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CA FINAL
GROUP I - PAPER 2
ADVANCED FINANCIAL MANAGEMENT
SUGGESTED ANSWERS
(Series 2)

PART - I (MCQs)

MCQ - 2 marks each														
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
A	B	B	B	C	B	B	B	D	A	D	C	A	B	A

PART - II (Descriptive Answers)

Answer 1A - 6 Marks

(i) Swap Points for 2 months and 15 days

	Bid	Ask
Swap Points for 2 months (a)	70	90
Swap Points for 3 months (b)	160	186
Swap Points for 30 days (c) = (b) - (a)	90	96
Swap Points for 15 days (d) = (c)/2	45	48
Swap Points for 2 months & 15 days (e) = (a) + (d)	115	138

(ii) Foreign Exchange Rates for 20th June 2022

	Bid	Ask
Spot Rate (a)	66.2525	67.5945
Swap Points for 2 months & 15 days (b)	0.0115	0.0138
	66.2640	67.6083

(iii) Annual Rate of Premium

	Bid	Ask
Spot Rate (a)	66.2525	67.5945
Foreign Exchange Rates for 20 th June 2022 (b)	66.2640	67.6083
Premium (c)	0.0115	0.0138
Total (d) = (a) + (b)	132.5165	135.2028
Average (d)/2	66.2583	67.6014

Premium	$\frac{0.0115}{66.2583} \times \frac{12}{2.5} \times 100$ = 0.0833%	$\frac{0.0138}{67.6014} \times \frac{12}{2.5} \times 100$ = 0.0980%
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Answer 1B - 4 Marks

(i) Personal earnings of Mr. Alex = $R_1 = 15\%$

Mutual Fund earnings = R_2

$$R_2 = \frac{1}{1 - \text{Initial expenses (\%)}} \times R_1 + \text{Recurring expenses (\%)}$$

$$R_2 = \frac{1}{1 - 0.06} \times 15\% + 2\% = 17.96\%$$

Mutual Fund earnings = **17.96%**

(ii) Net financial benefit to Mr. Alex if he invests his portfolio in Fund:

Present Income of Mr. Alex

	₹ Lakhs
Annual Professional Income (A)	40.00
Portfolio Value	50.00
Income on his Portfolio @15% (B)	7.50
Total Income (A) + (B)	47.50

Expected Income of Mr. Alex after investing the Portfolio in Multi-cap Fund:

	₹ Lakhs
Annual Professional Income (A)	40.00
Additional Professional Income (B)	4.00
Portfolio Value	50.00
Income on his Portfolio @13% (C)	6.50
Total Income (A) + (B) + (C)	50.50

It is advisable to **invest in Multi-cap Mutual Funds and devote the time on profession. He will get net benefit of ₹ 3 Lakhs** (₹ 50.50 – ₹ 47.50)

Answer 1C - 4 Marks

Yes, agree with the statement.

Three main types of fund structure exist: one for domestic funds and two for offshore ones:

(a) **Domestic Funds:** Domestic Funds (one **which raises funds domestically**) are **structured as:**

- (i) **A domestic vehicle for the pooling of funds from the investor**, and
- (ii) **A separate investment adviser** that carries those duties of asset manager.

The **choice of entity for the pooling vehicle falls between a trust and a company**, (India,

unlike most developed countries does not recognize a limited partnership), with the trust form prevailing due to its operational flexibility.

(b) Offshore Funds: Two common alternatives available to offshore investors are:

Offshore structure

Under this structure, an **investment vehicle** (an **LLC** or an **LP** organized in a jurisdiction **outside India**) **makes investments directly into Indian portfolio companies**. Typically, the **assets are managed by an offshore manager**, while the investment advisor in India carries out the due diligence and identifies deals.

Unified Structure

When domestic investors are expected to participate in the fund, a unified structure is used. Overseas investors pool their assets in an **offshore vehicle** that **invests in a locally managed trust**, whereas **domestic investors directly contribute to the trust**. This is later device used to make the local portfolio investments.

