

# CA Final AFM Test-15

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](mailto:sfmcertifiedcopy@gmail.com) for evaluation.*

**Time Allowed – 3 Hr**

**Maximum Marks - 100**

**All Questions are Compulsory.**

**Working Notes should form part of the respective answer.**

## **PART I – Case Scenario based MCQs (30 Marks)**

In our CA Final AFM paper / CMA Final SFM 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 detailed workings. This allows us to better evaluate your preparation and understanding of the concepts.

### **Case Scenario I:**

ABC Limited's shares are currently selling at ₹25 per share. There are 10,00,000 shares outstanding. The firm is planning to raise ₹20 lakhs by issuing right shares to Finance a new project.

1. What is the theoretical ex-right price of shares if the firm offers one right share for every four shares held? **2M**  
(a) 20 (b) 27  
(c) 21.6 (d) None of the above
2. Suppose Mr. Ankit is an existing shareholder holding 150 shares. If he neither purchase Right share nor sale Right Entitlement (RE), what will be the expected impact on his existing wealth? **2M**  
(a) No impact (b) Loss of ₹2,040  
(c) Loss of ₹510 (d) Loss of ₹2,550
3. The Board is not satisfied with the proposed rights issue ratio of 1:4. **2M**  
Instead, it has announced a new right issue ratio, which is expected to result in a 28% decline in the current market price of the share post the rights issue.  
One right share has been offered for every ..... shares held under new plan.  
(a) One (b) two  
(c) three (d) None of the above
4. The Value of each right entitlement (RE) ..... due to revision in right ratio. **2M**  
(a) Increased by 3.6 (b) Decreased by 3.6  
(c) Increased by 7 (d) Increased by 3.4

5. Which of the following is not an advantage of rights issue?

1M

- (a) No dilution of control (b) Cheaper mode of raising capital  
(c) Increase in promoter's stake (d) Increase in debt-equity ratio

### Case Scenario II:

Mr. India, an importer booked a forward contract with his bank on 10<sup>th</sup> April for USD 2,00,000 due on 10<sup>th</sup> June @ ₹84.4000. The bank covered its position in the market at ₹84.2800.

The exchange rates for dollar in the interbank market on 10<sup>th</sup> June and 13<sup>th</sup> June were:

|              | 10 <sup>th</sup> June | 13 <sup>th</sup> June |
|--------------|-----------------------|-----------------------|
| Spot USD 1 = | ₹ 83.8000/8200        | ₹ 83.6800/7200        |
| June         | ₹ 83.9200/9500        | ₹ 83.8000/8500        |
| July         | ₹ 84.0500/0900        | ₹ 83.9300/9900        |
| August       | ₹ 84.3000/3500        | ₹ 84.1800/2500        |
| September    | ₹ 84.6000/6600        | ₹ 84.4800/5600        |

Exchange Margin 0.10% and interest on outlay of funds @ 12%. The importer requested on 13th June for extension of contract with due date on 10th August.

Rates rounded to 4 decimals in multiples of 0.0025

On 10th June, Bank Swaps by selling spot and buying one month forward.

6. Cancellation rate is .....

2M

- (a) 83.6800 (b) 83.5963  
(c) 83.5975 (d) None of the above

7. Swap Loss is .....

2M

- (a) 30,000 (b) 90,000  
(c) 60,000 (d) 45,000

8. Interest on outlay of funds, if any, is .....

2M

- (a) 84.82 (b) 94.68  
(c) 69.04 (d) None of the above

9. New contract rate is .....

2M

- (a) 84.2500 (b) 84.3350  
(c) 84.2650 (d) None of the above

10. Total cost is .....

2M

- (a) 1,90,500.00 (b) 1,60,500.00  
(c) 2,20,594.68 (d) 1,90,594.68

**Case Scenario III:**

The following information is available in respect of Security Y:

|                                                       |      |
|-------------------------------------------------------|------|
| Equilibrium Return                                    | 16%  |
| Market Return                                         | 15%  |
| 6% Treasury Bond (FV 100) Trading at                  | ₹120 |
| Covariance between Security Y and Market Return       | 168% |
| Correlation Coefficient between Security Y and Market | 0.80 |

