

CA Final AFM Test-14

Mission 80+ in AFM for May 2025 attempt

Write following details on First page of your Answer sheet.

(1) Name, (2) Mobile Number & (3) Mail ID:

Send scan copy of your answer sheet in PDF format at: sfmcertifiedcopy@gmail.com for evaluation.

Time Allowed – 3 Hr

Maximum Marks - 100

PART I – Case Scenario based MCQs (30 Marks)

Answer all Questions.

In our CA Final AFM paper conducted by Institute, it is not required to show the working for MCQs. However, for our test series, we highly recommend that students provide workings. This allows us to better evaluate your preparation and understanding of the concepts.

Case Scenario I:

Following are risk and return estimates for two stocks:

Stock	Returns (%)	Beta	Specified Variance of return
A	14	0.8	0.1225
B	18	1.2	0.2025

The market index has a Standard Deviation (SD) of 25%.

From the information given above, choose the correct answer to the Question no. 1 to 6:

1. Systematic Risk of Stock-A is **1M**
(a) 125.44 (b) 500
(c) 156.25 (d) 400
2. Systematic Risk of Stock-B is **1M**
(a) 465.56 (b) 900
(c) 30 (d) None of the above
3. The Standard Deviation of Stock-A is **2M**
(a) 23.45% (b) 20.30%
(c) 40.31% (d) None of the above
4. The standard Deviation of Stock-B is **2M**
(a) 54.08 (b) 36.19
(c) 52.67 (d) None of the above

5. If the Treynor Ratio of Stock-A & Stock-B are same, the Risk-free Rate on treasury Bill should be **2M**
 (a) 8% (b) 10%
 (c) 4% (d) 6%
6. Suppose a portfolio is to be constructed with the proportion of 25%, 40% and 35% in stock A, B and Treasury Bills respectively, what would be the expected return of the portfolio? **2M**
 (Use R_f calculated above)
 (a) 12.5% (b) 10.8
 (c) 12.8% (d) None of the above

Case Scenario II:

- II On 1st September 2023 when BSE Sensex was 60000, future contract on BSE Index with 4 months maturity is used to hedge the value of the portfolio over the next 3 months. One future contract for delivery is 25 times of the index.

The following information is available:

Value of the portfolio	₹ 1,51,50,000
BSE Sensex on 1st January 2024 (Anticipated on 1st September 2023)	60600
BSE Sensex on 1st January 2024 (Anticipated on 1st December 2023)	58145
181 days' treasury bills offers a rate of interest	9% p.a.

From the information given above, choose the correct answer to the Question no. 7 to 9:

7. Dividend Yield of Index is **2M**
 (a) 4% (b) 3%
 (c) 6% (d) None of the above
8. Turned out value of the Sensex as on 1st December 2023 is **2M**
 (a) 58000 (b) 57712
 (c) 58290 (d) None of the above
9. If total 12 contracts were entered for the complete hedge, decide the beta of the portfolio. **2M**
 (a) 1.18 (b) 1.50
 (c) 1.20 (d) None of the Above

Case Scenario III:**III**

Bank A is in need of fund for a period of 14 days. To meet this financial need on 20th September 2023 Bank A enters into an agreement with Bank B under which it will sell 10% Government of India Bonds issued on 1st January 2023 @ 5.65% for ₹ 8 crore (Face value is ₹ 10,000 per Bond).

The clean price of same Bond is ₹ 9,942 and the Initial Margin be 2% and the maturity date of Bond is 31st December 2028 & Days of accrued interest be 262 days.

Consider 360 days in a year and interest is payable annually.

Based on above Case Scenario, answer the following questions:

10. The arrangement entered between Bank A and Bank B will be called 1M
 - (a) Call Money Arrangement
 - (b) Commercial Paper
 - (c) Commercial Bill Arrangement
 - (d) Repurchase Agreement
11. Dirty Price of the Bond will approximately be..... 2M
 - (a) ₹ 10,353
 - (b) ₹ 10,670
 - (c) ₹ 10,499
 - (d) ₹ 10,816
12. The start proceeds of the transaction shall be approximately 2M
 - (a) ₹ 8,38,36,604
 - (b) ₹ 8,36,52,800
 - (c) ₹ 8,58,36,804
 - (d) ₹ 8,48,52,585
13. The second leg of the transaction shall be approximately..... 2M
 - (a) ₹ 8,38,36,604
 - (b) ₹ 8,36,52,800
 - (c) ₹ 8,58,36,804
 - (d) ₹ 8,48,52,585
14. The amount of Accrued Interest per Bond shall be approximately 1M
 - (a) ₹ 728
 - (b) ₹ 720
 - (c) ₹ 734
 - (d) ₹ 714

Case Scenario IV:**IV**

PharmaCare Ltd., a mid-sized pharmaceutical company, has been expanding steadily over the past few years. The company's growth has been driven by increasing demand for affordable healthcare products, especially in emerging markets. While management is optimistic about future expansion, the CFO has raised concerns regarding the firm's ability to sustain this growth without compromising financial stability.

