The WAY CA test series– JAN 2025

CA FINAL P2 : ADVANCED FINANCIAL MANGEMENT 05.10.2025

[SYLLABUS : MUTUAL FUNDS, SECURITY VALUATION]

TIME : 2 HRS **TOTAL : 70 MARKS**

PART I : MCQ ANSWERS 14 MARKS

Case Study – 1

1. Option (b) : 27.27%
2. Option (a) : 10%
3. Option (c) : Rs 22

Case Study – 2

4. Option (c) $\frac{8,00,000}{10.10} \times 10$ Rs 7,92,079.21

5. Option (a) $\frac{4,00,000}{10.30}(10.35-10.30)+9000 = 10,941.75$

6. Option (c) $\frac{10,941.75}{4,00,000} \times \frac{365}{D} = 0.0966$

7. Option (a) $\frac{\frac{8,00,000}{10.10}(10.00-10.10)}{8,00,000} \times \frac{365}{D} = -11.66\%$

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PART II :DESCRIPTIVE SOLUTIONS56 MARKS

Question : 1(a) **6 Marks**

Working Notes:

(i) Computation of Growth Rate in Earning and EPS

Years	1	2	3	4	5	6	7	8	9	10
GrowthinEarning	40%	40%	40%	40%	40%	34%	28%	22%	16%	10%
EPS(₹)	5.60	7.84	10.98	15.37	21.51	28.82	36.89	45.00	52.20	57.42

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(ii) Computation of Payout Ratio and Dividend

Years	1	2	3	4	5	6	7	8	9	10
Payout Ratio	10%	10%	10%	10%	10%	18%	26%	34%	42%	50%
Dividend(₹)	0.56	0.78	1.10	1.54	2.15	5.19	9.59	15.30	21.92	28.71

(iii) Calculation of PV of Dividend

Year	Dividend(₹)	PVF	PVofDividend(₹)
1	0.56	0.855	0.48
2	0.78	0.731	0.57
3	1.10	0.625	0.69
4	1.54	0.534	0.82

5	2.15	0.456	0.98
6	5.19	0.390	2.02
7	9.59	0.333	3.19
8	15.30	0.285	4.36
9	21.92	0.244	5.35
10	28.71	0.209	6.00
			24.46

$$TV = \frac{28.71(1.10)}{0.17-0.10} \times 0.209 = ₹94.29$$

Intrinsic Value = ₹24.46 + ₹94.29 =₹118.75

Since the Intrinsic Value of Equity share is less than current market price, it is not advisable to invest in the same.

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

	Amount in ₹ lakhs	Amount in ₹ lakhs	Amount in ₹ lakhs
Opening Bank (200 - 185 -12)	3.00		
Add: Proceeds from sale of securities	63.00		
Add: Dividend received	2.00	68.00	
Deduct:			
Cost of securities purchased	56.00		
Fund management expenses paid (90% of 8)	7.20		
Capital gains distributed = 80% of (63 – 60)	2.40		
Dividend distributed = 80% of 2.00	1.60	67.20	
Closing Bank			0.80

Closing market value of portfolio			198.00
			198.80
Less: Arrears of expenses			0.80
Closing Net Assets			198.00
Number of units (Lakhs)			20
Closing NAV per unit			**9.90**

Rate of Earning (Per Unit)

	Amount
Incomereceived(₹2.40+₹1.60)/20	₹0.20
Loss:Lossondisposal(₹200-₹198)/20	₹0.10
Netearning	₹0.10
Initialinvestment	₹10.00
Rateofearning(monthly)	1%
Rateofearning(Annual)	12%

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

(i) Value of share at present $= \frac{Dg}{Ke-g} = \frac{2(1.06)}{0.08-0.06} = ₹106$

However, if the Board implement its decision, no dividend would be payable for 3 years and the dividend for year 4 would be ₹2.50 and growing at 7% p.a. The price of the share, in this case, now would be:

$$P0 = \frac{2.50}{0.08-0.07} \times \frac{2(1.06)}{(1+0.08)^3} = ₹ 198.46$$

So, the price of the share is expected to increase from ₹106 to ₹198.45 after the announcement of the project. The investor can take up this situation as follows:

$$\text{Expected market price after 3 years} = \frac{2.50}{0.08-0.07} = ₹\ 250.00$$

$$\text{Expected market price after 2 years} = \frac{2.50}{0.08-0.07} \times \frac{1}{(1+0.08)} = ₹231.48$$

$$\text{Expected market price after 1 years} = \frac{2.50}{0.08-0.07} \times \frac{1}{(1+0.08)^2} = ₹214.33$$