Answer below questions 11 to 14 based on above information:

- 11.** The Risk free Return ( $R_f$ ) is **1M**  
 (a) 6% (b) 5%  
 (c) 12% (d) Insufficient information
- 12.** Calculate Beta of the Security **1M**  
 (a) 1 (b) 1.22  
 (c) 1.1 (d) None of the above
- 13.** Standard Deviation of market return is ..... **1M**  
 (a) 152 (b) 12.36  
 (c) 11.72 (d) None of the above
- 14.** Standard Deviation of Security Y ( $\sigma_Y$ ) is ..... **1M**  
 (a) 17% (b) 17.92%  
 (c) 16% (d) None of the above

**Case Scenario IV:**

Prosper Finance Ltd., an NBFC, requires funds and sells its loan receivables worth ₹150 million to Horizon Capital Services (HCS). HCS establishes a trust named Secure Asset Trust (SAT) to facilitate the securitization process and issue securities with varying risk and return profiles to investors. SAT is also permitted to reinvest surplus funds for short-term purposes as needed. HCS appoints TrustGuard Solutions Pvt. Ltd. (TGS) as a third party to collect payments from obligors, transfer them to SAT, follow up on defaults, and initiate legal action if necessary.

- 15.** The securities issued by Secure Asset Trust (SAT) for ₹150 million are categorized as: **1M**  
 (a) Pay Through Security (PTS) (b) Pass Through certificate (PTCs)  
 (c) Equity Fund (d) Stripped Security
- 16.** In the above scenario, the Originator is: **1M**  
 (a) Horizon Capital Services (HCS) (b) Secure Asset Trust (SAT)  
 (c) TrustGuard Solutions Pvt. Ltd. (TGS) (d) Prosper Finance Ltd.
- 17.** In the above scenario, the Secure Asset Trust (SAT) is a/an: **1M**  
 (a) Obligor (b) Special Purpose Vehicle (SPV)  
 (c) Receiving and Paying Agent (RPA) (d) Originator
- 18.** In the above scenario, TrustGuard Solutions Pvt. Ltd. (TGS) acts as a/an: **1M**  
 (a) Special Purpose Vehicle (SPV) (b) Originator  
 (c) Receiving and Paying Agent (RPA) (d) Obligor

19. Which of the following statements is true regarding Principal Only (PO) securities in the context of securitization? **1M**
- (a) When Yield to Maturity in the market falls, prices of PO securities tend to rise.
  - (b) When Yield to Maturity in the market rises, prices of PO securities tend to rise.
  - (c) When Yield to Maturity in the market falls, prices of PO securities remain unchanged.
  - (d) When Yield to Maturity in the market rises, prices of PO securities remain unchanged.
20. In the above scenario, Horizon Capital Services (HCS) is best described as: **1M**
- (a) The Originator
  - (b) The Obligor
  - (c) The Arranger/Sponsor
  - (d) The Receiving and Paying Agent
21. What is the primary role of the Obligor in this securitization structure? **1M**
- (a) To issue securities to investors
  - (b) To make payments on the underlying receivables
  - (c) To collect payments and pursue defaulters
  - (d) To create the Special Purpose Vehicle (SPV)

## **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) CHENNAI PETROLEUM CORPORATION LIMITED (CPCL) imports crude oil for its requirements on a regular basis. Its requirements are estimated at 150 tonnes per month. Of late, there has been a surge in the prices of oil. The current price (month of June) of crude oil is ₹7,500 per barrel. The firm expects the price to rise in the coming months to ₹7,800 by August. It wants to hedge against the rising prices for some of its requirements of the month of August.

Multi Commodity Exchange (MCX) in India offers futures contracts in crude oil. The Contract size is 50 barrels and August contract is currently traded at ₹7,668 per barrel.

CPCL would like to hedge two-third its exposure in futures and leave the one-third to market conditions. While hedging, the number of futures contracts dealt with should be rounded off to the next higher integer.

Ignore marking-to-market and initial margin on futures contracts.

Given that 3 tonne = 22 barrels.

