The WAY CA test series – SEPT 2025

CA FINAL **P2: ADVANCED FINANCIAL MANAGEMENT** **21.06.2025**

[SYLLABUS : PORTFOLIO MANAGEMENT, ADVANCED CAPITAL BUDGETING]

TIME : 2 HRS **Maximum Marks : 70**

All Question Papers are uploaded Here ⬇

https://t.me/catestseries_thewaychannel

GENERAL INSTRUCTIONS TO CANDIDATES

1. Write your name and subject name at the top of the first page of your answer sheet
2. The question paper comprises of two parts, Part I and Part II.
3. Part I comprises of MCQs and Part II comprises of descriptive questions.
4. Working notes should form part of answer, if any.
5. Answers should be written only in English.
6. Duration of the examination is 2 hrs only.
7. Students who want to get their paper evaluated follow the instructions given in the channel link above.

PART I

1. Answer all MCQs
2. After each MCQ, four options are given. Choose the correct and most appropriate option, and write the letter corresponding to that option on the first page of your answer sheet.

PART II

1. Question paper comprises 4 questions.

PART I **14 Marks**

TIME : 2 HRS Maximum Marks : 70

Case Study – 1

Mr. A is interested in investing ₹ 1,00,000 for which he is considering following three alternatives:

i. Invest ₹ 1,00,000 in Mutual Fund X (MFX)
ii. Invest ₹ 1,00,000 in Mutual Fund Y (MFY)
iii. Invest ₹ 60,000 in Mutual Fund X (MFX) and ₹ 40,000 in Mutual Fund Y (MFY)

Average annual return earned by MFX and MFY is 12% and 11% respectively. Risk free rate of return is 8% and market rate of return is 10%.

Covariance of returns of MFX, MFY and market portfolio Mix are as follow:

Particulars	MFX	MFY	Portfolio
MFX	4400	4300	3370
MFY	4300	4200	2800
Portfolio	3370	2800	4200

On the basis of the information provided above, you are required to choose the most appropriate answer to the below mentioned questions 1 to 3 **(3 × 2 = 6)**

1. Standard deviation of MFX is……
   a) 2.0736
   b) 2.0976
   c) 1.8358
   d) 2.0494

2. Portfolio return would be…….
   a) 11.00%

b) 12.00%

c) 11.50%

d) 11.60%

3. Based on standard deviation, the optimum investment for Mr. A would be…..

a) Portfolio

b) All investment in MFX

c) All investment in MFY

d) Both MFY and MIX are indifferent

4. XYZ Ltd. is considering a project "A" with an initial outlay of ₹ 14,00,000 and the possible three cash inflow attached with the project as follows:

Particulars	Year 1	Year 2	Year 3
Worst case	450	400	700
Most likely	550	450	800
Best case	650	500	900

Assuming the cost of capital as 9%. If XYZ Ltd is certain about the most likely result in first two years but uncertain about the third year's cash flow, analyze what will be the NPV expecting worst scenario in the third year. (2 × 1 = 2)

a) Rs (1,10,150)

b) Rs 1,00,850

c) Rs 3,11,850

d) Rs 23,871

5. An enterprise is investing ₹ 100 lakhs in a project. The risk-free rate of return is 7%. Risk premium expected by the Management is 7%. The life of the project is 5 years. Following are the cash flows that are estimated over the life of the project:

Year	Cash flows (₹ in lakhs)
1	25
2	60
3	75
4	80
5	65

Calculate Net Present Value of the project based on Risk free rate and also on the basis of Risks adjusted discount rate. (2 × 1 = 2)

a) Rs 144.34 Lakh
b) Rs 99.79 Lakh
c) Rs 102.79 Lakh
d) Rs 109.79 Lakh

6. The following information is available in respect of Security

Equilibrium Return	15%
Market Return	15%
7% Treasury Bond Trading at	$140
Covariance of Market Return and Security Return	225%
Coefficient of Correlation	0.75

You are required to determine the Standard Deviation of Market Return and Security Return. (2 × 1 = 2)

a) 5% & 15%
b) 15% & 20%
c) 5% & 20%

d) 12% & 15%

7. Mr. Tamarind 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	1.20	7.70	7.70
Inflation	1.75	5.50	7.00
Interest rate	1.30	7.75	9.00
Stock market index	1.70	10.00	12.00
Industrial production	1.00	7.00	7.50

If the risk - free rate of interest be 9.25%, how much is the return of the share under Arbitrage Pricing Theory? **(2 × 1 = 2)**

a) 8.16%
b) 17.41%
c) 9.25%
d) 10.87%

TIME : 2 HRS Maximum Marks : 70

PART – II 56 Marks

Question : 1(a) 6 Marks

The following information are available with respect of Krishna Ltd.

YEAR	Krishna Ltd. Average share price	Dividend Per share	Average Market index	Dividend yeild	Return on Govt. bonds
	₹	₹			
2012	245	20	2013	4%	7%
2013	253	22	2130	5%	6%
2014	310	25	2350	6%	6%
2015	330	30	2580	7%	6%

Compute Beta Value of the Krishna Ltd. at the end of 2015 and state your observation.

Question : 1(b) 4 Marks

New Projects Ltd. is evaluating 3 projects, P-I, P-II, P-III. Following information is available in respect of these projects:

	P-I	P-II	P-III
Cost	₹ 15,00,000	₹ 11,00,000	₹ 19,00,000
Inflows-Year 1	6,00,000	6,00,000	4,00,000
Year 2	6,00,000	4,00,000	6,00,000
Year 3	6,00,000	5,00,000	8,00,000
Year 4	6,00,000	2,00,000	12,00,000
Risk Index	1.80	1.00	0.60

Minimum required rate of return of the firm is 15% and applicable tax rate is 40%. The risk free interest rate is 10%.