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(ii) In order to maintain his receipt at ₹2,000 for first 3 year, he would sell

10 shares in first year @ ₹ 214.33 for = ₹2,143.30

9 shares in second year @ ₹ 231.48 for = ₹2,083.32

8 shares in third year @ ₹ 250 for = ₹2,000.00

At the end of 3rd year, he would be having 973 shares valued @ ₹250 each i.e. ₹2,43,250. On these 973 shares, his dividend income for year 4 would be @ ₹2.50 i.e. ₹2,432.50.

Thus, if the project is taken up by the company, the investor would be able to maintain his receipt of at least ₹2,000 for first three years and would be getting increased income thereafter.

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

(i) Dirty Price

= Clean Price + Interest Accrued

$$= 99.42 + 100 \quad \frac{12}{100} \times \frac{292}{360}$$

$$= 109.1533$$

(ii) First Leg (Start Proceed)

$$= \text{Nominal Value} \times \frac{\text{Dirty Price}}{100} \times \frac{100 - \text{intial margin}}{100}$$

$$= ₹5,00,00,000 \times \frac{109.1533}{100} \times \frac{100 - 2}{100}$$

= ₹5,34,85,117 say ₹5,34,85,000

(iii) Second Leg (Repayment at Maturity)

$$= \text{Start proceed} \times 1 + \text{Repo rate} \times \frac{\text{No of days}}{360}$$

$$= ₹5,34,85,000 \times 1 + 0.0525 \times \frac{14}{360}$$

= ₹5,35,94,199

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

(i) Number of shares to be issued: 5,00,000

Subscription price ₹20,00,000 / 5,00,000 = ₹4

Ex-right Price = (₹1,30,00,000+₹20,00,000)/15,00,000 = ₹ 10

Value of right = (₹10-₹4)/2 = ₹ 3

Or = ₹10 - ₹4 = ₹6

(ii) Subscription price ₹20,00,000 / 2,50,000 = ₹8

Ex-right Price = (₹1,30,00,000+₹20,00,000)/12,50,000 = ₹12

Value of right = (₹12-₹8)/4 = ₹ 1

Or = ₹12 - ₹8 = ₹ 4

(iii) The effect of right issue on wealth of Shareholder's wealth who is holding, say 100 shares.

a. When firm offers one share for two shares held.

ValueofSharesafterrightissue(150×₹10)	₹1,500
Less:Amountpaidtoacquirerightshares(50×₹4)	₹200

	₹1,300

b. When firm offers one share for every four shares held

ValueofSharesafterrightissue(125×₹12)	₹1,500
Less:Amountpaidtoacquireright shares(25×₹8)	₹200
	₹1,300

c. Wealth of Shareholders before Right Issue ₹1,300

Thus, there will be no change in the wealth of shareholders from (i) and (ii).

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

(a) If return is 29%

	₹
Fixedfee(A)0.10%of₹20crore	2,00,000
NewFundValue(1.29×₹20crore)	25.80crore
ExcessValueofbestachieved(25.8crore–21.0crore)	4.80crore
IncentiveFee(2%of4.80crores) (B)	9,60,000
TotalFee(A)+(B)	11,60,000

(b) If return is 4.5%

	₹
Fixed(A)0.10%of₹20crore	2,00,000

NewFundValue(1.045×₹20crore)	20.90crore
ExcessValueofbestachieved(20.90crore–21.00crore)	(₹0.10crore)
IncentiveFee(asdoesnotexceedbestachieved)(B)	Nil
TotalFee(A)+(B)	2,00,000

(c) If return is (-1.8%)

No incentive only fixed fee of ₹2,00,000 will be paid

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

NPV for bond refunding

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	₹
PVofannualcashflowsavings(W.N.2) (3,49,600x PVIFA 8 %, 25) i.e. 10.675	37,31,980
Less:Initialinvestment(W.N.1)	31,15,000
NPV	6,16,980

Recommendation: Refunding of bonds is recommended as NPV is positive.