Answer 2A – 6 Marks

(i) The number of shares to be issued by A Ltd.:

The Exchange ratio is 0.5

So, New Shares = $1,80,000 \times 0.5 = 90,000$ shares

(ii) EPS of A Ltd. after the acquisition:

Total Earnings ($\text{₹ } 18,00,000 + \text{₹ } 3,60,000$)	₹ 21,60,000
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No. of Shares ($6,00,000 + 90,000$)	6,90,000
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EPS ($\text{₹ } 21,60,000 / 6,90,000$)	₹ 3.13
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(iii) Equivalent EPS of T Ltd.:

No. of new Shares	0.5
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EPS	₹ 3.13
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Equivalent EPS ($\text{₹ } 3.13 \times 0.5$)	₹ 1.57
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(iv) New Market Price of A Ltd. (P/E remaining unchanged):

Present P/E Ratio of A Ltd.	10 times
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Expected EPS after merger	₹ 3.13
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Expected Market Price ($\text{₹ } 3.13 \times 10$)	₹ 31.30
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(v) Market Value of merged firm:

Total number of Shares	6,90,000
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Expected Market Price	₹ 31.30
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Total value ($6,90,000 \times 31.30$)	₹ 2,15,97,000
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(vi) Present market Value of share of T Ltd. ($100 \times \text{₹ } 14$)	₹ 1,400
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Revised market price of each share of A Ltd. after Merger	₹ 31.30
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Equivalent No. of A Ltd. share in exchange of T Ltd. (100×0.5)	50
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Equivalent Value of A Ltd. share in exchange of T Ltd. ($50 \times \text{₹ } 31.30$)	₹ 1,565
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Increase in Market Value ($\text{₹ } 1,565 - \text{₹ } 1,400$)	₹ 165
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No, I am not agreed to sell the stake as there is increase in market value.

Answer 2B - 4 Marks**Workings:**

Asset turnover ratio	= 1.1
Total Assets	= ₹ 600
Turnover	= ₹ 600 lakhs x 1.1 = ₹ 660 lakhs
Effective interest rate	= Interest/Liabilities = 8%
Liabilities	= ₹ 125 lakhs + 50 lakhs = 175 lakh
Interest	= ₹ 175 lakhs x 0.08 = ₹ 14 lakh
Operating Margin	= 10%
Hence operating cost	= (1 - 0.10) x ₹ 660 lakhs = ₹ 594 lakh
Dividend Payout	= 16.67%
Tax rate	= 40%

(i) Income statement

	(₹ Lakhs)
Sale	660
Operating Exp	<u>594</u>
EBIT	66
Interest	<u>14</u>
EBT	52
Tax @ 40%	<u>20.80</u>
EAT	31.20
Dividend @ 16.67%	<u>5.20</u>
Retained Earnings	<u>26.00</u>

(ii) SGR = ROE (1 - b)

$$ROE = \frac{PAT}{NW} \text{ and } NW = ₹ 100 \text{ lakh} + ₹ 300 \text{ lakh} = 400 \text{ lakh}$$

$$ROE = \frac{₹ 31.2 \text{ lakhs}}{₹ 400 \text{ lakhs}} \times 100 = 7.8\%$$

$$SGR = 0.078 (1 - 0.1667) = 6.5\%$$

(iii) Calculation of fair price of share using dividend discount model

$$P_0 = \frac{D_0 (1 + g)}{k_e - g}$$

$$\text{Dividends} = \frac{₹ 5.2 \text{ lakhs}}{₹ 10 \text{ lakhs}} = ₹ 0.52$$

$$\text{Growth Rate} = 6.5\%$$

$$\text{Hence } P_0 = \frac{₹ 0.52 (1 + 0.065)}{0.15 - 0.065} = ₹ 6.51$$

- (iv) Since the current market price of share is ₹ 14, the share is **overvalued**. Hence the investor should not invest in the company.

Answer 2C – 4 Marks

The interface of strategic management and financial policy will be clearly understood if we appreciate the fact that starting point of organization is money and end point of that organization is also money.

Sources of finance and capital structure are the most important dimensions of a strategic plan. The need for fund mobilization to support the expansion activity of firm is very vital for any organization. The generation of funds may arise out of ownership capital and or borrowed capital.

Another important dimension of strategic management and financial policy interface is the **investment and fund allocation decisions**.

Dividend policy is another area for making financial policy decisions affecting the strategic performance of company. Dividend policy decision deals with the extent of earnings to be distributed as dividend and the extent of earnings to be retained for future expansion scheme of the organization.

It may be noted from above discussions that **financial policy of a company cannot be worked out in isolation of other functional policies**. It has wider appeal and closer link with overall organizational performance and direction of growth. As a result preference and patronage for the company depends significantly on financial policy framework. Hence, attention of the corporate planners must be drawn while framing the financial policies not at a later stage but during the stage of corporate planning itself.