To address this, the CFO emphasized the importance of monitoring the **Sustainable Growth Rate (SGR)** — the maximum rate at which PharmaCare Ltd. can grow using internally generated funds without needing to raise external equity.

A review of the company's financials revealed that although sales have been rising, the profit margins are under pressure due to increased R&D and compliance costs. The CFO recommends that the company:

- Focus on **operational efficiency** and **cost control**.
- Reinvest profits strategically, especially in high-return therapeutic segments.
- Avoid over-reliance on debt, maintaining a balanced **debt-to-equity** ratio.
- Evaluate market opportunities carefully to avoid **over-expansion risks**.

The management agrees to align the expansion strategy with the firm's **sustainable growth capacity**, aiming to ensure long-term financial health and shareholder value.

15. The concept of Sustainable Growth Rate (SGR) is primarily used to 1M
- (a) Measure the company's liquidity
 - (b) Estimate the external debt requirements
 - (c) Plan for short-term investments
 - (d) Determine the maximum growth achievable without external equity financing
16. According to the scenario, which of the following is a risk if PharmaCare Ltd. grows beyond its SGR? 1M
- (a) Increase in research efficiency
 - (b) Unavailability of external fund
 - (c) Strain on internal financial resources
 - (d) Reduction in compliance requirements
17. To align with SGR, the CFO recommends all of the following except: 1M
- (a) Cost control
 - (b) Balanced capital structure
 - (c) Relying solely on debt financing
 - (d) Strategic reinvestment of profits
18. Which of the following would most likely **improve** PharmaCare Ltd.'s SGR? 1M
- (a) Improving asset turnover and net profit margin
 - (b) Increasing dividend payout ratio
 - (c) Reducing profit margins
 - (d) Issuing new equity
19. If the company improves its net profit margin, keeps the payout ratio constant, and maintains the same asset turnover, the likely impact on SGR would be: 1M
- (a) No impact as payout and turnover are unchanged
 - (b) Increase in SGR due to improved ROE components
 - (c) Decline in SGR as internal equity gets diluted
 - (d) Cannot be determined without knowing financial leverage

PART II – Descriptive Questions (70 Marks)

Question No.1 is compulsory.

Candidates are also required to answer **any four** from the remaining **five** questions.

Working notes should form part of the respective answer.

1. (a) Phototech plc has in issue 9% bonds which are redeemable at their par value of £100 in five years' time. Alternatively, each bond may be converted on that date into 20 ordinary shares of the company. The current ordinary share price of Phototech plc is £4.45 and this is expected to grow at a rate of 6.5% per year for the foreseeable future. Floor value of Bond is 108.20 7

Required:

Calculate the following for each £ 100 convertible bond:

- (i) Cost of debt
- (ii) Market value;
- (iii) Conversion premium.
- (iv) Percentage downside risk

- (b) The return of security 'L' and Security 'K' for the past five years are given below: 7

Year	Security-L Return %	Security-K Return %
2012	10	11
2013	04	-06
2014	05	13
2015	11	08
2016	15	14

Calculate:

- (i) The risk and return of portfolio consisting above information.
- (ii) the proportion of investment to minimize the risk of portfolio

2. (a) The following information is provided related to the acquiring Firm Mark Limited and the target Firm Mask Limited:

	Firm Mark Limited	Firm Mask Limited
Earning after tax (₹)	2,000 lakhs	400 lakhs
Number of shares outstanding	200 lakhs	100 lakhs
P/E ratio (times)	10	5

Required:

- (i) What is the Swap Ratio based on current market prices?
- (ii) What is the EPS of Mark Limited after acquisition?
- (iii) What is the expected market price per share of Mark Limited after acquisition, assuming P/E ratio is adversely affected by 10%?
- (iv) Determine the market value of the merged firm.
- (v) Calculate gain/loss for shareholders of the two independent companies after acquisition. 8

- (b) An importer requested his bank to extend for Forward contract of US \$ 25,000 which is due for maturity on 31-10-2015 for a further period of six month. The other details are as under: 6

Contract rate ₹100 = \$ 1.6393

The ₹100 quoted on 31-10-2015.

Spot: \$1.6493/1.6578

Six-month premium: 0.86 %/0.98%

Exchange Margin for buying and selling rate are 0.086% and 0.15% respectively.

Compute

(1) Cost to importer in respect to extension of forward contract.

(2) New Forward contract rate.

