



Q.1 Theory - all pts discussed in class.

Q.2 (a) WACC

<u>Source</u>	<u>Cost</u>	<u>(£ in lacs) Weight</u>	<u>Cost x Wgt.</u>
Equity	$\frac{2}{20} + 0.05 = 15\%$	30	4.50
10% Preference	10%	5	0.50
14% Debt	$14(1 - 0.30) = 9.80\%$	15	1.47
		<u>50</u>	<u>6.47</u>

$$K_0 = \frac{6.47}{50} \times 100 = 12.94\%$$

(ii) WACC

<u>Source</u>	<u>Cost</u>	<u>(£ in lacs) Wgt.</u>	<u>Cost x Wgt.</u>
Equity	$\frac{3}{15} + 0.05 = 25\%$	30	7.50
10% Pref.	10%	5	0.50
14% Debt	$14(1 - 0.30) = 9.80\%$	15	1.47
15% Debt	$15(1 - 0.30) = 10.50\%$	10	1.05
		<u>60</u>	<u>10.52</u>

$$K_0 = \frac{10.52}{60} \times 100 = 17.53\%$$

(iii) WACC

<u>Source</u>	<u>Cost</u>	<u>Wgt.</u>	<u>Cost x Wgt.</u>
Eq.	$\frac{3}{15} + 0.10 = 30\%$	30	9
10% Pref.	10%	5	0.50
14% Debt	9.8%	15	1.47
15% Debt	10.5%	10	1.05
		<u>60</u>	<u>12.02</u>

$$K_0 = \frac{12.02}{60} \times 100 = 20.03\%$$

(2)(b)

$$R_f = 12\%, R_m = 20\%, \sigma_s = 3\%, \sigma_m = 2.5\%, \rho_{sm} = 0.80$$

$$\text{Beta} = \beta_s = \frac{\sigma_s \times \rho_{sm}}{\sigma_m} = \frac{3}{2.5} \times 0.80 = 0.96$$

$$E(r) = R_f + \beta_s (R_m - R_f) = 12 + 0.96(20 - 12) = 19.68\%$$

(3)(iv) Income Statement

Particulars	(Lacs) ₹
Sales	300
(-) V.C (60%)	(180)
Contr. (40%)	120
(-) F.C. (120-40)	80
EBIT	40
(-) I	(20)
EBT	20
(-) Tax @ 40%	(8)
EAT	12

Notes

$$(i) PL = \frac{EBIT}{EBT} = \frac{2}{1}$$

$$\Rightarrow \frac{EBIT}{EBIT - I} = \frac{2}{1}$$

$$\Rightarrow EBIT = 40$$

$$(ii) OL = \frac{C}{EBIT} = 3$$

$$\Rightarrow \frac{C}{40} = 3$$

$$\Rightarrow C = 120$$

3(v)

(i) Price purchase -

as Dividend is declared.

$$P_1 = P_0 (1 + K_c) - D_1$$

$$= 150(1 + 0.12) - 8 = ₹160$$

(b) Div is not declared

$$P_1 = P_0 (1 + K_c) - D_1$$

$$= 150(1 + 0.12) - 0 = ₹168$$

(ii)

No of shares to be issued

$$\text{as Div is declared} = \frac{4Cr - (2Cr - 0.30\%)}{160} = 175000 \text{ shares}$$

$$\text{as Div is not declared} = \frac{4Cr - 2Cr}{168} = 119048 \text{ shares}$$

(iii) Mkt value at the end of the yr

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(a) Div is declared = $(10 \text{ lacs} + 1.75 \text{ lacs}) \times 160 = ₹1880 \text{ lacs}$

(b) Div is not declared = $(10 \text{ lacs} + 1.19 \text{ lacs}) \times 168 = ₹1880 \text{ lacs}$
(approx)

∴ Mkt value remains same

Q(c)

Statement of Evaluation

(310 days in a yr)

	Existing	Proposed
Sales. (£)	31,00,000	36,00,000
A/c	3 days	15 days
Avg Receivables	30,00,000	15,00,000
Int lost	$30,00,000 \times 20\%$ = 60,000	$15,00,000 \times 20\%$ = 30,000
Discount (36 lacs $\times 80\% \times 2\%$)	-	57600
Total cost	60,000	87600

∴ In cost ₹27600/-

∴ Should not introduce new policy.

Q.4 discussed in class.

Q.5 (a) MPS

$EBIT = 12\% \text{ of } (54 + 25 \text{ lacs}) = ₹9 \text{ lacs}$

option I = $\frac{\{ (900,000 - 56,000) (1 - 0.35) \} - 108,000}{20,000 + 20,000} \times 11.40 = ₹100.259$
(Existing share, Existing Div, New share)

option II = $\frac{\{ (900,000 - 56,000) (1 - 0.35) \} - (108,000 + 210,000)}{20,000} \times 17 = ₹162.01$
(Existing share, New Pref div)

option ii

Put on New ~~diff~~ diff

$$= \frac{\{950000 - 56000 - 200000\} (1 - 0.35)}{20000} - 100000 \times 15 - 7 = 243.82$$

Best alternative is option ii

④

Sub)

	(i)	(ii)	(iii)
	500	350	600
Call. →	Not exercised	Not Ex.	Exercised
	GPO = 0	GPO = 0	GPO = 50
	NPO = -30	NPO = -30	NPO = 20
Put →	Not Exercised	Exercised	Not Ex.
	GPO = 0	GPO = 100	GPO = 0
	NPO = -5	NPO = 95	NPO = -5
Overall current.	-25	65	15

⑥ (i) Initial outlay = £ 500,000 + 150,000
= £ 650,000

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(ii) Annual cash flow

Q.7

Discussed in class.

Savings - salaries	400,000
Reduced Travel Allowance	75,000
Lost sales Redn.	80,000
Timely Billing	25,000
	<u>580,000</u>

Less: Annual exp. £	(150,000)
Salaries (2 x 120,000)	(240,000)
	<u>190,000</u>

(-) Dep. $\left(\frac{580,000 - 150,000}{5} \right)$ (80,000)

110,000

(-) Tax @ 30% PAT

(33,000) PAT

(+) Dep.

80,000
157,000 cash flow

(iii) NPV = - 650,000 + (157,000 x 3.60) + (150,000 x 0.57)
= £ 100,700 (q.m.)

(iv) PI = $\frac{650,700}{550,000}$ = 1.18 (q.m.)

(v) Payback Pd = $\frac{650,000}{157,000}$ = 3.50 y.m. (approx)