- (i) Calculate the Number of contracts entered
- (ii) Calculate the Exposed portion (barrels not hedged)
- (iii) What is the effective price per barrel for the whole requirement of August, if in August, the spot price is ₹7,570 and futures price is ₹7,788.
- (iv) If effective Price (in August) turns out to be 2% higher than current price of the June. What might be the Future Price in August. Given, in August, Future price is 1% higher than Spot price prevailing in August.

9

- (b) Mr. Ganpat intends to invest in equity shares of a company the value of which depends upon various parameters as mentioned below:

| Factor                | Beta | Expected value in % | Actual value in % |
|-----------------------|------|---------------------|-------------------|
| GNP                   | ?    | 7.70                | 7.70              |
| Inflation             | ?    | 5.50                | 7.50              |
| Interest rate         | 1.30 | 7.75                | 9.00              |
| Stock market index    | 1.70 | 10.00               | 11.00             |
| Industrial production | 1.00 | 7.00                | 7.50              |

If the risk-free rate of interest be 8.50% and the return of the share under Arbitrage pricing theory is 15.825% then calculate sensitivity of factor-Inflation?

5

2. (a) Mr. A is holding 1000 shares of face value of 100 each of M/s. ABC Ltd. He wants to hold these shares for long term and have no intention to sell.

On 1st January 2023, M/s. XYZ Ltd. has made short sales of M/s. ABC Ltd.'s shares and approached Mr. A to lend his shares under Stock Lending Scheme with following terms:

- (1) Shares to be borrowed for 3 months from 01-01-2023 to 31-03-2023,
- (2) Lending Charges/Fees of 1% to be paid every month on the closing price of the stock quoted in Stock Exchange and
- (3) Bank Guarantee will be provided as collateral for the value 01-01-2023.

**Other Information:**

(a) Cost of Bank Guarantee is 8% per annum,

(b) On 29-02-2023 M/s. ABC Ltd., declared dividend of 25%,

Closing price of M/s. ABC Ltd.'s share quoted in Stock Exchange on various dates are as follows:

| Date       | Share Price in Scenario-I<br>Bullish | Share Price in Scenario-II<br>Bearish |
|------------|--------------------------------------|---------------------------------------|
| 01-01-2023 | 500                                  | 500                                   |
| 31-01-2023 | 520                                  | 480                                   |
| 29-02-2023 | 540                                  | 460                                   |
| 31-03-2023 | 550                                  | 440                                   |

**You are required to find out:**

- Earnings of Mr. A through Stock Lending Scheme in both the scenarios,
- Total Earnings of Mr. A during 01-01-2023 to 31-03-2023 in both the scenarios,
- What is the Profit or loss to M/s. XYZ by shorting the shares using through Stock Lending Scheme in both the scenarios?

8

- (b) In March 2022, SMD Bank sold 7% Interest Rate Futures underlying Notional 7.5% Coupon Bonds. The Exchange provides following details of eligible securities that can be delivered:

| Security      | Quoted Spot Price of Bonds | Conversion Factor |
|---------------|----------------------------|-------------------|
| 6.55 GOI 2025 | 9264.0                     | 0.9060            |
| 6.80 GOI 2029 | 8775.5                     | 0.9195            |
| 6.85 GOI 2026 | 9723.0                     | 0.9643            |
| 8.44 GOI 2027 | 11463.0                    | 1.1734            |
| 8.85 GOI 2028 | 12017.0                    | 1.2428            |

Recommend the Cheapest to Deliver (CTD) security that should be delivered by SMD Bank if Future settlement price is 10000.

6

3. (a) M/S. Corpus an AMC, on 1.04.2015 has floated two schemes viz. Dividend Plan and Bonus Plan. Mr. X, an investor has invested in both the schemes. The following details (except the issue price) are available:

| Date       | Dividend<br>(%) | Bonus Ratio                    | NAV              |               |
|------------|-----------------|--------------------------------|------------------|---------------|
|            |                 |                                | Dividend<br>Plan | Bonus<br>Plan |
| 1.04.2015  |                 |                                | ?                | ?             |
| 31.12.2016 |                 | 1:4 (One unit on 4 units held) | 47               | 40            |
| 31.03.2017 | 12              |                                | 48               | 42            |
| 31.03.2018 | 10              |                                | 50               | 39            |
| 31.12.2018 |                 | 1:5 (One unit on 5 units held) | 46               | 43            |
| 31.03.2019 | 15              |                                | 45               | 42            |
| 31.03.2020 | -               | -                              | 49               | 44            |

| Additional details: |            |             |  |  |
|---------------------|------------|-------------|--|--|
| Investment (₹)      | ₹ 9,20,000 | ₹ 10,00,000 |  |  |
| Average Profit (₹)  | ₹27,748.60 |             |  |  |
| Average Yield (%)   |            | 6.40        |  |  |

