Chapter wise Test (2001)
Cost of Capital

Instructions

- All questions are compulsory.
- Test Duration will be one hour, starting from 11:00 AM to 12:00 AM
- 5 minutes reading time will be provided before 11, i.e. question paper will be shared by 10:55 AM.
- Share your scanned answer sheets by 12:05 on below link https://forms.gle/wLRZWiTvMELNpCeC6

1. A company issues:
   - 15% convertible debentures of Rs. 100 each at par with a maturity period of 6 years. On maturity, each debenture will be converted into 2 equity shares of the company. The risk-free rate of return is 10%, market risk premium is 18% and beta of the company is 1.25. The company has paid dividend of Rs. 12.76 per share. Five years ago, it paid dividend of Rs. 10 per share. Flotation cost is 5% of issue amount.
   - 5% preference shares of Rs. 100 each at premium of 10%. These shares are redeemable after 10 years at par. Flotation cost is 6% of issue amount.

   Assuming corporate tax rate is 40%.

   (i) CALCULATE the cost of convertible debentures using the approximation method.

   (ii) Use YTM method to CALCULATE cost of preference shares.

   [10 marks]

2. Capital structure of D Ltd. as on 31st March, 2023 is given below:

Particulars	Rs.
Equity share capital (Rs. 10 each)	30,00,000
8% Preference share capital (Rs. 100 each)	10,00,000
12% Debentures (Rs. 100 each)	10,00,000

- Current market price of equity share is Rs. 80 per share. The company has paid dividend of Rs. 14.07 per share. Seven years ago, it paid dividend of Rs. 10 per share. Expected dividend is Rs. 16 per share.
- 8% Preference shares are redeemable at 6% premium after five years. Current market price per preference share is Rs. 104.
- 12% debentures are redeemable at 20% premium after 10 years. Flotation cost is Rs. 5 per debenture.
- The company is in 40% tax bracket.

- In order to finance an expansion plan, the company intends to borrow 15% Long-term loan of Rs. 30,00,000 from bank. This financial decision is expected to increase dividend on equity share from Rs. 16 per share to Rs. 18 per share. However, the market price of equity share is expected to decline from Rs. 80 to Rs. 72 per share, because investors' required rate of return is based on current market conditions.

Required:

(i) Determine the existing Weighted Average Cost of Capital (WACC) taking book value weights.

(ii) Compute Weighted Average Cost of Capital (WACC) after the expansion plan taking book value weights.

Interest Rate	1%	2%	3%	4%	5%	6%	7%
FVIFi,5	1.051	1.104	1.159	1.217	1.276	1.338	1.403
FVIFi,6	1.062	1.126	1.194	1.265	1.340	1.419	1.501
FVIFi,7	1.072	1.149	1.230	1.316	1.407	1.504	1.606

[10 Marks]

3. Navya Limited wishes to raise additional capital of Rs.10 lakhs for meeting its modernisation plan. It has Rs. 3,00,000 in the form of retained earnings available for investments purposes. The following are the further details:

Debt/ equity mix	40%/60%
Cost of debt (before tax)	
Upto Rs. 1,80,000	10%
Beyond Rs. 1,80,000	16%
Earnings per share	Rs. 4
Dividend pay out	Rs. 2
Expected growth rate in dividend	10%
Current market price per share	Rs. 44
Tax rate	50%

Required:

(i) To DETERMINE the pattern for raising the additional finance.

(ii) To CALCULATE the post-tax average cost of additional debt.

(iii) To CALCULATE the cost of retained earnings and cost of equity, and

(iv) To DETERMINE the overall weighted average cost of capital (after tax).

[10 Marks]