COST OF CAPITAL

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Ques : A limited Company has following capital structure:

	Rs.	Growth	0.07
Equity share capital @ Rs. 20	4000000	Tax rate	0.5
6% Pref. share capital @ Rs. 100	1000000		
8% debentures	3000000		
Market Price of Equity shares	20		
Current equity dividend	2		

1. You are required to calculate Weighted Average Cost of Capital (WACC)
2. The new weighted average cost of capital if the company raises an additional Rs. 20,00,000 debt by issuing 10% debentures.
This would result in expected dividend to Rs. 3 and leave growth rate unchanged but the price of share will fall to Rs. 15 per share.

SOLUTION:
1

cost of equity	=(B10/B9)+D5	ke	(D1/P0)+g	Where	D1= D0(1+g)
cost of preference shares	0.06	Kp	(P.D./P0)*100		
cost of 8% debentures	=8%*(1-D6)	Kd	I(1-t)		

WACC as per book values

Source of Capital	Book value	Weights (W)	Specific Cost (K)	Composite Costs (W*K)	
Equity share capital @ rs. 20	=B6	=B23/$B$26	=B17	=C23*D23	
6% Pref. share capital @ rs. 100	=B7	=B24/$B$26	=B18	=C24*D24	
8% debentures	=B8	=B25/$B$26	=B19	=C25*D25	
	=SUM(B23:B25)	=SUM(C23:C25)		=SUM(E23:E25)	10.75 PER CENT

2. Revised WACC with additional debt as per book values

Price	Rs.	Growth	0.07
Equity shares	15	tax rate	0.5
Current equity dividend	3		

cost of equity =(B32/B31)+E30

cost of preference shares	0.06
cost of 8% debentures	=8%*(1-E31)
cost of 10% debentures	=10%*(1-E31)

Source of Capital	Book value	Weights (W)	Specific Cost (K)	Composite Costs (W*K)	
Equity share capital @ rs. 15	4000000	=B42/$B$46	=B34	=C42*D42	
6% Pref. share capital @ rs. 100	1000000	=B43/$B$46	=B35	=C43*D43	
8% debentures	3000000	=B44/$B$46	=B36	=C44*D44	
10% debentures	2000000	=B45/$B$46	=B37	=C45*D45	
	=SUM(B42:B45)	=SUM(C42:C45)		=SUM(E42:E45)	13.60 PER CENT