Working Notes:

(i) Initial Investment:

(a)	**CallPremium**		
	Beforetax(1,150-1,000)×30,000	45,00,000	

	LessTax@40%	18,00,000	
	Aftertaxcostofcall premium		27,00,000
(b)	**FloatationCost**		4,25,000
(c)	**OverlappingInterest**		
	Beforetax(0.14×2/12×3Crores)	7,00,000	
	Lesstax@ 40%	2,80,000	4,20,000
(d)	**Taxsavingonunamortizeddiscountonold bond (25/30 × 9,00,000 × 0.4)**		(3,00,000)
(e)	**Tax savings from unamortized floatation cost of old bonds (25/30 × 3,90,000 × 0.40)**		(1,30,000)
			31,15,000

(ii) Annual cash flow savings:

a. Old Bond

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(i) Interestcost(0.14×3crores) **Less:** tax @ 40%	42,00,000 16,80,000	25,20,000
(ii)Taxsavingsfromamortisationofdiscount (9,00,000/30×0.4)		(12,000)
(iii)Taxsavingsfromamortizationoffloatation cost (3,90,000/30)		(5,200)
Annualaftertaxcostpaymentunderoldbond(A)		25,02,800

b. New bond

(i)	InterestCost(0.12×3crores)	36,00,000	
	Less:Tax@40%	14,40,000	21,60,000
(ii)	Taxsavingsfromamortisationof floatationcost0.4×4,25,000/25		(6,800)
	AnnualaftertaxpaymentundernewBond(B)		21,53,200

	AnnualCashFlowSaving(A)–(B)	3,49,600

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

(i) Calculation of Income Available for Distribution

	Units (Lakh)	PerUnit (₹)	Total (₹Inlakh)
Income from April	300	0.0765	22.9500
Add:Dividendequalizationcollectedonissue	6	0.0765	0.4590
	306	0.0765	23.4090
Add :Income from May		0.1125	34.4250
	306	0.1890	57.8340
Less:Dividendequalizationpaidonrepurchase	3	0.1890	(0.5670)
	303	0.1890	57.2670
Add: Income from June		0.1500	45.4500
	303	0.3390	102.7170
Less:Dividend Paid		0.2373	(71.9019)
	303	0.1017	30.8151

(ii) Calculation of Issue Price at the end of April

	₹
OpeningNAV	18.750
Add:EntryLoad2%of ₹18.75	0.375
	19.125
Add:Dividend Equalization collected on Issue Price	0.0765
	19.2015

(iii) Calculation of Repurchase Price at the end of May

	₹
OpeningNAV	18.750
Less:Exit Load 2% of ₹18.750	(0.375)
	18.375
Add:Dividend Equalization paid on Issue Price	0.189
	18.564

(iv) Closing NAV

		₹(lakh)
Opening NetAssetValue (₹18.75 ×300)		5625.000
Portfolio Value Appreciation		425.470
Issue of Fresh Units(6×19.2015)		115.209
Income Received(22.95+34.425+45.45)		102.825
Less:Units repurchased(3×18.564)	-55.692	6268.504
IncomeDistributed	-71.9019	(-127.5939)
Closing NetAssetValue		6140.9101
Closing Units(300+6–3)lakh		303lakh
Closing NAV as on 30th June		₹20.2670

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

(i) Calculation of Bond Duration

Bond A

Year	Cashflow	P.V.@9%		Proportionof bond value	Proportionofbond valuetime(years)
1	10	0.917	9.17	0.086	0.086
2	10	0.842	8.42	0.079	0.158
3	10	0.772	7.72	0.073	0.219
4	10	0.708	7.08	0.067	0.268
5	10	0.650	6.50	0.061	0.305
6	10	0.596	5.96	0.056	0.336
7	10	0.547	5.47	0.051	0.357
8	10	0.502	5.02	0.047	0.376
9	10	0.460	4.60	0.043	0.387
10	110	0.4224	46.46	0.437	4.370
			106.40	**1.000**	**6.862**