Answer 3A – 6 Marks

(i) Computation of Beta Value

Calculation of Returns

$$\text{Returns} = \frac{D_1 + (P_1 - P_0)}{P_0} \times 100$$

Year	Returns
2020-21	$[(22 + (253 - 245))/245] \times 100 = 12.24\%$
2021-22	$[(25 + (310 - 253))/253] \times 100 = 32.41\%$
2022-23	$[(30 + (330 - 310))/310] \times 100 = 16.13\%$

Calculation of Returns from market Index

Year	% of Index Appreciation	Dividend Yield %	Total Return %
2020-21	$[(2130 - 2013)/2013] \times 100 = 5.81\%$	5%	10.81%
2021-22	$[(2350 - 2130)/2130] \times 100 = 10.33\%$	6%	16.33%
2022-23	$[(2580 - 2350)/2350] \times 100 = 9.79\%$	7%	16.79%

Computation of Beta

Year	Krishna Ltd. (X)	Market Index (Y)	XY	Y ²
2020-21	12.24%	10.81%	132.31	116.86
2021-22	32.41%	16.33%	529.25	266.67
2022-23	16.13%	16.79%	270.82	281.90

Total	60.78%	43.93%	932.38	665.43
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$$\text{Average Return of Krishna Ltd.} = \frac{60.78}{3} = \mathbf{20.26\%}$$

$$\text{Average Market Return} = \frac{43.93}{3} = \mathbf{14.64\%}$$

$$\begin{aligned} \text{Beta } (\beta) &= \frac{\sum XY - n \bar{X} \bar{Y}}{\sum Y^2 - n(\bar{Y})^2} \\ &= \frac{932.38 - 3 \times 20.26 \times 14.64}{665.43 - 3(14.64)^2} = \mathbf{1.897} \end{aligned}$$

(ii) Observation

	Expected Return (%)	Actual Return (%)	Action
2020-21	6% + 1.897 (10.81% - 6%) = 15.12%	12.24%	Sell
2021-22	6% + 1.897 (16.33% - 6%) = 25.60%	32.41%	Buy
2022-23	6% + 1.897 (16.79% - 6%) = 26.47%	16.13%	Sell

Answer 3B - 4 Marks

(i) Computation of Business Value

	₹ Lakhs	₹ Lakhs
Profit before tax [77/(1 - 0.30)]		110
Less: Extraordinary income		(8)
Add: Extraordinary losses		10
		112
Profit from new product		
Sales	70	
Less: Material costs	20	
Labour costs	12	
Fixed costs	<u>10</u>	
	(42)	28
		140.00
Less: Taxes @ 30%		42.00
Future Maintainable Profit after taxes		98.00
Relevant Capitalisation Factor		0.14
Value of Business (₹ 98/0.14)		700

(ii) Determination of Market Price of Equity Share

Future maintainable profits (After Tax)	₹ 98,00,000
Less: Preference share dividends 1,00,000 shares of ₹ 100 @ 13%	₹ 13,00,000
Earnings available for Equity Shareholders	₹ 85,00,000
No. of Equity Shares	50,00,000

Earnings per share (₹ 85,00,000/50,00,000)	₹ 1.70
PE ratio	10
Market price per share	₹ 17

Answer 3C – 4 Marks

The securitization has the following features:

- (i) **Creation of Financial Instruments:** The process of securitization can be viewed as process of creation of additional financial product of securities in market backed by collaterals.
- (ii) **Bundling and Unbundling:** When all the assets are combined in one pool, it is bundling and when these are broken into instruments of fixed denomination it is unbundling.
- (iii) **Tool of Risk Management:** In case of assets are securitized on non-recourse basis, then securitization process acts as risk management as the risk of default is shifted.
- (iv) **Structured Finance:** In the process of securitization, financial instruments are tailor structured to meet the risk return trade of profile of investor, and hence, these securitized instruments are considered as best examples of structured finance.
- (v) **Trenching:** Portfolio of different receivable or loan or asset are split into several parts based on risk and return they carry called 'Trenche'. Each Trench carries different level of risk and return.
- (vi) **Homogeneity:** Under each trenche, the securities are issued of homogenous nature and even meant for small investors the who can afford to invest in small amounts.