3. (a) The following particulars relating to Vishnu Fund Scheme: 8

S.N.	Particulars	Value ₹ in Crores
1	Investments in Shares (at cost)	
	a. Pharmaceutical companies	80
	b. Constructions Industries	30
	c. Service Sector Companies	60
	d. IT Companies	30
	e. Real Estate Companies	10
2	Investments in bonds (Fixed Income)	
	a. Listed Bond (8000, 14% Bonds of ₹15000 each)	12
	b. Unlisted Bonds	7
3	No. of Unit outstanding (crores)	4.2
4	Expenses Payable	3.5
5	Cash and Cash equivalents	1.5
6	Market expectations on listed bonds	8.842%

The fund has incurred the following expenses:

Consultancy and Management fees	₹ 480 Lakhs
Office Expenses	₹ 150 Lakhs
Advertisement Expenses	₹ 38 Lakhs

Particulars relating to each sector are as follows:

Sector	Index on Purchase date	Index on Valuation
Pharmaceutical companies	8600	15500
Constructions Industries	2100	4500
Service Sector Companies	2750	4800

IT Companies	16020	33000
Real Estate Companies	2550	4100

You are required to calculate the following:

- Net Assets Value of the fund
- Net Assets Value per unit
- If the period of consideration is 2 years, and the fund has distributed ₹3 per year as cash dividend, ascertain the Net return (Annualized).
- Ascertain the Expenses ratio.

(b) Calculate the value of share from the following information:

6

Profit of the company	₹290 crores
Equity capital of company	₹1,300 crores
Par value of share	₹40 each
Debt ratio of company	27
Long run growth rate of the company	8%
Growth rate of the company for the 6 year and onward	5%
Beta 0.1; risk free interest rate	8.7%
Market returns	10.3%
Capital expenditure per share	₹47
Depreciation per share	₹39
Change in working capital	₹3.45 per share

4. (a) The Balance Sheet of M/s. Sundry Ltd. as on 31-03-2020 is follows:

Liabilities	₹ (in Lakh)	Assets	₹ (Lakh)
Share Capital	300	Fixed Assets	600
Reserves	200	Inventory	500
Long Term Loan	400	Receivables	240
Short Term Loan	300	Cash	60
Payables & Provisions	200		
Total	1400	Total	1400

Sales for the year was ₹ 600 lakhs. The sales are expected to grow by 20% during the year. The profit margin and dividend pay-out ratio are expected to be 4% and 50% respectively.

The company further desires that during the current year Sales to Short Term Loan and Payables and Provision should be in the ratio of 4:3. Ratio of fixed assets to Long Term Loans should be 1.5.

Debt Equity Ratio should not exceed 1.5.

You are required to determine:

- The amount of External Fund Requirement (EFR).
- The amount to be raised from Short Term, Long Term and Equity funds.

8

(b) What is the application of blockchain and also explain the risks associated with it

6

5. (a) The Easygoing Company Ltd. is considering a new project with initial investment, for a product "survival". It is estimated that IRR of the project is 16% having an estimated life of 5 years. 8

Financial manager has studied the project with sensitivity analysis and informed that annual fixed cost sensitivity is 7.8416%, whereas cost of capital (discount rate) sensitivity is 60%.

Other information available are:

Profit volume ratio (P/V) is 70%

Variable cost ₹ 60/- per unit;

Annual cash flow ₹ 57500/-

Ignore depreciation on initial investment and impact of taxation.

Calculate:

- (i) Initial investment of the project;
- (ii) Net present value of the project
- (iii) Annual fixed cost
- (iv) Estimated annual unit of sales
- (v) Break even units

Cumulative discounting factor for 5 years

8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%
3.993	3.890	3.791	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127

- (b) From the following particulars, calculate the effective interest p.a. as well as the total cost of funds to ABC Ltd., which is planning a CP issue: 3

Issue Price of CP ₹97,350

Face Value ₹1,00,000

Maturity period 3 months.

Issue Expenses:

Brokerage: 0.125% for 3 months.

Rating Charges: 0.5% p.a.

Stamp duty: 0.125% for 3 months

- (c) State the strategy at different hierarchy levels 3

6. (a) AB Ltd.'s equity shares are presently selling at a price of ₹500 each. An investor is interested in purchasing AB Ltd.'s shares. The investor expects that there is a 70% chance that the price will go up to ₹650 or a 30% chance that it will go down to ₹450, three months from now. There is a call option on the shares of the firm that can be exercised only at the end of three months at an exercise price of ₹550. 6

Calculate the following:

- (i) If the investor wants a perfect hedge, what combination of the share and option should he select?
- (ii) Explain how the investor will be able to maintain identical position regardless of the share price.
- (iii) If the risk-free rate of return is 5% for the three months period, what is the value of the option at the beginning of the period?

- (iv) What is the expected return on the option?
- (b)** Consider a portfolio consisting of a ₹ 200,00,000 investment in share XYZ and a ₹200,00,000 investment in share ABC. The daily standard deviation of both shares is 1% and that the coefficient of correlation between them is 0.3. You are required to determine the 10- day 99% value at risk for the portfolio? **4**
- Given: The Z score from this normal table at 99% confidence level is 2.33 (show your calculation upto four decimal points.)
- (c)** What is an exotic option? Briefly explain the various types of exotic options **4**