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Duration of the bond is 6.862 years or 6.86 year

Bond B

Year	Cash flow	P.V.@ 9%		Proportionof bondvalue	Proportionofbond valuetime(years)
1	11	0.917	10.087	0.091	0.091
2	11	0.842	9.262	0.083	0.166
3	11	0.772	8.492	0.076	0.228
4	11	0.708	7.788	0.070	0.280
5	11	0.650	7.150	0.064	0.320
6	11	0.596	6.556	0.059	0.354

7	11	0.547	6.017	0.054	0.378
8	111	0.502	55.772	0.502	4.016
			111.224	**1.000**	**5.833**

Duration of the bond B is 5.833 years or 5.84 years.

Bond C

Year	Cash flow	P.V.@9%		Proportionof bond value	Proportionofbond valuetime(years)
1	9	0.917	8.253	0.082	0.082
2	9	0.842	7.578	0.076	0.152
3	9	0.772	6.948	0.069	0.207
4	9	0.708	6.372	0.064	0.256
5	109	0.650	70.850	0.709	3.545
			100.00	**1.000**	**4.242**

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Duration of the bond C is 4.242 years or 4.24 years

(ii) Amount of Investment required in Bond B and C

Periodrequiredtobeimmunized	6.000Year
Less:PeriodcoveredfromBondA	3.087Year
TobeimmunizedfromBandC	2.913Year

Let proportion of investment in Bond B and C is b and c respectively then

b + c = 0.55 (1)

5.883b + 4.242c = 2.913 (2)

On solving these equations, the value of b and c comes 0.3534 or 0.3621 and 0.1966 or 0.1879 respectively and accordingly, the % of investment of B and C is 35.34% or 36.21% and 19.66 % or 18.79% respectively.

(iii) With revised yield the Revised Duration of Bond stands

0.45 × 7.15 + 0.36 × 6.03 + 0.19 × 4.27 = 6.20 year

No portfolio is not immunized as the duration of the portfolio has been increased from 6 years to 6.20 years.

(iv) New percentage of B and C bonds that are needed to immunize the portfolio.

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Period required to be immunized	6.0000 Year
Less: Period covered from Bond A	3.2175 Year
To be immunized from B and C	2.7825 Year

Let proportion of investment in Bond B and C is b and c respectively, then

b + c = 0.55

6.03b + 4.27c = 2.7825

b = 0.2466

On solving these equations, the value of b and c comes 0.2466 and 0.3034 respectively and accordingly, the % of investment of B and C is 24.66% or 25% and 30.34 % or 30.00% respectively.

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

(i) Dividend Plan

(a)AverageAnnualgainoveraperiodof5Years	27748.60
(b)Totalgainoveraperiodof5years(a*5)	138743
(c)InitialInvestment	920000
(d)Totalvalueofinvestment(b+c)	1058743
(e)NAVason31.3.2020	49
(f)Numberofunitsattheendoftheperiodason31.03.2019(d/e)	21607

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	1	2	3	4=(2*3)	5	6 = 1/ (4+5)*4	7
Period	Units held	Rate	Unit value	Dividend	NAV	NewUnits*	Balance UnitsPre-Dividend
31.03.2019	21607	0.15	10	1.5	45	697	20910
31.03.2018	20910	0.1	10	1	50	410	20500
31.03.2017	20500	0.12	10	1.2	48	500	20000

Issue Price as on 01 04.2015 Investment 920000/ Units purchased 20000 (c/i) = ₹46

* Let the units issued be X

X = (Closing Units/NAV + Dividend) × Dividend

(ii) Bonus Plan

(a)AverageYield	0.064
(b)Investment	1000000
(c)Gainoveraperiodof5years(a*b*5)	320000
(d)MarketValueason31.03.2019(b+c)	1320000
(e)NAVason31.03.2020	44
(f)Totalunitsason31.03.2020(d/e)	30000
(g)Noofunitsason31.03.2018Prebonus=30000*5/(5+1)	25000
(h)Noofunitsason31.12.2016Prebonus=25000*4/(4+1)	20000
(i)IssuePriceason01.04.2015Investment1000000/Units purchased 20000 (b/h)	50

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