Advanced Financial Management

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.
Answer Question No. 1 which is compulsory.
From Section A: Answer any two questions.
From Section B: Answer any one question.
From Section C: Answer any one question.
From Section D: Answer any one question.

1. Answer all questions:

   (a) Mr. Kiritee Prasad can earn a return of 16 per cent by investing in equity shares on his own. Now he is considering a recently announced equity-based Mutual Fund Scheme in which initial expenses are 5.70 per cent and annual recurring expenses are 1.70 per cent.

   How much should the Mutual Fund earn to provide Mr. Kiritee Prasad a return of 16 per cent?   3

   (b) The following table gives details of the market value of a Pharma Fund of a portfolio manager during the year along with the value of cash flows into the Fund:

   (₹ in crores)

Time (years)	Market value of Pharma Fund	Cash flow
0.25	93	(+) 5
0.50	99	(+) 2
0.75	105	(+) 7
1.00	115	—

   The value of the Fund at the beginning was ₹ 90 crores. Calculate Time Weighted Rate of Return (TWROR).   3

   (c) (i) Draw a relationship between call option and put option in put-call Parity theory.   3

   (ii) A 8-version Laptop is priced at $ 461.5 at New York. The same version Laptop is priced ₹ 30,500 in New Delhi.

   Calculate the exchange rate in New Delhi, if over the next year, price of the Laptop increased by 8% in New Delhi and 5% in New York.

   Determine the price of Laptop at New Delhi and New York.   2

   (d) The Beta Co-efficient of Moon Light Ltd. is 1.40. The Company has been maintaining 8% rate of growth in dividends and earnings. The last dividend paid was ₹ 4 per share. Return on Government securities is 12% Return on Market Portfolio is 18%. The current market price of one share of Moon Light Ltd. is ₹ 32.

   What will be the equilibrium price per share of Moon Light Ltd.?   2

   (e) The equity of Southern India Automobiles Ltd. (SIAL) is ₹ 750 crores. Its Debt is worth ₹ 330 crores. 84% of the value is attributable to CAR & AUTO Accessories segment which has an Asset Beta of 1.25. The balance value is applied on MISC. Accessories division, which has an Asset Beta of 1.10. Compute Equity Beta, if the Debt Beta is 0.15.   2

   (f) ADITYA BIRLA CHEMICALS LTD. adopts constant WACC approach and believes that its cost of Debt and Overall Cost of Capital is at 9% and 12% respectively. If the ratio of the market value of Debt to the market value of Equity is 0.8, what rate of return do Equity Shareholders earn? (Assume that there are no taxes.)   3

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(g) The Capital of Pigments Ltd. is as follows:

9% preference shares of ₹ 10 each	₹ 3,00,000
Equity shares of ₹ 10 each	₹ 8,00,000

Following further information is available:

Profit after tax	₹ 2,70,000
Equity dividend paid	20%
Market price of Equity Shares	₹ 40 each

Compute: Earnings Per Share (EPS) and Price Earning Ratio (PE Ratio).   2

Section A

(Answer *any two* of the following.)

2. (a) Following information is available regarding four Mutual Funds:

Mutual Fund	Return %	Standard Diviation (σ)	Beta (β)
A	12	15	0.80
B	16	22	0.76
C	21	37	1.15
D	13	24	1.32

Risk free rate of return is 10% and face value is ₹ 100 each.

Evaluate the performance of these Mutual Funds using Sharpe Ratio and Treynor's Ratio. Comment on the evaluation after ranking the Funds.

(b) What makes commodity trading attractive?

(c) Distinguish between 'Inter Corporate Deposits' and 'Public Deposits'.   6+3+3=12

3. (a) Who are the participants of Commodity Market?

(b) Explain the following commonly used terms in Commodity Market:

   (i) Forward contract

   (ii) Futures market

(c) Explain 'Final Settlement' and 'Pay-out mechanism of final settlement' in a clearing house.   3+4+5=12

4. Explain in brief:

   (i) SEBI regulations and

   (ii) RBI Guidelines relating to infrastructure sector.   12

SECTION B

(Answer *any one* of the following.)

5. (a) The following table shows interest rates and exchange rates for the US Dollar and French Franc. The spot exchange rate is 7.05 Francs per Dollar. Complete the missing entries:

	3 months	6 months	1 year
Euro-dollar interest rate (Annual)	11.5%	12.25%	?
Euro-franc interest rate (Annual)	19.5%	?	20%
Forward Francs per doller	?	?	7.52
Forward discount on Franc (% per year)	?	(6.3%)	?

(b) Estimate the disadvantages of Book Building system, in relation to Indian Capital Market.

(c) The following two-way quotes appear in the Foreign Exchange Market:

	Spot	2 months forward
₹/US $	₹ 46.00/46.25	₹ 47.00/47.50

Required:

(i) How many US Dollars should a firm sell to get ₹ 25 lakhs after 2 months?

(ii) How many Rupees is the firm required to pay so as to obtain US $ 2,00,000 in the spot market?

(iii) Assume that the firm has US $ 69,000 in current account earning interest. ROI on Rupee investment is 10% per annum. Should the firm encash the US $ now or 2 months later?   10+4+6=20

6. (a) DS Inc. is considering a new plan in Netherlands. The Plan will cost 26 million Guilders. Incremental cash flows are expected to be 3 million Guilders per year for the first 3 years. 4 million Guilders for the next 3, 5 million Guilders in years 7 to 9, and 6 million Guilders in years 10 through 19, after which the project will terminate with no residual value.

The present exchange rate is 1.90 Guilders per dollar. The required rate of return on repatriated dollar is 16%.

Required:

(i) If the exchange rate stays at 1.90, what is the project NPV?