You are required to calculate the issue price of both the schemes as on 1.04.2015.

8

- (b) PSK Company is considering the replacement of its existing machine with a new machine. The Purchase price of the New machine is ₹26 Lakhs and its expected Life is 8 years. The company follows straight-line method of depreciation on the original investment (scrap value is not considered for the purpose of depreciation). The other expenses to be incurred for the New Machine are as under:

- (i) Installation Charges ₹9,000
- (ii) Fees paid to the consultant for his advice to buy New Machine ₹6,000.
- (iii) Additional Working Capital required ₹17,000. (will be released after 8 years)

The written down value of the existing machine is ₹76,000, and its Cash Salvage Value is ₹12,500. The dismantling of this machine would cost ₹4,500. The Annual Earnings (before tax but after depreciation) from the New Machine would amount to ₹3,15,000. Income tax rate is 35%. The Company's required Rate of Return is 13%.

You are required to advise on the viability of the proposal.

PVIF (13%, 8) = 0.376; PVIFA (13%, 8) = 4.80

6

4. (a) Shrinidhi is learning the portfolio management techniques and wants to test one of the techniques she has developed on KGF Equity Fund and compare the gains and losses from the technique with those from a passive buy and hold strategy.

The KGF Equity Fund consists of equities only and the ending NAVs of the fund she constructed for the last 10 months are given below:

|       | Month Ending | NAV (₹/unit) |        | Month Ending | NAV (₹/unit) |
|-------|--------------|--------------|--------|--------------|--------------|
| (i)   | Jan-23       | 100          | (vi)   | Jun-23       | 98           |
| (ii)  | Feb-23       | 78           | (vii)  | Jul-23       | 100          |
| (iii) | Mar-23       | 92           | (viii) | Aug-23       | 102          |
| (iv)  | Apr-23       | 86           | (ix)   | Sep-23       | 118          |
| (v)   | May-23       | 102          | (x)    | Oct-23       | 120          |

Assume:

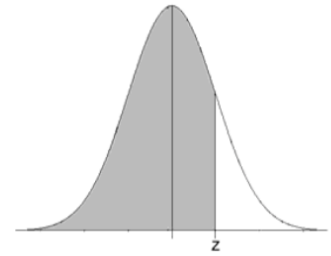
- (i) Shrinidhi had invested a notional amount of ₹ 5 lakhs equally in the equity fund and a conservative portfolio (of bonds) in the beginning of January 2023 and the total portfolio was being rebalanced each time the NAV of the fund increased or decreased by 15% compared to the NAV of previous month.
- (ii) There is no income earned from the conservative portfolio during the period.
- (iii) There is no taxation and entry/exit loads.