Answer 4A – 6 Marks

- (i) Net Present Value (All Equity Financed) – Base NPV

Particulars	Period	USD Lakhs	PVF @ 12%	PV (USD Lakhs)
Initial Investment (100 + 85 + 65)	0	(250.00)	1.000	(250.000)
EBIDTA (19 + 14)	1 to 20	33.00	7.469	246.477
Tax	1 to 20	(9.90)	7.469	(73.943)
Depreciation	1 to 10	(25.00)		
Tax Saving on Dep	1 to 10	7.50	5.650	42.375
NPV				(35.091)

- (ii) PV of Tax Shield on Interest

Particulars	Period	USD Lakhs	PVF @ 8%	PV (USD Lakhs)
Interest (150 lakhs x 6%)	1 to 15	9		
Tax Saving on Interest (9 x 30%)	1 to 15	2.70	8.559	23.109

Adjusted Present Value of the Project = Base NPV + PV of Tax Shield on Interest

$$= -\text{US\$ } 35.091 \text{ lakh} + \text{US\$ } 23.109 \text{ lakh} = -\text{US\$ } 11.982 \text{ lakh}$$

Advise: Since APV is positive, Ambani Infra Projects Pvt. Ltd. **should accept the project.**

Answer 4B - 4 Marks

- (a) To compute the beta of 10th security first we shall compute overall weighted beta as follows: Let weighted β be w , then

$$5 = \frac{9,94,450}{8,767.07 \times 25} \times w$$

$w = 1.102$ approximately

Let beta of 10th security is β then,

$$1.102 = 0.90 \times 1.10 + 0.10 \times \beta$$

$\beta = 1.12$

- (b) The **main reason for the profit** in cash position might due to reason that contrary to her expectation fall in the value of cash position **there may be increase in value of cash position.**

Answer 4C - 4 Marks

TRC is exposed to following financial risks:

- (1) **Currency Risk:** Since most of the Receipts and Payments of TRC are denominated in Non-INR currencies it is exposed to Currency Risk.
- (2) **Interest Rate Risk:** As TRC borrows and invest money in short-term instruments it is exposed to Interest Rate Risk.
- (3) **Counter Party Risk:** Due to relaxation of norms for granting credits certainly the receivable amount must have increased resulting in increased in Credit Risk.
- (4) **Liquidity Risk:** Since for short-term funding requirements TRC is using Commercial Papers etc. they are exposed to Liquidity Risk as in time of need if funds are not available from these sources, then securities shall be sold at discounted price.
- (5) **Political Risk:** As TRC is operating in various countries, it is also exposed to Political Risks such as restriction on conversion of local earnings into foreign currency, restrictions on remittance etc.

Answer 5A - 7 Marks

Let the number of contract in Index future be y and Beta of Antargyan Ltd. be x . Then,

$$\frac{200,000 \times 22 \times x - 100,000 \times 40 \times 2}{1,000} = -y^*$$

*Negative (-) sign indicates the sale (short) position

$$4,400,000x - 8,000,000 = -1,000y$$

Cash Outlay (Outflow)

Purchase of 200,000 shares of Antargyan Ltd. at a price of ₹ 22 ($200,000 \times 22$)	4,400,000
Sale of 100,000 shares of Arride Tech Ltd. for ₹ 40 ($100,000 \times 40$)	- 4,000,000
Short Position in Index Futures ($1,000 \times y$)	-1,000y*
Net	400,000 - 1,000y

* Negative (-) sign indicates the indicates inflow due to sale (short) position

Cash Inflow

Sale of 200,000 shares of Antargyan Ltd. $(200,000 \times 22 \times 0.98)$	4,312,000
Purchase of 100,000 shares of Arride Tech Ltd. $(100,000 \times 40 \times 1.03)$	- 4,120,000
Long Position in Index Futures $(1,000 \times y \times 0.985)$	-985y
Net	192,000 - 985y

* Negative (-) sign indicates the indicates outflow due to purchase (long) position

Position on Close Out

$$(400,000 - 1,000 y) - (192,000 - 985y) = 229,000$$

$$y = -1400$$

Thus **number of future contract short is 1400**

Beta of Antargyan Ltd. can be calculated as follows:

$$4,400,000x - 8,000,000 = -1000 \times 1400$$

$$4,400,000x = 6,600,000$$

$$x = 1.5$$

Thus Beta of Antargyan Ltd. shall be 1.5

Answer 5B - 7 Marks

(i) Calculation of overall cost

$$\text{Interest \& Margin (A) = } 3.55\%$$

$$\text{Hedging cost (B) = } 4\%$$

$$7.55\%$$

$$\text{Onetime fee = } 1.20\%$$

$$\text{Average loan maturity = } 3.4 \text{ years}$$

$$\text{Per annum cost } [1.2/3.4] \text{ (C) = } 0.35\%$$

$$\text{Annual overall cost in \% terms (A+B+C) = } 7.9\%$$

$$\text{Overall Cost in Rupee terms@ GBP 1 = 1,00,00,000} \times 7.90\% \times 90 = \text{₹ 7,11,00,000}$$

(ii) Cost of Hedging in terms of Rupees

$$\text{GBP 1,00,00,000} \times 90 \times 4\% = \text{₹ 3,60,00,000 on Annual Basis}$$