(ii) If the Guilder appreciates to 1.84 for years 1-3, to 1.78 for years 4-6, 1.72 for years 7-9, and to 1.65 for years 10-19, what happens to NPV?

Year	0	1-3	4-6	7-9	10-19
Discount factors at 16%	1	2.246	1.439	0.922	1.270

(b) Write short notes on *any two* of the following:

(i) American Depository Receipts (ADRs).

(ii) Commodity swaps.

(iii) Sources of credit rating information.   10+(5+5)=20

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SECTION C

(Answer *any one* of the following.)

7. (a) (i) Mention four important factors that you would consider for investment decisions in portfolio managemen

   (ii) An investor is interested to construct a portfolio of securities ALFA and GAMA. He has collected th following information about the proposed investment:

	ALFA	GAMA
Expected return	20%	25%
σ	12%	16%

   Co-efficient of Correlation (r) between ALFA and GAMA is 0.16.

   He wants to constitute only 5 portfolios of ALFA and GAMA as follows:

   (1) All funds invested in ALFA.

   (2) 50% of funds in ALFA and 50% in GAMA.

   (3) 75% of funds in ALFA and 25% in GAMA.

   (4) 25% of funds in ALFA and 75% in GAMA.

   (5) All funds invested in GAMA.

   You are required to calculate:

   (A) Expected return under different portfolios.

   (B) Risk factor associated with these portfolios.

   (C) Which portfolio is best from the view-point of risk?

   (D) Which portfolio is best from the view-point of return?

   (b) Explain the major risks associated with holding Government securities. 2+(2+4+1+1)+6=16

8. (a) A portfolio manager has the following four stocks in his portfolio:

Security	No. of shares	Market Price per share (₹)	β = Beta
VSL	10,000	50	0·9
CSL	5,000	20	1.0
SML	8,000	25	1.5
APL	2,000	200	1.2

   Compute the following:

   (i) Portfolio Beta (β).

   (ii) If the Portfolio Manager seeks to reduce the Beta to 0.8, how much Risk-Free investment should he bring in?

   (iii) If the Portfolio Manager seeks to increase the Beta to 1.2, how much Risk-Free investment should he bring in?

(b) From the following data, calculate the Return and Risk of a Portfolio containing 60% of Stock A and 40% of Stock B.

Market condition	Probability	E (R$_A$)	E (R$_B$)
Boom	0.25	40%	40%
Growth	0.50	20%	30%
Recession	0.25	10%	20%

10+6=16

Section D

(Answer *any one* of the following.)

9. (a) What do you understand by: Foreign Portfolio Investment? Discuss briefly.

   (b) What is Global Financial System? Who are the main players in Global Financial System?

   (c) SHREE LEATHERS LTD. has an investment proposal, requiring an outlay of ₹ 40,000. The investment proposal is expected to have 2 years' economic life with no salvage value. In year 1, there is a 0.4 probability that Cash Flow After Tax (CFAT) will be ₹ 25,000 and 0.6 probability that CFAT will be ₹ 30,000.

   The probabilities assigned to CFAT for the year 2 are as follows:

   If CFAT = ₹ 25,000   If CFAT = ₹ 30,000

Amount (₹)	Probability	Amount (₹)	Probability
12,000	0.2	20,000	0.4
16,000	0.3	25,000	0.5
22,000	0.5	30,000	0.1

   SHREE LEATHERS LTD. uses a 10% discount rate for this type of investment.

   Required:

   (i) Construct a decision tree for the proposed investment project.

   (ii) What Net Present Value (NPV) will the project yield if worst outcome is realised? What is the probability of occurrence of this NPV?

   (iii) What will be the best and the probability of that occurrence?

   (iv) Will the project be accepted?

   [10% discount factor: Year 1 = 0.909 and Year 2 = 0.826]   5+5+10=20

10. (a) What is Cross Border Leasing? What are its objectives?

    (b) M/s JAMUNALAL BAJAJ LTD. is considering a project with the following cash flows:

    Initial investment   ..   ..   ₹ 1,00,000

    Expected Cash flows:

    1st year   ..   ..   ₹   70,000

    2nd year   ..   ..   ₹   60,000

    3rd year   ..   ..   ₹   45,000

    The cost of capital is 10%.

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Due to uncertainty of future cash flows, the management decides to reduce the cash inflows to certainty equivalent by taking only 80%, 70% and 60% respectively.

Is it worthwhile to take up the project?

[Given: P.V. factor (10%, 3 years): 0.909, 0.826 and 0.751]

(c) Nava Ratna Ltd. has just installed MACHINE R at a cost of ₹ 2,00,000. This machine has 5 years life with no residual value. The annual volume of production is estimated at 1,50,000 units, which can be sold at ₹ 6 per unit. Annual operating costs are estimated at ₹ 2,00,000 (excluding depreciation) at this output level. Fixed costs are estimated at ₹ 3 per unit for the same level of production.

The company has just come across another model called MACHINE S, capable of giving the same output at an annual operating costs of ₹ 1,80,000 (excluding depreciation). There will be no change in fixed costs. Capital cost of this machine is ₹ 2,50,000 and the estimated life is 5 years with no residual value.

The company has an offer for sale of MACHINE R at ₹ 1,00,000. But the cost of dismantling and removal will amount to ₹ 30,000. As the company has not yet commenced operation, it wants to sell MACHINE R and purchase MACHINE S.

Nava Ratna Ltd. will be a zero-tax company for 7 years in view of several incentives and allowances available. The cost of capital may be assumed as 14%.

Required:

(i) Advise the company whether it should opt for replacement.

(ii) What would be your advice, if MACHINE R has not been installed but the company is in the process of selecting one or the other machine?

[Given: PVIF for 1-5 years = 0.877, 0.769, 0.675, 0.592, 0.519]   5+5+10=20