**You are required to determine.**

- a) The value of the portfolio for each level of NAV following the Constant Ratio Plan. 8
- b) Which strategy (whether *constant ratio plan* or *buy-hold strategy*) would have provided better position as on Oct-23? Assume equal fund invested in equity & bond at the beginning under both strategies. 8
- (b) List out the points to be kept in mind while preparing a Pitch Presentation. What are the basic documents that are included in financial projections that make up a business's financial statement. 6
5. (a) Suppose you hold ₹2 crore shares of X Ltd. whose market price standard deviation is 2% per day. Assuming 260 trading days a year, determine maximum loss level over the period of 1 one week with 98% confidence level (i.e. 2% Significance level) 6  
[Note: use table given at the end of the Question paper.]
- (b) X Limited proposes to acquire Y Limited. The relevant financial details of the two firms prior to the merger announcement are as follows:
- |                              | X Limited | Y Limited |
|------------------------------|-----------|-----------|
| Market price per share       | ₹ 80      | ₹40       |
| Number of outstanding shares | 10 lakhs  | 5 lakhs   |
- The merger is expected to generate gains with a present value of ₹120 Lakhs.  
X Ltd. will issue 1 share of it for 2 shares of Y Ltd.  
You are required to find out the true cost of merger for X Ltd. 4
- (c) **Either**  
Describe briefly on which principles Technical Analysis is based. 4
- OR**
- (c) Explain the Efficient Market Theory in and what are major misconceptions about this theory? 4
6. (a) The valuation of Hansel Limited has been done by an investment analyst. Based on an expected free cash flow of ₹ 54 lakhs for the following year and an expected growth rate of 9 percent, the analyst has estimated the value of Hansel Limited to be ₹ 1800 lakhs. However, he committed a mistake of using the book values of debt and equity.  
The book value weights employed by the analyst are not known, but you know that Hansel Limited has a cost of equity of 20 percent and post tax cost of debt of 10 percent. The value of equity is thrice its book value, whereas the market value of its debt is nine-tenths of its book value. What is the correct value of Hansel Ltd? 7
- (b) Explain the term Corporate Level Strategy and what are the three basic questions it answers? 4
- (c) Although rating agency is secondary to the process of securitization, but it plays a vital role. Explain. 3



## Standard Normal Cumulative Probability Table



Cumulative probabilities for POSITIVE z-values are shown in the following table:

