTER

COURSE   :   **MAJOR – CORE**
PAPER   :   **SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT**
SUBJECT CODE   :   **19AF/MC/SP54**
TIME   :   **3 HOURS**   **MAX. MARKS: 100**

SECTION – A

ANSWER ALL QUESTIONS: **(10 x 2 = 20)**

1. What is Portfolio Management?
2. Write a short note on CAPM.
3. What are the objectives of Markowitz model?
4. Expand EIC.
5. List out various techniques of Portfolio Management

6. The price of an equity share was Rs. 380 in the beginning of the year. The price at the end of the year was Rs. 492. Dividend received by the holder of shares at the end of the year was Rs. 15.80, what is the rate of return?

7. Mr. Ram is constructing the portfolio with risky and risk-free securities by investing 25% and 75% of his funds, respectively. The expected return from the risky security is 12%, and risk-free security is 10%. Find out the expected return of the portfolio.

8. A bond is currently traded at Rs. 900 in the market. Though, it was issued at Rs. 1000. On this bond, the yearly interest payout is Rs. 60. The coupon rate for the bond is 6%. The bond will reach maturity in 10 years. Calculate yield to maturity.

9. From the following information of M/S. John & Co whose, accounting year ends on March 31st 2022.

> 10,000 equity share of Rs.10 each, Rs.8 paid
> Profit before Tax Rs.80000
> Rate of Tax 50%

Calculate Return on equity.

10. Assume a mutual fund realized a return of 15% last year. The appropriate market index for this fund returned 12%. The beta of the fund versus that same index is 1.2, and the risk-free rate is 3%. Find the Jensen's Alpha.

SECTION – B

ANSWER ANY FIVE QUESTIONS: **(5 x 8 = 40)**

11. Explain the principles of portfolio management.
12. Discuss the various principles of Dow Theory.

13. Mr. Sharma holds shares of ONGC Ltd., He estimates the possible return and their probability as under. Calculate the expected return and the standard deviation of the expected return.

Possible return (%)	Probability
34	0.32
21	0.52
23	0.25
10	0.90
9	0.95

14. Mr. Akhil is interested in constructing a portfolio with two securities. For the investment in security X & Y, he has gathered the following information.

Particulars	Security X	Security Y
Expected return	12%	20%
Risk	10%	18%

The coefficient of correlation between X & Y is 0.15. Assume the investment value is Rs. 100,000. Mr. Akhil has the desire to construct the following portfolios:
   i. Invest the entire amount in security 'X'.
   ii. Invest 50% of the fund in each of 'X' & 'Y' securities.
Calculate and advise Mr. Akhil on the aspects of (a) Expected return under different portfolios and (b) Risk factors associated with this portfolio.

15. Using the information, help Mr. Mukesh to make an investment decision by calculating the expected return, risk, and risk-return ratio. The purchase price of share A is Rs. 50, and share B is Rs. 100. At the end of the year, the shares may be sold at the below-mentioned price with the given probabilities.

Details of Share A			Details of Share B		
Price (₹)	Dividend (₹)	Prob.	Price (₹)	Dividend (₹)	Prob.
70	7	0.1	80	7	0.1
65	5	0.2	90	9	0.2
60	3	0.4	105	11	0.4
45	2	0.2	110	13	0.2
40	2	0.1	115	15	0.1

16. Expected Earnings per share (EPS) of Sun Ltd. Is Rs. 7 and the expected dividend per share (DPS) is Rs. 3.5. The Company's ROE is expected to be maintained at 20%. Investor's required return for Sun Ltd. is 15%. What should be the value (or expected price) of its share? If the current market price is Rs. 74, should it be purchased?

17. An investor gathered the following information about the different portfolios.

Portfolio	Return (in %)	Risk (in %)	Beta
A	15	5	1.5
B	11	4	0.5
C	17	7	1
D	11	6	0.7
E	19	5	1.2

The risk-free rate of return (Rf) is 4% and the market return is 18%. Evaluate the performance of the portfolio using (i) Sharpe's, and (ii) Treynor's model and also rank the portfolio.

SECTION – C

ANSWER ANY TWO QUESTIONS: (2 x 20 = 40)

18.

Economy	Probability	Treasury Bills	Stock I	Stock II	Market Portfolio
Recession	0.2	6%	-13%	30%	-12%
Normal	0.5	6%	22%	5%	18%
Boom	0.3	6%	41%	-15%	32%

a. Calculate expected return and standard deviation of stock I, II and market portfolio.
b. Calculate beta for stocks I and II.
c. What is the expected return and standard deviation of a portfolio in which stocks I and II are equally weighted?
d. Are stocks I and II correctly priced?

19. An investor has made an investment in shares in Zebron Ltd., the face value of a share is Rs. 120. From the last ten years he is recording the amount of dividend paid by the company and the change in price of share are as follows:

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Dividend	20	25	20	10	0	15	12	18	22	25
Share Price	140	150	160	185	200	175	185	190	200	210

From the above information compute the total yield on his investment.

20. A portfolio manager has gathered the following information from the market. Construct an efficient portfolio by using a single index model.

Securities	Expected Return	Beta	Unsystematic Risk in %
A	32	1.70	50
B	30	1.40	35
C	25	1.10	40
D	22	0.95	24
E	20	1.05	28
F	14	0.70	18

The risk-free rate of return is 8%, return on market portfolio is 12% with the variance of 20%.

21. The financials of M Limited are given below:

Financials of M Limited

(Rs in million)

	2001	2002	2003	2004	2005
• Net sales	1020	1090	1210	1350	1520
• Cost of goods sold	734	807	883	959	1095
• Gross profit	286	283	327	391	425
• Operating expenses	72	74	85	105	120
• Operating profit	214	209	242	286	305
•Non-operating surplus/deficit	11	14	18	-12	-5
• Profit before interest and tax (PBIT)	225	223	260	274	300
• Interest	40	45	60	66	55
• Profit before tax	185	178	200	208	245
• Tax	35	38	40	52	50
• Profit after tax	150	140	160	156	195
• Dividend	60	60	65	65	70
• Retained earnings	90	80	95	91	125
• Equity share capital (Rs 10par)	200	200	200	250	250
• Reserves and surplus	400	480	575	616	741
• Shareholders' funds	600	680	775	866	991
• Loan funds	400	450	550	600	615
• Capital employed	1000	1130	1325	1466	1606
• Net fixed assets	600	650	710	850	900
• Investments	50	55	60	70	80
• Net current assets	350	425	555	546	626
• Total assets	1000	1130	1325	1466	1606
Market price per share (End of the year)	60	55	65	57	75

Required

(a) Calculate the following for the last five years:
  I.   Return on equity;
  II.   Book value per share;
  III. EPS;
  IV.   Bonus adjustment factor;
  V.   Adjusted EPS;
  VI.   PE ratio (prospective);
  VII. PB ratio (retrospective);

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