OR

$$\text{₹ 3,60,00,000} \times 3.4 \text{ years} = \text{12,24,00,000 in Total}$$

(iii) If K Ltd. pursues an aggressive approach, then Gain/Loss in INR Depreciation/Appreciation shall be computed as follows:

(a) If INR depreciates by 10%

$$\text{₹ loss per GBP} = 90 \times 10\% = \text{₹ 9}$$

$$\text{Total Loss on Repayment of loan (GBP 10 million} \times \text{₹ 9) = ₹ 90 million}$$

$$\text{Less: Saving in Cost of Hedging = ₹ 36 million}$$

$$\text{Net Loss = ₹ 54 million}$$

(b) If INR appreciates by 10%

$$\text{₹ Gains per GBP} = \text{₹ 90} \times 10\% = \text{₹ 9}$$

Total Gain on Repayment of loan (GBP 10 million x ₹ 9) =

₹ 90 million

Add: Saving in Cost of Hedging =

₹ 36 million

Net Gain =

₹ 126 million**Answer 6A - 7 Marks**

Since no trading is done on weekends and 21st May is Wednesday, 17th and 18th May is Saturday & Sunday respectively. Hence, these 2 days will be ignored in all calculations.

(i) AMA

$$AMA = (14522 + 14925 + 15222 + 16000)/4$$

$$AMA = 15167$$

(ii) EMA

Date	1 Sensex	2 EMA for Previous day	3 1 - 2	4 3 x exponent*	5 EMA 2 ± 4
15.05.2022	14522	15000	(478)	(191.20)	14808.80
16.05.2022	14925	14808.80	116.20	46.48	14855.28
19.05.2022	15222	14855.28	366.72	146.688	15001.968
20.05.2022	16000	15001.968	998.032	399.2128	15401.1808

$$*exponent = 2/(n + 1) = 2/(4 + 1) = 2/5 = 0.4$$

Here, n = No. of Trading Days

Conclusion – The market is bullish.**Answer 6B - 7 Marks**Interest and Commission due from Sleepless = ₹ 50 crore (0.10 + 0.002) = **₹ 5.10 crore****Net Sum Due to Sleepless in each of Scenarios****Scenario 1**

Year	PLR	Sum due to Sleepless	Net Sum Due (₹ Crore)		(₹ Crore)
1	10.25	50 (10.25 + 0.8)% = 5.525	5.10 - 5.525 = -0.425	0.909	-0.38633
2	10.5	50 (10.50 + 0.8)% = 5.650	5.10 - 5.650 = -0.550	0.826	-0.4543
3	10.75	50 (10.75 + 0.8)% = 5.775	5.10 - 5.775 = -0.675	0.751	-0.50693
4	11	50 (11.00 + 0.8)% = 5.900	5.10 - 5.900 = -0.800	0.683	-0.5464
					-1.89395

Scenario 2

Year	PLR	Sum due to Sleepless	Net Sum Due (₹ Crore)		(₹ Crore)
1	8.75	50 (8.75 + 0.8)% = 4.775	5.10 - 4.775 = 0.325	0.909	0.295425
2	8.85	50 (8.85 + 0.8)% = 4.825	5.10 - 4.825 = 0.275	0.826	0.22715

3	8.85	$50 (8.85 + 0.8)\% = 4.825$	$5.10 - 4.825 = 0.275$	0.751	0.206525
4	8.85	$50 (8.85 + 0.8)\% = 4.825$	$5.10 - 4.825 = 0.275$	0.683	0.187825
					0.916925

Scenario 3

Year	PLR	Sum due to Sleepless	Net Sum Due (₹ Crore)		(₹ Crore)
1	7.20	$50 (7.20 + 0.8)\% = 4.00$	$5.10 - 4.00 = 1.10$	0.909	0.9999
2	7.40	$50 (7.40 + 0.8)\% = 4.10$	$5.10 - 4.10 = 1.00$	0.826	0.826
3	7.60	$50 (7.60 + 0.8)\% = 4.20$	$5.10 - 4.20 = 0.90$	0.751	0.6759
4	7.70	$50 (7.70 + 0.8)\% = 4.25$	$5.10 - 4.25 = 0.85$	0.683	0.58055
					3.08235

Decision: Since the NPV of the proposal is positive in Scenario 2 (Best Case) and Scenario 3 (Most likely Case) the **proposal of swap can be accepted**. However, if management of NoBank is of strong opinion that PLR are likely to be more than 10% in the years to come then it can reconsider its decision.