CA FINAL **P2: ADVANCED FINANCIAL MANAGEMENT** **07.02.2025**

[SYLLABUS : Security valuation, Security analysis]

TIME : 1 HR 45 MIN **TOTAL : 60 MARKS**

PART A : MCQ 12 MARKS

Case Scenario

Bank A enter into a Repo for 21 days with Bank B in 9% Government of India Bonds 2020 @ 6.10% for ₹5 crore. Assuming that clean price is ₹97.30 and initial margin is 1.50% and days of accrued interest are 240 days (assume 360 days in a year)

Question : 1 **2 Marks**

Compute The Dirty Price?

a) Rs. 103.30
b) Rs. 102.63
c) Rs. 105.08
d) Rs. 101.36

Question : 2 **2 Marks**

Compute the repayment at maturity. (Approx)

a) Rs. 5,07,25,132/-
b) Rs. 5,10,73,342/-
c) Rs. 5,11,42,345/-
d) Rs. 5,08,75,250/-

Case Scenario

On 31st March, 2013, the following information about Bonds is available

Name of Security	Face Value (Rs.)	Maturity Date	Coupon Rate	Coupon Date (s)
Zero Coupon	10,000	31-03-2023	N.A.	N.A.
T-Bill	1,00,000	20-06-2013	N.A.	N.A.

10.71% GOI 2023	100	31-03-2023	10.71	31-March
10% GOI 2018	100	31-03-2018	10.00	31 March & 30th Sep

Question : 3 **2 Marks**

If 10 years yield is 7.5% pa. what price the ZCB would fetch on 31st March, 2013?

a) 5000
b) 4952
c) 4900
d) 4852

Question : 4 **2 Marks**

What will be the annualized yield if the T-Bill is traded @ 98,500?

a) 5.86%
b) 7.86%
c) 7.46%
d) 6.86%

Question : 5 **2 Marks**

If 10.71% GOI 2023 Bond having yield to maturity is 8%, what price would fetch on April 01, 2013 (after coupon payment on 31st March)?

a) 118.19
b) 119.18
c) 118.49
d) 117.89

Question : 6 **2 Marks**

If 10% GOI 2018 Bond having yield to maturity is 8%, what price would it fetch on April 1, 2013 (after coupon payment on 31st March)?

a) 118.19

b) 109.11

c) 108.11

d) 107.11

PART B : DESCRIPTIVE 48 MARKS

Question : 1 **8 Marks**

AB Industries has Equity Capital of ₹12 Lakhs, total Debt of ₹8 Lakhs, and annual sales of ₹30 Lakhs. Two mutually exclusive proposals are under consideration for the next year. The details of the proposals are as under:

Particulars	Proposal no. 1	Proposal no. 2
Target Assets to Sales Ratio	0.65	0.62
Target Net Profit Margin (%)	4	5
Target Debt Equity Ratio (DER)	2:3	4:1
Target Retention Ratio (of Earnings) (%)	75	-
Annual Dividend (₹In Lakhs)	-	0.30
New Equity Raised (₹in Lakhs)	-	1

You are required to calculate sustainable growth rate for both the proposals.

Question : 2 **6 Marks**

SAM Ltd. has just paid a dividend of ₹2 per share and it is expected to grow @ 6% p.a. After paying dividend, the Board declared to take up a project by retaining the next three annual dividends. It is expected that this project is of same risk as the existing projects. The results of this project will start coming from the 4th year onward from now. The dividends will then be ₹2.50 per share and will grow @ 7% p.a. An investor has 1,000 shares in SAM Ltd. and wants a receipt of at least ₹2,000 p.a. from this investment. Required:

i. EVALUATE whether the market value of the share is affected by the decision of the Board.

ii. RECOMMEND how the investor can maintain his target receipt from the investment for first 3 years and improved income thereafter, given that the cost of capital of the firm is 8%.

Question : 3 **8 Marks**

The following data are available for three bonds A, B and C. These bonds are used by a bond portfolio manager to fund an outflow scheduled in 6 years. Current yield is 9%. All bonds have face value of ₹100 each and will be redeemed at par. Interest is payable annually.

Bond	Maturity (Years)	Coupon rate
A	10	10%
B	8	11%
C	5	9%

i. Calculate the duration of each bond.

ii. The bond portfolio manager has been asked to keep 45% of the portfolio money in Bond A. Calculate the percentage amount to be invested in bonds B and C that need to be purchased to immunize the portfolio.

iii. After the portfolio has been formulated, an interest rate change occurs, increasing the yield to 11%. The new duration of these bonds are: Bond A = 7.15 Years, Bond B = 6.03 Years and Bond C = 4.27 years. Is the portfolio still immunized? Why or why not?

iv. Determine the new percentage of B and C bonds that are needed to immunize the portfolio. Bond A remaining at 45% of the portfolio

Present values be used as follows:

Present Values	t1	t2	t3	t4	t5
$PVIF_{0.09,t}$	0.917	0.842	0.772	0.708	0.650

t6	t7	t8	t9	t10
0.596	0.547	0.502	0.460	0.4224

Question : 4 **6 Marks**

The current EPS of M/s VEE Ltd. is ₹4. The company has shown an extraordinary growth of 40% in its earnings in the last few year. This high growth rate is likely to continue for the next 5 years after which growth rate in earnings will decline from 40% to 10% during the next 5 years and remain stable at 10% thereafter. The decline in the growth rate during the five year transition period will be equal and linear. Currently, the company's pay-out ratio is 10%. It is likely to remain the same for the next five years and from the beginning of the sixth year till the end of the 10th year, the pay-out will linearly increase and stabilize at 50% at the end of the 10th year. The post tax cost of capital is 17% and the PV factors are given below:

Years	1	2	3	4	5	6	7	8	9	10
PVIF @17	0.855	0.731	0.625	0.534	0.456	0.390	0.333	0.285	0.244	0.209

You are required to calculate the intrinsic value of the company's stock based on expected dividend. If the current market price of the stock is ₹125, suggest if it is advisable for the investor to invest in the company's stock or not.

Question : 5 **4 Marks**

Explain Dow Theory.

Question : 6 **8 Marks**

Closing values of BSE Sensex from 6 th to 17 th day of the month of January of the year 200X were as follows:

Days	Date	Day	Sensex
1	6	THU	29522
2	7	FRI	29925
3	8	SAT	No Trading
4	9	SUN	No Trading
5	10	MON	30222
6	11	TUE	31000
7	12	WED	31400
8	13	THU	32000
9	14	FRI	No Trading
10	15	SAT	No Trading
11	16	SUN	No Trading
12	17	MON	33000

Compute Exponential Moving Average (EMA) of Sensex during the above period. The 30 days simple moving average of Sensex can be assumed as 30,000. The value of exponent for 30 days EMA is 0.062. Provide detailed analysis on the basis of your calculations.

Question : 7 **8 Marks**

Calculate the value of share from the following information:

Profit after tax of the company	₹290 crores
Equity capital of company	₹1,300 crores
Par value of share	₹40 each
Debt ratio of company (Debt/ Debt + Equity)	27%
Long run growth rate of the company	8%
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