Required:

a. Find out the risk-adjusted discount rate (RADR) for these projects.
b. Which project is the best?

Question : 1(c) **4 Marks**

Expected returns on two stocks for particular market returns are given in the following table:

Market Return	Aggressive	Defensive
7%	4%	9%
25%	40%	18%

You are required to calculate:

a. The Betas of the two stocks.
b. Expected return of each stock, if the market return is equally likely to be 7% or 25%.
c. The Security Market Line (SML), if the risk free rate is 7.5% and market return is equally likely to be 7% or 25%.
d. The Alphas of the two stocks.

Question : 2(a) **5 Marks**

KLM Ltd. requires ₹ 15,00,000 for a new project.

Useful life of project is 3 years.

Salvage value - NIL.

Depreciation is ₹ 5,00,000 p.a.

Given below are projected revenues and costs (excluding depreciation) ignoring inflation:

Year	1	2	3
Revenues in ₹	10,00,000	13,00,000	14,00,000
Costs in ₹	5,00,000	6,00,000	6,50,000

Applicable tax rate is 35%. Assume cost of capital to be 14% (after tax). The inflation rates for revenues and costs are as under:

Year	Revenue %	Cost %
1	9	10
2	8	9
3	6	7

PVF at 14%, for 3 years =0.877, 0.769 and 0.675

Show amount to the nearest rupee in calculations.

You are required to calculate net present value of the project.

Question : 2(b) **5 Marks**

Suppose that economy A is growing rapidly and you are managing a global equity fund and so far you have invested only in developed-country stocks only. Now you have decided to add stocks of economy A to your portfolio. The table below shows the expected rates of return, standard deviations, and

correlation coefficients (all estimates are for aggregate stock market of developed countries and stock market of Economy A).

	Developed Country Stocks	Stocks of Economy A
Expected rate of return (annualized percentage)	10	15
Risk [Annualized Standard Deviation (%)]	16	30
Correlation Coefficient (ρ)	0.30	

Assuming the risk – free interest rate to be 3%, you are required to determine:

a. What percentage of your portfolio should you allocate to stocks of Economy A if you want to increase the expected rate of return on your portfolio by 0.5%?
b. What will be the standard deviation of your portfolio assuming that stocks of Economy A are included in the portfolio as calculated above?
c. Also show how well the Fund will be compensated for the risk undertaken due to inclusion of stocks of Economy A in the portfolio?

Question : 2(b) **4 Marks**

Trouble Free Solutions (TFS) is an authorized service center of a reputed domestic air conditioner manufacturing company. All complaints/service related matters of Air conditioner are attended by this service center. The service center employs a large number of mechanics, each of whom is provided with a motor bike to attend the complaints. Each mechanic travels approximately 40000 kms per annuam. TFS decides to continue its present policy of always buying a new bike for its mechanics but wonders whether the present policy of replacing the bike every three year is optimal or not. It is of

believe that as new models are entering into market on yearly basis, it wishes to consider whether a replacement of either one year or two years would be better option than present three year period. The fleet of bike is due for replacement shortly in near future.

The purchase price of latest model bike is ₹ 55,000. Resale value of used bike at current prices in market is as follows:

Period	₹
1 Year old	35,000
2 Year old	21,000
3 Year old	9,000

Running and Maintenance expenses (excluding depreciation) are as follows

Year	Road Taxes Insurance etc. (₹)	Petrol Repair Maintenance etc. (₹)
1	3,000	30,000
2	3,000	35,000
3	3,000	43,000

Using opportunity cost of capital as 10% you are required to determine optimal replacement period of bike.

Question : 3(a) **7 Marks**

Ramesh wants to invest in stock market. He has got the following information about individual securities:

Security	Expected Return	Beta	σ2ci
A	15	1.5	40
B	12	2	20
C	10	2.5	30

D	09	1	10
E	08	1.2	20
F	14	1.5	30

Market index variance is 10 percent and the risk - free rate of return is 7%. What should be the optimum portfolio assuming no short sales?

Question : 3(b) **7 Marks**

X Ltd. is considering its new project with the following details:

Sr. No.	Particulars	Figures
1	Initial capital cost	₹400 Cr.
2	Annual unit sales	5 Cr.
3	Selling price per unit	₹100
4	Variable cost per unit	₹50
5	Fixed costs per year	₹50 Cr.
6	Discount Rate	6%

Required:

i. Calculate the NPV of the project.
ii. Compute the impact on the project's NPV considering a 2.5 per cent adverse variance in each variable. Which variable is having maximum effect?

Consider Life of the project as 3 years.

Question : 4(a) **7 Marks**

Following are the details of a portfolio consisting of three shares:

Share	Portfolio weight	Beta	Expected return in %	Total variance
A	0.20	0.40	14	0.015
B	0.50	0.50	15	0.025
C	0.30	1.10	21	0.100

Standard Deviation of Market Portfolio Returns = 10% You are given the following additional data:

Covariance (A, B) = 0.030

Covariance (A, C) = 0.020

Covariance (B, C) = 0.040

Calculate the following:

a. The Portfolio Beta
b. Residual variance of each of the three shares
c. Portfolio variance using Sharpe Index Model
d. Portfolio variance (on the basis of modern portfolio theory given by Markowitz)

Question : 4(b) **7 Marks**

The Easygoing Company Limited 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.

Financial Manager has studied that 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 ₹ 57,500/-

Ignore Depreciation on initial investment and impact of taxation.

Calculate

a. Initial Investment of the Project
b. Net Present Value of the Project
c. Annual Fixed Cost
d. Estimated annual unit of sales
e. 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

ALL THE BEST