| z   | 0.00   | 0.01   | 0.02   | 0.03   | 0.04   | 0.05   | 0.06   | 0.07   | 0.08   | 0.09   |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0 | 0.5000 | 0.5040 | 0.5080 | 0.5120 | 0.5160 | 0.5199 | 0.5239 | 0.5279 | 0.5319 | 0.5359 |
| 0.1 | 0.5398 | 0.5438 | 0.5478 | 0.5517 | 0.5557 | 0.5596 | 0.5636 | 0.5675 | 0.5714 | 0.5753 |
| 0.2 | 0.5793 | 0.5832 | 0.5871 | 0.5910 | 0.5948 | 0.5987 | 0.6026 | 0.6064 | 0.6103 | 0.6141 |
| 0.3 | 0.6179 | 0.6217 | 0.6255 | 0.6293 | 0.6331 | 0.6368 | 0.6406 | 0.6443 | 0.6480 | 0.6517 |
| 0.4 | 0.6554 | 0.6591 | 0.6628 | 0.6664 | 0.6700 | 0.6736 | 0.6772 | 0.6808 | 0.6844 | 0.6879 |
| 0.5 | 0.6915 | 0.6950 | 0.6985 | 0.7019 | 0.7054 | 0.7088 | 0.7123 | 0.7157 | 0.7190 | 0.7224 |
| 0.6 | 0.7257 | 0.7291 | 0.7324 | 0.7357 | 0.7389 | 0.7422 | 0.7454 | 0.7486 | 0.7517 | 0.7549 |
| 0.7 | 0.7580 | 0.7611 | 0.7642 | 0.7673 | 0.7704 | 0.7734 | 0.7764 | 0.7794 | 0.7823 | 0.7852 |
| 0.8 | 0.7881 | 0.7910 | 0.7939 | 0.7967 | 0.7995 | 0.8023 | 0.8051 | 0.8078 | 0.8106 | 0.8133 |
| 0.9 | 0.8159 | 0.8186 | 0.8212 | 0.8238 | 0.8264 | 0.8289 | 0.8315 | 0.8340 | 0.8365 | 0.8389 |
| 1.0 | 0.8413 | 0.8438 | 0.8461 | 0.8485 | 0.8508 | 0.8531 | 0.8554 | 0.8577 | 0.8599 | 0.8621 |
| 1.1 | 0.8643 | 0.8665 | 0.8686 | 0.8708 | 0.8729 | 0.8749 | 0.8770 | 0.8790 | 0.8810 | 0.8830 |
| 1.2 | 0.8849 | 0.8869 | 0.8888 | 0.8907 | 0.8925 | 0.8944 | 0.8962 | 0.8980 | 0.8997 | 0.9015 |
| 1.3 | 0.9032 | 0.9049 | 0.9066 | 0.9082 | 0.9099 | 0.9115 | 0.9131 | 0.9147 | 0.9162 | 0.9177 |
| 1.4 | 0.9192 | 0.9207 | 0.9222 | 0.9236 | 0.9251 | 0.9265 | 0.9279 | 0.9292 | 0.9306 | 0.9319 |
| 1.5 | 0.9332 | 0.9345 | 0.9357 | 0.9370 | 0.9382 | 0.9394 | 0.9406 | 0.9418 | 0.9429 | 0.9441 |
| 1.6 | 0.9452 | 0.9463 | 0.9474 | 0.9484 | 0.9495 | 0.9505 | 0.9515 | 0.9525 | 0.9535 | 0.9545 |
| 1.7 | 0.9554 | 0.9564 | 0.9573 | 0.9582 | 0.9591 | 0.9599 | 0.9608 | 0.9616 | 0.9625 | 0.9633 |
| 1.8 | 0.9641 | 0.9649 | 0.9656 | 0.9664 | 0.9671 | 0.9678 | 0.9686 | 0.9693 | 0.9699 | 0.9706 |
| 1.9 | 0.9713 | 0.9719 | 0.9726 | 0.9732 | 0.9738 | 0.9744 | 0.9750 | 0.9756 | 0.9761 | 0.9767 |
| 2.0 | 0.9772 | 0.9778 | 0.9783 | 0.9788 | 0.9793 | 0.9798 | 0.9803 | 0.9808 | 0.9812 | 0.9817 |
| 2.1 | 0.9821 | 0.9826 | 0.9830 | 0.9834 | 0.9838 | 0.9842 | 0.9846 | 0.9850 | 0.9854 | 0.9857 |
| 2.2 | 0.9861 | 0.9864 | 0.9868 | 0.9871 | 0.9875 | 0.9878 | 0.9881 | 0.9884 | 0.9887 | 0.9890 |
| 2.3 | 0.9893 | 0.9896 | 0.9898 | 0.9901 | 0.9904 | 0.9906 | 0.9909 | 0.9911 | 0.9913 | 0.9916 |
| 2.4 | 0.9918 | 0.9920 | 0.9922 | 0.9925 | 0.9927 | 0.9929 | 0.9931 | 0.9932 | 0.9934 | 0.9936 |
| 2.5 | 0.9938 | 0.9940 | 0.9941 | 0.9943 | 0.9945 | 0.9946 | 0.9948 | 0.9949 | 0.9951 | 0.9952 |
| 2.6 | 0.9953 | 0.9955 | 0.9956 | 0.9957 | 0.9959 | 0.9960 | 0.9961 | 0.9962 | 0.9963 | 0.9964 |
| 2.7 | 0.9965 | 0.9966 | 0.9967 | 0.9968 | 0.9969 | 0.9970 | 0.9971 | 0.9972 | 0.9973 | 0.9974 |
| 2.8 | 0.9974 | 0.9975 | 0.9976 | 0.9977 | 0.9977 | 0.9978 | 0.9979 | 0.9979 | 0.9980 | 0.9981 |
| 2.9 | 0.9981 | 0.9982 | 0.9982 | 0.9983 | 0.9984 | 0.9984 | 0.9985 | 0.9985 | 0.9986 | 0.9986 |
| 3.0 | 0.9987 | 0.9987 | 0.9987 | 0.9988 | 0.9988 | 0.9989 | 0.9989 | 0.9989 | 0.9990 | 0.9990 |
| 3.1 | 0.9990 | 0.9991 | 0.9991 | 0.9991 | 0.9992 | 0.9992 | 0.9992 | 0.9992 | 0.9993 | 0.9993 |
| 3.2 | 0.9993 | 0.9993 | 0.9994 | 0.9994 | 0.9994 | 0.9994 | 0.9994 | 0.9995 | 0.9995 | 0.9995 |
| 3.3 | 0.9995 | 0.9995 | 0.9995 | 0.9996 | 0.9996 | 0.9996 | 0.9996 | 0.9996 | 0.9996 | 0.9997 |
| 3.4 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9998 |